ANALYSES OF CRUDE OILS FROM 546 IMPORTANT OILFIELDS IN THE UNITED STATES

By C. M. McKinney, E. P. Ferrero, and W. J. Wenger

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UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

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by

C. M. McKinney,¹ E. P. Ferrero,² and W. J. Wenger³

ABSTRACT

The Bureau of Mines analyzed 626 crude oils from 546 oilfields in the United States that produced 2,500 BOPD or more during at least 1 of the last 3 years. Included also are crude oil analyses from eight fields that produced less but which were located in areas having few or no fields that produced 2,500 BOPD. The tables show the geographical and geological source, general characteristics, and determined and computed analytical data for each sample. The analyses were made according to the Bureau of Mines routine method and are directly comparable to other previously published analyses.

INTRODUCTION

Knowledge of crude oil characteristics is important to the Government and to producers, refiners, marketers, and consumers of petroleum. Physical and chemical property data for crude oils produced in various areas and from different geological sources also are of interest to those who explore for petroleum and to those engaged in research regarding its composition and more efficient use. The Bureau of Mines fills these needs by obtaining and analyzing crude oil samples from deposits throughout the world and by reporting these findings.

Previous Bureau of Mines reports (5, 6, 9)⁴ contain similar crude oil analyses from important U.S. oilfields, some of which are repeated in this report. However, most of the fields for which analyses were previously published are represented by new analyses which include data not previously reported.

Analyses were made at the Bureau of Mines Bartlesville Petroleum Research Center, except for the analyses of crude oil samples from the Rocky Mountain area and Alaska, which were made at the Bureau of Mines Laramie Petroleum Research Center.

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⁴Underlined numbers in parentheses refer to items in the list of references at the end of this report.

Commission, The Railroad Commission of Texas, North Dakota Geological Survey, U.S. Geological Survey, State Corporation Commission of Kansas, and to many oil companies that supplied samples and sampling information and gave permission for publication of the analyses.

ANALYTICAL METHODS

The crude oils were analyzed according to the Bureau of Mines routine method (10), which has remained fundamentally unchanged for over 40 years, although additional data now are determined as part of the analysis. Also, several analytical procedures have been modified to obtain more accurate and reproducible results.

Refractive indexes n_D and n_g , both at 20° C, are determined by ASTM Method D1218 for all distillate fractions sufficiently transparent to obtain accurate measurements, except fraction 1 which is excessively volatile (2). Specific dispersion (sp disp) for each fraction for which refractive indexes are determined is calculated using the following formula:

$$\text{sp disp} = \frac{n_g - n_D}{\text{density, } 20^\circ/4^\circ \text{ C}} \times 10^4.$$

As densities of the fractions are not determined, their approximate equivalents are obtained by subtracting 0.004 from specific gravity at 60° F and by substituting this value for density in the preceding equation.

Carbon residue determinations on the distillation residuum, formerly determined by the Conradson method, are now determined by ASTM Method D524 (1). To facilitate direct comparison with previous analyses the carbon residue data are converted to equivalent Conradson values using the relationship between data obtained by the two methods that are given in ASTM Method D524.

Procedures for using data from the Bureau of Mines routine crude oil analyses to estimate the composition of the distillate fraction and otherwise characterize crude oils were described by Smith and Hale (8) in a recent Bureau of Mines report. Previously, Smith (7) described the correlation index for characterizing crude oil distillate fractions.

Table 1 summarizes data showing sources of the samples; table 2 summarizes some of the determined and calculated data obtained from their analyses. The data are self-explanatory, with the possible exception of the column in table 2 headed "Percent on gasoline-free basis" under "Characteristics of residuum". The data in this column were obtained by calculating the percentage of residuum for each crude oil sample in that portion boiling above fraction 7.

SAMPLE SELECTION AND OILFIELD REPRESENTATION

Petroleum production during 1964 from the oilfields represented by analyses in this report was 1,859,000 BOPD (4), or 67.1 percent of total U.S. crude oil production. During 1964 there were 559 oilfields in the United States that produced more than 2,500 BOPD, and analyses of oils from 495 (83 percent) of these fields are included.

Two or more analyses are included for several fields to provide adequate representation of crude oils produced from different geological formations within the same field but having different characteristics.

Crude oil analyses from several of the fields for which analyses are included have been published previously, and a listing of the publications is available (3). Most of the reports are tabulations of analyses according to area or State, and many are out of print.

TABLE 1. - Summary of information regarding geographical and geological source of samples

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
1	61053	Alabama: Citronelle.....	Mobile.....	Rodessa, Lower Glen Rose, Lower Cretaceous.	10,708-11,200
2	54032	Pollard.....	Escambia.....	Upper and Lower Tuscaloosa, Cretaceous	5,710- 5,920
3	PC-58-352	Alaska: Swanson River....		Hemlock zone, Tertiary.....	Below 11,000
4	47025	Arkansas: Fouke.....	Miller.....	First Sturgis, Paluxy, Lower Cretaceous	3,633- 3,642
5	61011	Magnolia.....	Columbia.....	Reynolds Smackover, Jurassic.....	7,392- 7,570
6	64031	Midway.....	Lafayette.....	Smackover, Jurassic.....	6,200
7	48098	Schuler.....	Union.....	Cotton Valley, Jurassic.....	7,553- 7,584
8	57112	Smackover (Asphalt).....	...do.....		
9	46083	Stephens-Smart.....	Ouachita.....	Travis Peak sand, Lower Cretaceous....	3,650- 3,652
10	48043	Wesson.....	...do.....	Hogg sand, Glen Rose, Lower Cretaceous.	3,099- 3,112
11	55166	California: Aliso Canyon.....	Los Angeles.....	Sesnon sand, Miocene-Luisian.....	8,350- 8,670
12	64074	Asphalto.....	Kern.....	Stevens, Miocene.....	5,677- 5,745
13	53057	Belgian Anticline.....	...do.....	Oceanic, Oligocene.....	5,395- 5,495
14	64095	Belmont.....	Orange.....	Deep Zone, Miocene.....	5,810- 6,509
15	55146	Belridge, South.....	Kern.....	Tulare sand, Pliocene-Pleistocene.....	500- 1,000
16	55177	Brea-Olinda.....	Orange.....	Miocene sand.....	3,390- 3,899
17	46050	Buena Vista.....	Kern.....	27-B pool, Basal Etchegoin, Pliocene...	3,272- 3,343
18	53061	Castaic Hills.....	Los Angeles.....	Sterling, Upper Miocene.....	5,600- 5,850
19	55125	Castaic Junction.....	...do.....	Zone 10, Miocene.....	10,640-10,790
20	53055	Cat Canyon, West.....	Santa Barbara.....	Los Flores, Miocene.....	4,612- 5,386
21	64113	Cheviot Hills.....	Los Angeles.....	B, Miocene.....	9,000- 9,500
22	61060	Coalinga, East.....	Fresno.....	Main Gatchell, Eocene.....	7,443- 8,100
23	58027	Coalinga, Nose.....	...do.....	Gatchell, Eocene.....	7,686- 8,217
24	58001	Coalinga, West.....	...do.....	Temblor, Miocene.....	2,278- 2,378
25	55109	Coles Levee, North.....	Kern.....	Miocene.....	
26	46059	Coles Levee, South.....	...do.....	Stevens, Miocene.....	9,540- 9,920
27	64102	Conception.....	Santa Barbara.....	Alegria, Oligocene.....	3,011- 3,169
28	57092	Coyote, East.....	Orange.....	Repetto, Pliocene.....	3,950- 3,956
29	55164	Coyote, West.....	...do.....	Emery, Pliocene.....	4,900- 6,500
30	58018	Cuyama, South.....	Santa Barbara.....	Dibblee, Miocene.....	4,195- 4,540
31	61051	Cymric.....	Kern.....	Tulare, Pleistocene-Pliocene.....	655- 1,042
32	55147	Del Valle.....	Los Angeles.....	Del Valle, Upper Miocene.....	6,467- 6,962
33	55139	Dominguez.....	...do.....	Pliocene-Miocene.....	4,000- 8,000
34	55149	Edison.....	Kern.....	Chanac, Jurassic.....	4,008- 4,073
35	59157	Elk Hills.....	...do.....	Shallow, Pleistocene-Miocene.....	3,000- 3,200
36	55133	Fruitvale.....	...do.....	Chanac, Pliocene-Miocene.....	3,602- 4,399
37	55132	Gato Ridge.....	Santa Barbara.....	Monterey, Miocene.....	2,118- 3,534
38	61058	Gosford, East.....	Kern.....	Lower Stevens, Miocene.....	9,464- 9,567
39	55162	Greeley.....	...do.....	Lower Miocene.....	11,260-11,500
40	49038	Guajarral Hills.....	Fresno.....	Leda, Kreyenhagen, Oligocene.....	8,658- 8,730
41	55106	Helm.....	...do.....	Wyant, Eocene.....	8,075- 8,090
42	53058	Honor Rancho.....	Los Angeles.....	Wayside, Upper Miocene.....	6,600
43	58014	Huntington Beach.....	Orange.....	Puente, Miocene.....	
44	55140	Inglewood.....	Los Angeles.....	Vickers, Lower Miocene.....	2,300
45	56022	Kern Front.....	Kern.....	Chanac, Pliocene-Miocene.....	1,865- 1,940
46	55121	Kern River.....	...do.....	Kern River, Pleistocene-Pliocene.....	1,099- 1,183
47	55138	Kettleman, North Dome...	Fresno.....	Temblor, Miocene.....	8,015- 8,060
48	64061	Las Cienegas.....	Los Angeles.....	Upper Miocene.....	2,300
49	43170	Lompoc.....	Santa Barbara.....	Avenaceous shale, Miocene.....	2,500- 2,850
50	61029	Long Beach.....	Los Angeles.....	Alamitos, Repetto, Pliocene.....	2,620- 2,808
51	55159	Lost Hills.....	Kern.....	Etchegoin, Pliocene.....	1,810- 2,368
52	61072	McKittrick.....	...do.....	Tulare, Pleistocene-Pliocene.....	1,000- 1,050
53	53021	Midway-Sunset.....	...do.....		
54	61024	Montalvo, West.....	Ventura.....	Colonia, Sespe, Oligocene.....	11,094-12,429
55	55165	Montebello.....	Los Angeles.....	Middle Repetto, Pliocene.....	3,346- 3,626
56	55150	Mount Poso.....	Kern.....	Wedder, Lower Miocene.....	1,600- 1,800
57	55130	Mountain View.....	...do.....	Upper Miocene-Lower Pliocene.....	5,015- 5,346
58	55154	Newhall-Potrero.....	Los Angeles.....	5th zone, Upper Miocene.....	8,800- 9,500

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
California--Continued					
59	55145	Newport, West.....	Orange.....	Newport, Miocene.....	3,608- 8,844
60	55134	Orcutt.....	Santa Barbara.....	Point Sal, Pliocene-Miocene.....	3,046- 3,650
61	61025	Oxnard.....	Ventura.....	McInnes, Sespe, Oligocene.....	6,273- 6,363
62	61052	Premier (Main Area).....	Kern.....	Chanac, Pliocene-Miocene.....	2,400- 2,800
63	55183	Raisin City.....	Fresno.....	Miocene.....	.....
64	55163	Richfield.....	Orange.....	Kraemer, Miocene.....	4,100- 4,700
65	55131	Rincon.....	Ventura.....	Pliocene.....	2,000- 3,500
66	57104	Rio Bravo.....	Kern.....	Rio Brave, Vedder, Lower Miocene.....	11,444-11,500
67	55180	Rosecrans.....	Los Angeles.....	Zins, Pliocene.....	5,720- 6,095
68	49036	Russell Ranch-Cuyama....	San Luis Obispo....	Dibblee, Vaqueros, Lower Miocene.....	2,700- 3,050
69	58028	San Ardo.....	Monterey.....	Lombardi, Miocene.....	2,100- 2,250
70	61018	San Emidio, Nose.....	Kern.....	Reef Ridge, Miocene.....	11,460-11,560
71	55160	San Miguelito.....	Ventura.....	Repetto, Pliocene.....	6,022- 7,011
72	53056	Sansinena.....	Los Angeles.....	Miocene.....	3,000- 4,375
73	55178	Santa Fe Springs.....	..do.....	Buckbee, Pliocene.....	5,534- 5,944
74	49008	Santa Maria Valley.....	Santa Barbara.....	Pliocene-Miocene.....	.....
75	64070	Saticoy.....	Ventura.....	Pico, Pliocene.....	6,454- 7,141
76	55142	Seal Beach.....	Orange.....	McGrath, Upper Miocene.....	8,500
77	53049	South Mountain.....	Ventura.....	Sespe, Oligocene.....	4,609- 6,010
78	64075	Summerland.....	Santa Barbara.....	Vaqueros, Lower Miocene.....	8,285
79	61019	Tejon, North.....	Kern.....	Z-1R and Z-1, Miocene.....	8,710- 9,043
80	56011	Tejon-Grapevine.....	..do.....	Olcese, Middle Miocene.....	5,636- 6,770
81	55151	Ten Section.....	..do.....	Stevens, Upper Miocene.....	7,800- 8,400
82	55126	Torrance.....	Los Angeles.....	Del Amo, Miocene.....	3,100- 5,000
83	58023	Ventura.....	Ventura.....	Pico and Repetto, Pliocene.....	2,500-12,000
84	53051	Wheeler Ridge.....	Kern.....	Eocene.....	9,910-10,100
85	64060	Whittier.....	Los Angeles.....	1st and 2d Whittier, Repetto, Pliocene.....	2,500
86	53020	Wilmington.....	..do.....	Repetto, Pliocene and Puente, Miocene.....	.....
87	61055	Yorba Linda.....	Orange.....	Pleistocene.....	260- 720
Colorado:					
88	PC-56-229	Adena.....	Morgan.....	Muddy D, Upper Cretaceous.....	5,659- 5,665
89	PC-56-213	Graylin, Northwest.....	Logan.....	Dakota D, Cretaceous.....	4,879- 4,936
90	PC-55-297	Plumbush Creek.....	Washington.....	Dakota J, Cretaceous.....	4,972- 4,981
91	58010	Rangely.....	Rio Blanco.....	Weber, Pennsylvanian.....	5,960- 6,459
92	PC-49-257	Wilson Creek.....	..do.....	Morrison, Jurassic.....	6,664- 6,681
Illinois:					
93	54035	Albion.....	Edwards.....	McClosky, Chester, Mississippian.....	3,101- 3,197
94	57069	Bridgeport.....	Lawrence.....	Bridgeport, Pennsylvanian.....	906- 938
95	45018	Centralia.....	Clinton.....	Chester, Mississippian.....	.....
96	58022	Clay City Consolidated..	Clay, Richland, Jasper, and Wayne	Mississippian.....	2,174- 3,534
97	57063	Dale.....	Hamilton.....	Aux Vases, Chester, Mississippian.....	3,013- 3,035
98	57066	Johnsonville.....	Wayne.....	McClosky, Chester, Mississippian.....	3,134- 3,189
99	53015	Loudon.....	Fayette.....	.....	.....
100	57070	New Harmony.....	White.....	McClosky, Chester, Mississippian.....	2,880- 2,887
101	57072	Robinson-Stoy.....	Crawford.....	Robinson, Pennsylvanian.....	912- 932
102	57073	Roland.....	White.....	Aux Vases, Chester, Mississippian.....	2,896- 2,919
103	55148	Sailor Springs.....	Clay.....	Cypress, Chester, Mississippian.....	2,600- 2,619
104	57074	Salem.....	Marion.....	Aux Vases, Chester, Mississippian.....	1,786
Indiana:					
105	57103	Griffin.....	Posey.....	Cypress, Chester, Mississippian.....	2,473- 2,487
106	61088	Springfield.....	..do.....	Pennsylvanian.....	1,150- 1,160
Kansas:					
107	58157	Bemis-Shutts.....	Ellis.....	Upper Arbuckle, Cambro-Ordovician.....	3,592- 3,598
108	60012	Chase-Silica.....	Barton.....	Kansas City, Pennsylvanian.....	3,071- 3,077
109	56004	El Dorado.....	Butler.....	Admire, Pennsylvanian.....	650- 668
110	61082	Fairport.....	Russell.....	Lansing-Kansas City, Pennsylvanian.....	3,194- 3,224
111	61028	Geneseo-Edwards.....	Rice.....	..do.....	2,830- 2,834
112	61003	Gladys.....	Sedgwick.....	Mississippian.....	3,180
113	61080	Gorham.....	Russell.....	Arbuckle, Cambro-Ordovician.....	3,299- 3,308
114	59185	Hall-Gurney.....	..do.....	Lansing-Kansas City, Pennsylvanian.....	2,956- 2,965

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
Kansas--Continued					
115	64049	Hanston-Oppy.....	Hodgeman.....	Mississippian.....	4,413- 4,442
116	60033	Interstate.....	Morton.....	Purdy, Upper Morrow, Pennsylvanian.....	4,186- 4,198
117	54101	Iuka-Carmi.....	Pratt.....	Lansing-Kansas City, Pennsylvanian.....	3,912- 3,927
118	64041	Kismet, North.....	Seward.....	Marmaton, Pennsylvanian.....	5,060- 5,073
119	46118	Kraft-Prusa.....	Barton.....	Basal, Cambrian.....	3,341- 3,359
120	61084	Marcotte.....	Rooks.....	Arbuckle, Cambro-Ordovician.....	3,757- 3,761
121	46119	Morel.....	Graham.....	...do.....	3,711- 3,720
122	58009	Pleasant Prairie.....	Haske11.....	Mississippian.....	5,054- 5,122
123	61009	Ray.....	Phillips.....	Reagan, Cambrian.....	3,602
124	61007	Spivey-Grabs.....	Harper.....	Mississippian.....	4,472- 4,474
125	41365	Trapp.....	Russell.....	Arbuckle, Cambro-Ordovician.....	3,282- 3,285
126	54025	Welch-Bornholdt.....	Rice.....	Mississippian.....	3,534- 3,551
Kentucky:					
127	63264	Dixie, West.....	Henderson.....	Tradewater A, Pennsylvanian.....	924- 955
128	47001	Poole Consolidate.....	...do.....	Jett, Upper Tar Springs, Upper Mississippian.	1,814
129	47006	Uniontown.....	Union.....	Cypress, Chester, Mississippian.....	2,278- 2,285
Louisiana:					
130	57130	Anse La Butte.....	St. Martin.....	Upper Martin, Miocene.....	5,250- 5,260
131	50009	Avery Island.....	Iberia.....	Upper Miocene.....	8,900- 9,500
132	60036	Bastian Bay.....	Plaquemines.....	K, Miocene.....	10,990-11,000
133	54076	Bateman Lake.....	St. Mary.....	9,900 ft, Miocene.....	10,582-10,592
134	54070	Bay de Chene.....	Jefferson and Lafourche.	Miocene.....	.....
135	50092	Bay Marchand (Block 2)..	Lafourche.....	3,900 ft, Miocene.....	3,894- 3,907
136	57115	Bay St. Elaine.....	Terrebonne.....	Upper Miocene.....	.....
137	60024	Bayou Choctaw.....	Iberville.....	Miocene.....	.....
138	54060	Bayou des Allemands.....	Lafourche.....	...do.....	.....
139	53064	Bayou Sale.....	St. Mary.....	Marin, St. Mary, Miocene.....	10,100-10,300
140	60059	Bayou Sorrel.....	Iberville.....	Lower Miocene.....	9,298- 9,301
141	60052	Black Bay, West.....	Plaquemines.....	9,200 ft, Miocene.....	9,178- 9,185
142	64032	Bonnet Carre.....	St. John the Baptist.	Operculinoides 4, Miocene.....	9,400- 9,470
143	54029	Bully Camp.....	Lafourche.....	Miocene.....	6,468- 6,505
144	64088	Burrwood.....	Plaquemines.....	10,100 ft Bigenerina Floridana D, Miocene-Pliocene.	10,663-10,684
145	53032	Caddo-Pine Island.....	Caddo.....	Annona, Upper Cretaceous.....	1,446- 1,468
146	58019	Caillou Island.....	Terrebonne.....	70 series, Miocene.....	12,640-12,880
147	61095	Cameron, West (Block 45)	Cameron.....	Planulina, Miocene.....	9,955-10,010
148	60064	Chacahoula.....	Lafourche.....	Robulus 9, Miocene.....	12,640-12,645
149	60050	Charenton.....	St. Mary.....	Upper Miocene.....	6,430- 6,432
150	60022	Clear Creek.....	Beauregard.....	Bearhead Creek, Eocene.....	8,848- 8,870
151	61042	Clovelly.....	Lafourche.....	M, reservoir B, Miocene.....	12,567-12,569
152	57117	Cote Blanche Bay, West..	St. Mary.....	Upper Miocene.....	.....
153	60046	Cote Blanche Island.....	...do.....	I, Lower Miocene.....	13,986-14,090
154	46039	Cotton Valley.....	Webster.....	Bodcaw, Cotton Valley, Jurassic.....	8,465- 8,495
155	53038	Cox Bay.....	Plaquemines.....	Miocene.....	8,900-10,300
156	50010	Crowley, North.....	Acadia.....	Upper Miocene.....	4,900- 4,920
157	59153	Delhi.....	Richland.....	Tuscaloosa, Upper Cretaceous.....	3,342- 3,352
158	54071	Delta Duck Club.....	Plaquemines.....	Miocene.....	.....
159	53035	Delta Farms.....	Lafourche.....	...do.....	8,780- 9,752
160	53044	Duck Lake.....	St. Martin.....	Upper Miocene.....	10,892-10,898
161	50024	Egan.....	Acadia.....	Lower Miocene.....	9,810-10,010
162	53063	Erath.....	Vermilion.....	7,000 ft, 7,300 ft, and 7,700 ft, Miocene.	.....
163	64044	Eugene Island (Block 18)	Offshore.....	N, Miocene.....	9,582- 9,587
164	61110	Eugene Island (Block 32)	...do.....	Miocene.....	7,500
165	64117	Eugene Island (Block 45)	...do.....	10,000 ft, Miocene.....	10,060-10,073
166	64118	Eugene Island (Block 126).	St. Mary.....	D-1, Pliocene.....	5,808- 5,856
167	64046	Eugene Island (Block 128).	...do.....	DD, Miocene.....	10,533-10,543

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
Louisiana--Continued					
168	61129	Eugene Island (Block 188).	Offshore.....	9,080 ft, Miocene.....	9,082- 9,092
169	64082	Eugene Island (Block 208).	St. Mary.....	GS C-1, Miocene.....	6,365- 6,371
170	61010	Fausse Point.....	Iberia.....	B, Miocene.....	10,044-10,052
171	60044	Garden Island Bay.....	Plaquemines.....	Miocene.....	5,900- 5,920
172	61033	Gibson.....	Terrebonne.....	...do.....	8,900- 9,500
173	53045	Golden Meadow.....	Lafourche.....	Upper Miocene.....	8,410- 8,600
174	53040	Good Hope.....	St. Charles.....	...do.....	7,800- 7,815
175	53039	Grand Bay.....	Plaquemines.....	Miocene.....	6,600-10,000
176	60048	Grand Isle (Block 16)...	Offshore.....	BF-1, E segment, Pliocene.....	6,952- 6,961
177	60047	Grand Isle (Block 18)...	...do.....	B-2, Pliocene.....	8,875- 8,890
178	60020	Grand Isle (Block 47)...	...do.....	Pliocene and Miocene.....	7,900-13,500
179	60014	Greenwood-Waskom.....	Caddo.....	Nacatoch, Upper Cretaceous.....	1,110- 1,180
180	61092	Gueydan.....	Vermilion.....	Alliance, Upper Miocene.....	3,385
181	64120	Hackberry, East.....	Cameron.....	Main Camerina, Miocene.....	7,256- 7,260
182	50015	Hackberry, West.....	...do.....	Upper Miocene.....	3,050- 3,090
183	53031	Haynesville.....	Claiborne.....	Pettit, Lower Cretaceous.....	5,255- 5,330
184	53033	Haynesville, East.....	...do.....	Birdsong-Owens, Upper Cretaceous.....	5,179- 5,189
185	57105	Iowa.....	Calcasieu.....	C, Miocene.....	5,050- 5,080
186	54102	Jeanerette.....	St. Mary.....	Q, Miocene.....	6,500- 6,580
187	64114	Johnson Bayou.....	Cameron.....	Amphistegina 1-2, Miocene.....	7,132- 7,136
188	61090	Krotz Springs.....	St. Landry.....	Frio, Oligocene.....	8,843
189	60023	La Rose.....	Lafourche.....	11,400 ft, Lower Miocene.....	11,390-11,396
190	53037	Lafitte.....	Jefferson.....	Upper Miocene.....	4,000-10,000
191	60049	Lake Barre.....	Terrebonne.....	R-1, Miocene.....	16,534-16,542
192	54062	Lake Chicot.....	St. Martin.....	8,100 ft, Miocene.....	8,170- 8,185
193	60063	Lake Palourde, East.....	Assumption.....	Camerina 1, Miocene.....	12,829-12,833
194	57118	Lake Pelto.....	Terrebonne.....	Upper Miocene.....	.....
195	60045	Lake Salvador.....	St. Charles.....	Miocene.....	8,550
196	53042	Lake St. John.....	Tensas.....	Basal Tuscaloosa, Upper Cretaceous.....	9,138- 9,146
197	60060	Lake Verret, West.....	St. Martin.....	Middle Q, Miocene.....	7,669- 7,679
198	59178	Lake Washington.....	Plaquemines.....	Miocene.....	8,000-13,500
199	57114	Leeville.....	Lafourche.....	Upper Miocene.....	.....
200	59180	Lisbon, West.....	Claiborne.....	Sligo, Lower Cretaceous.....	5,300- 5,500
201	61047	Little Lake.....	Jefferson.....	Textularia Panamensis 2, Miocene.....	.....
202	64089	Main Pass (Block 35)...	Plaquemines.....	7,200 ft Buccella Mansfieldi A, Upper Miocene.	7,198- 7,205
203	59165	Main Pass (block 69)...	Offshore.....	Miocene.....	5,550- 8,190
204	60029	Nebo-Hemphill.....	LaSalle.....	Wilcox, Eocene.....	3,370- 3,380
205	60030	Olla.....	...do.....	...do.....	2,226- 2,234
206	64121	Opelousas.....	St. Landry.....	Cockfield 2, Eocene.....	10,215-10,405
207	64085	Ossum, North.....	Lafayette.....	Frio, Oligocene.....	.....
208	53047	Paradis.....	St. Charles.....	Paradis, Miocene.....	10,220-10,229
209	64037	Patterson.....	St. Mary.....	Miocene.....	.....
210	64057	Pendleton-Many.....	Sabine.....	Saratoga, Upper Cretaceous.....	2,840
211	50045	Pointe-a-la-Hache.....	Plaquemines.....	BF-6, Miocene.....	8,831- 8,843
212	64093	Port Barre.....	St. Landry.....	1,500 ft, Pliocene.....	1,455- 1,475
213	57083	Quarantine Bay.....	Plaquemines.....	Miocene.....	6,700-10,900
214	64053	Rayne.....	Acadia.....	Homeseecker E, Lower Miocene.....	12,540-12,680
215	53036	Romere Pass.....	Plaquemines.....	Upper Miocene.....	10,100-10,377
216	60017	Saturday Island.....	...do.....	Miocene.....	10,350-10,360
217	54058	Section 28.....	St. Martin.....	Lower Miocene.....	10,180-10,210
218	60025	Ship Shoal (Block 154)...	Offshore.....	Miocene.....	6,322- 6,335
219	60021	Shongaloo, North-Red Rock.	Webster.....	Tokio, Jurassic.....	3,089- 3,094
220	61126	Sligo.....	Bossier.....	Paluxy, Lower Cretaceous.....	3,003- 3,006
221	58013	South Pass (Block 24)...	Offshore.....	Miocene.....	6,000- 9,000
222	64063	South Pass (Block 27)...	Plaquemines.....	N-4, Pliocene.....	8,847
223	64055	Southeast Pass.....	...do.....	Miocene.....	8,270
224	64103	Sweet Bay Lake.....	St. Mary.....	9,900 ft, Miocene.....	11,135
225	64096	Tiger Shoal.....	Iberia-Vermilion..	N, Miocene.....	8,560
226	64062	Timbalier, South (Block 131)	Offshore.....	E-2, Miocene.....	8,950- 8,976

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
Louisiana--Continued:					
227	59162	Timbalier Bay.....	Lafourche.....	Miocene.....	8,000-12,000
228	54065	Valentine.....	...do.....	South Coast 2, Miocene.....	11,664-11,802
229	53034	Venice.....	Plaquemines.....	Upper Miocene.....	3,547-11,760
230	53030	Vinton.....	Calcasieu.....	D, Oligocene.....	5,708- 5,728
231	61085	Washington.....	St. Landry.....	Cockfield, Eocene.....	9,300- 9,600
232	52035	Weeks Island.....	Iberia.....	Upper Miocene.....	9,250-15,000
233	57084	West Bay.....	Plaquemines.....	Miocene.....	6,400-10,400
234	61020	West Delta (Block 30)...	Offshore.....	...do.....	5,800-10,000
235	64078	West Delta (Block 52)...	Plaquemines.....	7,600 ft, 52-1, Miocene.....	7,634- 7,644
236	61023	West Delta (Block 83)...	Offshore.....	KE, Upper Miocene.....	10,100
237	64056	White Castle.....	Iberville.....	Heterostegina MR, Upper Oligocene.....	9,552- 9,660
238	61031	White Lake, East.....	Vermilion.....	R, Upper Miocene.....	6,390- 6,400
Michigan:					
239	61130	Albion.....	Calhoun.....	Trenton and Black River, Ordovician....	3,950
240	57053	Coldwater.....	Isabella.....	Dundee, Devonian.....	3,721- 3,732
241	57050	Deep River.....	Arenac.....	Richfield, Detroit River, Lower Devonian.	4,140- 4,177
242	64022	Pulaski.....	Jackson.....	Trenton and Black River, Middle Ordovician.	4,134- 4,232
243	64069	Scipio.....	Hillsdale.....	Tenton, Middle Ordovician.....	3,854- 3,874
Mississippi:					
244	58021	Baxterville.....	Lamar and Marion..	Lower Tuscaloosa, Upper Cretaceous....	8,734- 8,744
245	64099	Bolton.....	Hinds.....	8,124 ft, Washita and Fredericksburg, Lower Cretaceous.	8,359- 8,450
246	57090	Brookhaven.....	Lincoln.....	Pilot, Case, and Smith, Tuscaloosa, Upper Cretaceous.	10,152-10,312
247	61128	Bryan.....	Jones.....	Rodessa, Lower Cretaceous.....	10,302-10,312
248	61127	...do.....	...do.....	Sligo, Lower Cretaceous.....	10,760-10,770
249	64084	Dexter.....	Walthall.....	Pittman, Lower Tuscaloosa, Upper Cretaceous.	9,668- 9,674
250	45066	Eucutta.....	Wayne.....	Eutaw, Upper Cretaceous.....	5,141- 5,190
251	57094	Heidelberg.....	Jasper.....	Upper Tuscaloosa, Upper Cretaceous....	4,500- 5,100
252	48087	La Grange.....	Adams.....	Baker, Lower Cretaceous.....	6,222- 6,226
253	61036	Little Creek.....	Pike.....	Lower Tuscaloosa, Upper Cretaceous....	10,700-10,800
254	64098	McComb.....	...do.....	...do.....	10,493-10,575
255	64038	Pool Creek.....	Jones.....	Sligo, Lower Cretaceous.....	11,200
256	61078	Raleigh.....	Smith.....	Hosston, Lower Cretaceous.....	12,084-12,150
257	61100	Soso.....	Jasper.....	11,701 ft, Bailey, Rodessa, Lower Cretaceous.	12,041-12,055
258	61054	Tinsley.....	Yazoo.....	Selma, Upper Cretaceous.....	4,678- 4,712
259	54034	Yellow Creek.....	Wayne.....	Stanley, Eutaw, Upper Cretaceous.....	5,144- 5,219
Montana:					
260	PC-58-177	Cabin Creek.....	Fallon.....	Siluro-Ordovician.....	8,219- 8,951
261	PC-50-297	Cut Bank.....	Glacier.....	Madison, Mississippian.....	3,244- 3,247
262	45L-7	...do.....	...do.....	Cut Bank, Lower Cretaceous.....	2,995- 3,007
263	PC-64-170	Fred and George Creek...	Toole.....	Sunburst, Lower Cretaceous.....	2,572- 2,597
264	PC-63-95	Lookout Butte.....	Fallon.....	Red River, Ordovician.....	8,721- 8,723
265	PC-58-175	Pennel.....	...do.....	...do.....	8,640- 8,690
266	PC-58-178	Pine.....	Wibaux.....	Silurian.....	8,456- 8,516
267	PC-52-245	...do.....	...do.....	Red River, Ordovician.....	8,910- 8,970
268	PC-52-247	Poplar, East.....	Roosevelt.....	Charles, Mississippian.....	5,648- 5,680
269	PC-50-283	Sumatra.....	Rosebud.....	Amsden, Pennsylvanian.....	4,385- 4,415
Nebraska:					
270	PC-64-157	Singleton.....	Banner.....	J sand, Middle Cretaceous.....	.....
271	PC-56-171	Sloss-Hafeman.....	Kimball.....	...do.....	6,213- 6,229
New Mexico:					
272	54078	Bagley.....	Lea.....	Siluro-Devonian.....	10,762-10,960
273	PC-57-14	Bisti.....	San Juan.....	Gallup, Upper Cretaceous.....	5,000
274	54089	Caprock, East.....	Lea.....	Wolfcamp, Permian.....	8,384- 8,467
275	64058	Corbin.....	...do.....	Yates, Permian.....	3,443- 3,459
276	54037	Crossroads.....	...do.....	Devonian.....	12,000-12,102
277	58017	Denton.....	...do.....	...do.....	11,267-13,983

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
New Mexico--Continued					
278	47035	Drinkard.....	Lea.....	Drinkard, Clear Fork, Permian.....	6,360- 6,417
279	62120	Empire-Abo.....	Eddy.....	Abo, Permian.....	6,269- 6,334
280	64033	Eumont.....	Lea.....	San Andres, Permian.....	3,850- 3,950
281	57127	Eunice-Monument.....	..do.....	Grayburg, Permian.....	.....
282	58006	..do.....	..do.....	..do.....	3,800- 3,900
283	54032	Gladiola.....	..do.....	Wolfcamp, Permian.....	9,040
284	57095	Grayburg-Jackson.....	Eddy.....	Grayburg, Permian.....	3,239- 3,274
285	61016	Hobbs.....	Lea.....	San Andres, Permian.....	4,144
286	PC-61-256	Horseshow (Gallup).....	San Juan.....	Gallup, Upper Cretaceous.....	1,110- 1,126
287	61086	Jalmat.....	Lea.....	Yates, Permian.....	3,882- 4,010
288	64072	Justis.....	..do.....	Blaine, Permian.....	5,392- 5,484
289	64073	..do.....	..do.....	Fusselman, Silurian.....	6,736- 6,756
290	64071	..do.....	..do.....	Montoya, Ordovician.....	6,806- 6,822
291	61067	Kemnitz.....	..do.....	Wolfcamp, Permian.....	10,674-10,804
292	57089	Langlie-Mattix.....	..do.....	Queen, Permian.....	3,325- 3,362
293	64034	Lea.....	..do.....	Devonian.....	14,300-14,500
294	54055	Lovington.....	..do.....	Abo, Permian.....	8,380- 8,442
295	62115	Maljamar-Paddock.....	..do.....	Paddock, Permian.....	5,366- 5,372
296	54036	Saunders.....	..do.....	Wolfcamp, Permian.....	9,812- 9,912
297	57091	Vacuum.....	..do.....	San Andres, Permian.....	4,580- 4,625
298	57100	New York: Allegany.....	Allegany.....	Caneadea and Richburg, Upper Devonian..	1,288- 1,334
North Dakota:					
299	PC-58-136	Antelope.....	McKenzie.....	Madison, Mississippian.....	9,097- 9,136
300	PC-52-240	Beaver Lodge.....	Williams.....	..do.....	8,490- 8,512
301	PC-54-201	..do.....	..do.....	Three Forks and Jefferson, Devonian....	10,390-10,445
302	PC-58-139	Blue Buttes.....	McKenzie.....	Madison, Mississippian.....	9,159- 9,193
303	PC-53-61	Charlson.....	..do.....	..do.....	8,998- 9,042
304	PC-59-185	Glenburn.....	Renville.....	Mission Canyon, Mississippian.....	4,513- 4,518
305	PC-58-281	Rival.....	Burke.....	Madison, Mississippian.....	6,076- 6,109
306	PC-52-241	Tioga.....	Williams.....	..do.....	8,258- 8,290
307	PC-61-175	Tioga, North.....	Burke.....	..do.....	7,891- 7,897
Oklahoma:					
308	61075	Allen.....	Hughes.....	Allen, Pennsylvanian.....	696- 723
309	64030	Beebe-Konawa.....	Pottawatomie.....	Viola, Ordovician.....	2,364- 2,493
310	58015	Burbank.....	Osage.....	Layton and Burbank, Pennsylvanian.....	2,700- 2,760
311	47028	Cache Creek.....	Cotton.....	Lower Cache, Pennsylvanian.....	1,320- 1,323
312	64051	Camrick.....	Beaver.....	Morrow, Pennsylvanian.....	7,434- 7,454
313	57109	Cement.....	Caddo.....	Upper Melton, Pennsylvanian.....	5,790- 5,824
314	61063	Cumberland.....	Bryan.....	Bromide, Ordovician.....	5,000
315	61064	..do.....	..do.....	McLish, Ordovician.....	5,700
316	61062	..do.....	..do.....	Oil Creek, Ordovician.....	6,300
317	55089	Cushing.....	Creek.....	Bartlesville, Pennsylvanian.....	2,624- 2,637
318	59169	Domes-Pond Creek.....	Osage.....	..do.....	.....
319	61002	Dover-Hennessey.....	Kingfisher.....	Mississippian.....	.....
320	53013	Edmond, West.....	Canadian.....	.....	.....
321	59189	Eola, Robberson.....	Garvin.....	Bromide, Ordovician.....	.....
322	59188	..do.....	..do.....	Oil Creek and McLish, Ordovician.....	.....
323	54172	Glennpool.....	Creek.....	Glenn, Pennsylvanian.....	1,420- 1,500
324	50129	Golden Trend.....	Garvin.....	First and Second Gibson, Pennsylvanian.....	.....
325	61074	..do.....	Grady.....	Springer, Pennsylvanian.....	9,670- 9,781
326	50126	..do.....	Garvin.....	Gibson, Pennsylvanian.....	6,409- 6,454
327	50111	..do.....	..do.....	..do.....	7,318- 7,380
328	50119	..do.....	..do.....	Hart, Pennsylvanian.....	8,075- 8,127
329	49018	Healdton.....	Carter.....	Healdton, Pennsylvanian.....	1,866- 1,898
330	57048	Hewitt.....	..do.....	Lone Grove, Pennsylvanian.....	3,748- 3,752
331	61108	Joiner City.....	..do.....	Bois D'Arc, Siluro-Devonian.....	8,632- 8,700
332	64035	Marietta, Southeast.....	Love.....	Oil Creek, Ordovician.....	14,200
333	62074	Muskogee.....	Muskogee.....	Dutcher, Muskogee, and Timber Ridge, Pennsylvanian.....	1,284- 1,348
334	54016	Naval Reserve.....	Osage.....	Burbank, Pennsylvanian.....	.....
335	57101	Oklahoma City.....	Oklahoma.....	Wilcox, Ordovician.....	6,348- 6,563
336	61065	Payne, Northeast.....	McClain.....	7,026 ft, First Bromide, Ordovician....	9,560- 9,710
337	51048	Ringwood.....	Major.....	Manning, Ordovician.....	6,500

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
		Oklahoma--Continued:			
338	54064	Sho-Vel-Tum.....	Carter.....	Springer, Pennsylvanian.....	6,295- 6,385
339	54072	...do.....	Stephens.....	Culberson and Deese, Pennsylvanian....	5,893- 5,917
340	57047	...do.....	Carter.....	Upper Fusalinid, Deese, Pennsylvanian..	2,660- 2,710
341	64036	...do.....	Stephens.....	Pennsylvanian.....	3,468- 3,488
342	59172	...do.....	Garvin.....	...do.....	.....
343	48097	...do.....	Stephens.....	Lower Dornick Hills and Springer, Pennsylvanian.	4,900- 5,366
344	60011	St. Louis.....	Pottawatomie.....	Calvin, Pennsylvanian.....	3,182- 3,197
345	50130	Wayne, Southwest.....	McClain.....	Pennsylvanian.....	6,600- 6,660
346	58016	Pennsylvania: Bradford...	McKean.....	Upper Devonian.....	.....
		Texas:			
347	51052	Adair.....	Terry.....	San Andres, Permian.....	4,866- 4,927
348	54134	...do.....	...do.....	Wolfcamp, Permian.....	8,434- 8,540
349	63217	Alazan, North.....	Kleberg.....	Frio, H-21, Oligocene.....	7,212- 7,262
350	55047	Amelia.....	Jefferson.....	Marginulina 3, Frio, Oligocene.....	6,236- 6,644
351	55049	Anahuac.....	Chambers.....	Marginulina 1, Frio, Oligocene.....	7,053- 7,075
352	51057	Andector.....	Ector.....	Ellenburger, Cambro-Ordovician.....	8,463- 8,513
353	56062	Andrews.....	Andrews.....	Pennsylvanian.....	9,220
354	61151	Andrews, North.....	...do.....	Ellenburger, Cambro-Ordovician.....	12,482-12,490
355	59064	Andrews, South.....	...do.....	Wolfcamp, Permian.....	9,183
356	59015	Arthur.....	Borden.....	Spraberry, Permian.....	7,565
357	59060	Bakke.....	Andrews.....	Devonian.....	10,500
358	58150	...do.....	...do.....	Ellenburger, Cambro-Ordovician.....	12,400
359	59024	...do.....	...do.....	Pennsylvanian.....	9,000
360	59026	...do.....	...do.....	Wolfcamp, Permian.....	8,500
361	55050	Barbers Hill.....	Chambers.....	Frio, Oligocene.....	4,495- 4,556
362	62078	Bethany.....	Harrison.....	4,300 ft, Glen Rose, Lower Cretaceous..	4,401- 4,411
363	58076	Bethany, Northeast.....	Panola.....	Mooringsport, Cretaceous.....	3,903- 3,907
364	56067	Big Mineral Creek.....	Grayson.....	Barnes, Des Moines, Pennsylvanian.....	4,925- 5,145
365	63136	Blessing.....	Matagorda.....	Frio, F-14B, Oligocene.....	8,179- 8,183
366	63077	Block 31.....	Crane.....	Devonian.....	8,815- 8,990
367	59116	Borregos.....	Kleberg.....	Frio, F-5, Oligocene.....	5,141- 5,151
368	58148	Brahaney.....	Yoakum.....	San Andres, Permian.....	5,301
369	61026	Breedlove.....	Martin.....	Devonian.....	12,110-12,135
370	51051	Cedar Lake.....	Gaines.....	San Andres, Permian.....	4,580- 4,765
371	50021	Charlotte.....	Atascosa.....	Upper Cretaceous.....	5,154- 5,199
372	62063	Clam Lake.....	Jefferson.....	Miocene.....	4,436- 4,444
373	50034	Cogdell.....	Kent.....	Canyon, Pennsylvanian.....	6,857
374	63019	Conley.....	Hardeman.....	Ellenburger, Cambro-Ordovician.....	8,072- 8,237
375	53018	Conroe.....	Montgomery.....	Upper Cockfield, Eocene.....	.....
376	56112	Corsicana.....	Navarro.....	Wolf City, Upper Cretaceous.....	1,088- 1,116
377	52061	Cowden, North.....	Ector.....	Grayburg, Permian.....	4,406- 4,606
378	56041	Cowden Deep, North.....	...do.....	San Andres, Permian.....	5,170
379	59163	Cowden, South.....	...do.....	Grayburg, Permian.....	4,670- 4,775
380	63188	Crossett, South.....	Crockett.....	Devonian.....	5,220- 5,298
381	54123	Darst Creek.....	Guadalupe.....	Edwards, Lower Cretaceous.....	2,500- 2,691
382	50026	Diamond M.....	Scurry.....	Canyon, Pennsylvanian.....	6,569- 6,617
383	46092	Dollarhide.....	Andrews.....	Devonian.....	7,778- 8,051
384	52051	...do.....	...do.....	Ellenburger, Cambro-Ordovician.....	10,115-10,315
385	52050	...do.....	...do.....	Silurian.....	8,576- 8,676
386	56037	Dora Roberts.....	Midland.....	Ellenburger, Cambro-Ordovician.....	12,835
387	59051	Dune.....	Crane.....	Grayburg, Permian.....	3,270
388	53014	East Texas.....	Rusk.....	Woodbine, Upper Cretaceous.....	.....
389	61153	El Mar.....	Loving.....	Delaware, Permian.....	4,490- 4,500
390	61156	Emma.....	Andrews.....	Ellenburger, Cambro-Ordovician.....	12,340-12,580
391	56032	Emperor.....	Winkler.....	Yates and Seven Rivers, Permian.....	2,833- 2,900
392	62087	Fairway.....	Anderson.....	James, Lower Cretaceous.....	9,880- 9,890
393	55055	Fannett.....	Jefferson.....	Catahoula, Miocene.....	3,720- 3,740
394	58055	Farnsworth.....	Ochiltree.....	Upper Morrow, Pennsylvanian.....	7,926- 7,932
395	62056	Farnsworth-Conner.....	...do.....	Des Moines, Pennsylvanian.....	6,793- 6,820
396	62065	Fig Ridge.....	Chambers.....	Frio, Oligocene.....	8,492- 8,562
397	61140	Fluvanna.....	Scurry.....	Strawn, Pennsylvanian.....	7,950
398	63004	Fort Chadbourne.....	Coke.....	Odom, Strawn, Pennsylvanian.....	5,350- 5,390

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
		Texas--Continued:			
399	54135	Foster.....	Ector.....	Grayburg, Permian.....	4,300
400	54136	Fuhrman-Mascho.....	Andrews.....	...do.....	4,542
401	63065	Fullerton.....	...do.....	Devonian.....	8,580- 8,640
402	62019	...do.....	...do.....	Clear Fork, Permian.....	6,970- 7,072
403	62006	Fulton Beach.....	Aransas.....	Frio, B-3-8, Oligocene.....	7,136- 7,139
404	48032	Garza.....	Garza.....	San Andres, Permian.....	2,935- 3,032
405	61164	Geraldine-Ford.....	Culberson.....	Delaware, Permian.....	2,584- 2,608
406	50060	Gillock, South.....	Galveston.....	Big Gas sand, Frio, Oligocene.....	9,504- 9,588
407	52062	Goldsmith.....	Ector.....	Upper Clear Fork, Permian.....	5,622- 5,722
408	52063	...do.....	...do.....	Tubb, Clear Fork, Permian.....	6,295- 6,500
409	58029	...do.....	...do.....	San Andres, Permian.....	4,234- 4,290
410	55056	Goose Creek.....	Harris.....	Miocene, and Frio, Oligocene.....	4,432- 4,466
411	55025	Government Wells, North.	Duval.....	Jackson, Eocene.....	2,284- 2,303
412	62192	Greta.....	Refugio.....	Greta, Frio, Oligocene.....	4,400
413	50072	Hankamer.....	Liberty.....	Miocene.....	4,258- 4,294
414	56049	Harper.....	Ector.....	San Andres, Permian.....	4,211
415	63056	Harris.....	Gaines.....	Clear Fork and San Angelo, Permian....	5,930- 5,988
416	62066	Hastings, East.....	Brazoria.....	Frio, Oligocene.....	6,020- 6,050
417	53016	Hastings, West.....	...do.....	...do.....	.....
418	58008	Hawkins.....	Wood.....	Sub-Clarksville, Upper Cretaceous.....	4,100- 4,180
419	59010	Headlee.....	Ector.....	Ellenburger, Cambro-Ordovician.....	13,106
420	54137	Hendrick.....	Winkler.....	Yates, Permian.....	2,900
421	55057	High Island.....	Galveston.....	Miocene.....	4,487- 4,509
422	55027	Hoffman.....	Duval.....	Government Wells, Eocene.....	2,766- 2,768
423	63068	Howard-Glasscock.....	Howard.....	Yates, Permian.....	1,255- 1,278
424	55059	Hull.....	Liberty.....	Caprock, Miocene.....	1,651- 1,705
425	54130	Hull-Silk-Sikes.....	Archer.....	4,300 ft, Strawn, Pennsylvanian.....	4,338- 4,400
426	62068	Humble (Light).....	Harris.....	Yegua, Eocene.....	4,392- 4,408
427	59014	Hutex.....	Andrews.....	Devonian.....	12,509
428	62062	I.A.B.....	Coke.....	Menielle and Canyon, Pennsylvanian....	5,624- 5,812
429	54140	Iatan, East Howard.....	Howard.....	Clear Fork, Permian.....	2,550
430	63105	Inez.....	Andrews.....	Ellenburger, Cambro-Ordovician.....	.....
431	58108	Jameson.....	Coke.....	Strawn, Pennsylvanian.....	6,062
432	58104	...do.....	...do.....	Strawn Reef, Pennsylvanian.....	6,360
433	56056	Jo-Mill.....	Borden.....	Spraberry, Permian.....	7,300
434	54141	Jordan.....	Ector.....	San Andres, Permian.....	3,600
435	52042	Katz.....	Stonewall.....	Strawn, Pennsylvanian.....	4,878- 4,900
436	63045	Kelly-Snyder.....	Scurry.....	Canyon, Pennsylvanian.....	6,997- 7,019
437	52086	Kelsey Deep.....	Brooks.....	Frio, Oligocene.....	6,085- 6,095
438	54142	Kermit.....	Winkler.....	Yates, Permian.....	3,000
439	52081	Keystone (Colby).....	...do.....	Queen, Permian.....	3,343- 3,513
440	59177	Keystone (Ellenburger)...	...do.....	Ellenburger, Cambro-Ordovician.....	9,879- 9,903
441	52080	Keystone (Holt).....	...do.....	San Angelo, Permian.....	4,777- 4,827
442	54129	KMA.....	Wichita.....	KMA, Strawn, Pennsylvanian.....	3,794- 3,885
443	61050	Lake Pasture.....	Refugio.....	Greta, H-440, Oligocene.....	4,519- 4,526
444	54143	Lea.....	Crane.....	Ellenburger, Cambro-Ordovician.....	8,275- 8,357
445	59159	Levelland.....	Hockley.....	San Andres, Permian.....	4,707- 4,818
446	63150	Liberty, South.....	Liberty.....	Yegua 7, Eocene.....	9,352- 9,390
447	58133	Lolita.....	Jackson.....	Marginulina, Frio, Oligocene.....	.....
448	54122	Luling-Branyon.....	Caldwell.....	Edwards, Lower Cretaceous.....	2,100- 2,200
449	48034	Mabee.....	Andrews.....	Permian.....	4,654- 4,700
450	55062	Magnet-Withers.....	Wharton.....	Frio, Oligocene.....	5,535- 5,547
451	54146	Magutex.....	Andrews.....	Devonian.....	.....
452	62070	Manvel.....	Brazoria.....	Oligocene.....	5,115- 5,135
453	49023	Markham, North.....	Matagorda.....	Frio, Oligocene.....	7,700
454	63111	Martin.....	Andrews.....	Ellenburger, Cambro-Ordovician.....	8,900- 9,050
455	54162	Mary Ellen O'Connor.....	Refugio.....	Frio, FQ-40, Oligocene.....	5,913- 5,920
456	54176	McCamy.....	Upton.....	Grayburg, Permian.....	2,100
457	58030	McElroy.....	Crane and Upton...	...do.....	2,750- 3,050
458	62187	McFaddin, North.....	Victoria.....	6,000 ft, Frio, Oligocene.....	5,972
459	56061	McFarland.....	Andrews.....	Queen, Permian.....	4,680
460	54148	Means.....	...do.....	Grayburg, Permian.....	4,439- 4,535
461	61141	...do.....	...do.....	Queen, Permian.....	3,987- 4,031
462	55064	Merchant.....	Liberty.....	Yegua EY-1B, Eocene.....	9,080- 9,090

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
		Texas--Continued:			
463	56033	Midland Farms.....	Andrews.....	Wolfcamp, Permian.....	8,540
464	56093	Mustang Island.....	Nueces.....	Frio, 6, Oligocene.....	7,682- 7,694
465	59158	Neches.....	Anderson.....	Woodbine, Upper Cretaceous.....	4,656- 4,680
466	59077	Nena Lucia.....	Nolan.....	Strawn, Pennsylvanian.....	6,950- 6,975
467	55066	Old Ocean.....	Brazoria.....	Armstrong, Frio, Oligocene.....	10,204-10,208
468	46132	Oyster Bayou.....	Chambers.....	Oyster Bayou, Frio, Oligocene.....	8,375
469	58031	Panhandle.....	Hutchinson.....	Moore County limestone, Permian.....	2,991- 3,060
470	61136	Pecos Valley (High Gravity).	Pecos.....	Yates, Permian.....	1,516- 1,531
471	62135	Pegasus.....	Midland and Upton.	Ellenburger, Cambro-Ordovician.....	9,946-13,100
472	61167	Penwell.....	Ector.....	Glorieta, Permian.....	4,650- 4,680
473	56039	...do.....	...do.....	San Andres, Permian.....	3,600
474	62039	Person.....	Karnes.....	Upper Edwards, Lower Cretaceous.....	10,930-10,940
475	51075	Pierce Junction.....	Harris.....	Frio, Oligocene.....	4,784- 4,792
476	59110	Plymouth.....	San Patricio.....	Main Greta, Frio, Oligocene.....	4,663- 4,668
477	52089	Portilla.....	...do.....	7,400 ft, Frio, Oligocene.....	7,400- 7,415
478	62012	Prado.....	Jim Hogg.....	Loma Novia Middle I and II, Jackson, Eocene.	3,776- 3,795
479	63240	...do.....	...do.....	Loma Novia Middle II, Jackson, Eocene..	3,733- 3,748
480	62010	...do.....	...do.....	Loma Novia Middle III, Jackson, Eocene.	3,710- 3,713
481	54150	Prentice.....	Yoakum.....	6,700 ft, Clear Fork, Permian.....	6,460- 6,760
482	54151	...do.....	...do.....	Glorieta, Permian.....	5,945- 5,972
483	58056	Quinduno.....	Roberts.....	Lower Albany and Wolfcamp, Permian....	4,077- 4,098
484	54109	Quitman.....	Wood.....	Trinity, Lower Cretaceous.....	6,134- 6,150
485	56089	Raccoon Bend.....	Austin.....	Hockley, Eocene.....	3,344- 3,400
486	62071	Red Fish Reef, South...	Galveston.....	Frio, 15 B, Oligocene.....	11,340-11,346
487	63201	Reeves.....	Yoakum.....	San Andres and Guadalupe, Permian.....	4,968- 4,998
488	62041	Refugio-Fox.....	Refugio.....	5,800 ft, Frio, Oligocene.....	5,843- 5,859
489	62195	Refugio, Old.....	...do.....	5,700 ft, Frio, Oligocene.....	.....
490	51065	Reinecke.....	Borden.....	Canyon, Pennsylvanian.....	6,886- 6,920
491	48042	Rincon.....	Starr.....	Frio, Main G, Oligocene.....	4,124- 4,142
492	56052	Robertson.....	Gaines.....	San Angelo and Clear Fork, Permian....	.....
493	59061	Robertson, North.....	...do.....	7,100 ft, Clear Fork, Permian.....	7,114
494	54110	Rodessa.....	Marion.....	Gloyd, Trinity, Lower Cretaceous.....	5,954- 5,996
495	59080	Round Top.....	Fisher.....	Palo Pinto Reef, Pennsylvanian.....	4,808- 4,820
496	59036	Running W.....	Crane.....	Waddell, Ordovician.....	5,790
497	63023	Rusmag.....	Jack.....	Caddo, Pennsylvanian.....	4,466- 4,547
498	54040	Russell.....	Gaines.....	Clear Fork, Permian.....	7,350- 7,700
499	54038	Russell, North.....	...do.....	Devonian.....	11,090-11,440
500	54026	Sadler.....	Grayson.....	Sadler, Pennsylvanian.....	6,896- 6,950
501	56072	Sadler, West.....	...do.....	Huff, Pennsylvanian.....	6,413- 6,432
502	63120	Salt Creek.....	Kent.....	Canyon Reef, Pennsylvania.....	6,200
503	62046	Salt Flat.....	Caldwell.....	Austin, Upper Cretaceous and Buda, Lower Cretaceous.	2,330- 2,674
504	56059	Sand Hills (McKnight)...	Crane.....	San Andres, Permian.....	3,390
505	63073	Sand Hills (Tubb).....	...do.....	Clear Fork, Permian.....	3,700- 4,500
506	59028	Scarborough.....	Winkler.....	Yates, Permian.....	3,000
507	55038	Seeligson.....	Kleberg.....	Frio 19B, Oligocene.....	6,057- 6,074
508	55039	...do.....	...do.....	Frio 19C, Oligocene.....	6,123- 6,129
509	54153	Seminole.....	Gaines.....	San Andres, Permian.....	5,240- 5,270
510	63121	Seminole, West.....	...do.....	...do.....	5,009
511	56034	Shafter Lake.....	Andrews.....	...do.....	4,482
512	56053	Sharon Ridge.....	Scurry.....	...do.....	1,759
513	56071	Sherman.....	Grayson.....	7,500 ft, Baker, Pennsylvanian.....	7,247- 7,326
514	56069	...do.....	...do.....	8,900 ft, Cordell, Pennsylvanian.....	9,238- 9,375
515	59022	Shipley.....	Ward.....	Queen, Permian.....	3,100
516	53019	Slaughter.....	Hockley.....	Permian.....	.....
517	58052	Slocum, Northwest.....	Anderson.....	Woodbine C, Upper Cretaceous.....	5,564- 5,567
518	61138	Snyder.....	Howard.....	San Angelo, Permian.....	2,598- 2,727
519	49028	Sour Lake.....	Hardin.....	Eocene.....	.....
520	59144	Spindletop.....	Jefferson.....	Miocene.....	3,500- 4,500
521	52022	Spraberry Deep.....	Dawson.....	Spraberry, Pennsylvanian.....	6,770- 6,811
522	63123	Spraberry Trend.....	Midland.....	Clear Fork, Permian.....	.....

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
Texas--Continued					
523	58005	Spraberry Trend.....	Reagan.....	Spraberry, Permian.....	7,128- 7,228
524	46129	Stowell.....	Jefferson.....	Frio, Oligocene.....	7,838
525	55043	Stratton.....	Kleberg.....	Bertram, Wardner, Sellers 2 and P-4, Frio, Oligocene.	6,591- 6,635
526	59107	Sun, North.....	Starr.....	Frio C-25, Oligocene.....	4,318- 4,326
527	62052	Taft Deep.....	San Patricio.....	Frio D-2, Oligocene.....	6,209- 6,214
528	54106	Talco.....	Titus.....	Trinity, Lower Cretaceous.....	4,258- 4,276
529	62084	Tatum.....	Rusk.....	Lower Pettit, Lower Cretaceous.....	6,782- 6,786
530	52084	Thompson.....	Fort Bend.....	3,600 ft, No. 2, Miocene.....	3,478- 3,510
531	48056	Tijerina-Canales-Blucher	Jim Wells.....	Frio, Oligocene.....	7,115- 7,121
532	63013	Todd Deep.....	Crockett.....	Ellenburger, Cambro-Ordovician.....	6,232- 6,320
533	62044	Tom O'Connor.....	Refugio.....	5,500 ft, Frio, Oligocene.....	5,536- 5,550
534	62193	...do.....	...do.....	5,900 ft, Frio, Oligocene.....	.....
535	59154	...do.....	...do.....	Frio, Oligocene.....	.....
536	55072	Tomball.....	Harris.....	Schultz, Cockfield, Eocene.....	5,537- 5,544
537	59123	Trinity Bay.....	Chambers.....	Frio 12, Oligocene.....	8,106- 8,108
538	61170	Triple N.....	Andrews.....	Pennsylvanian.....	8,897- 8,961
539	63059	TXL.....	Ector.....	Devonian.....	7,818- 7,900
540	63046	...do.....	...do.....	Ellenburger, Cambro-Ordovician.....	9,359- 9,411
541	59047	...do.....	...do.....	Tubb, Permian.....	6,158
542	56058	University Block 9.....	Andrews.....	Devonian.....	10,450
543	56054	...do.....	...do.....	Wolfcamp, Permian.....	8,430
544	51060	University-Waddell.....	Crane.....	Devonian.....	8,510- 9,225
545	62168	Van.....	Van Zandt.....	Woodbine, Upper Cretaceous.....	2,682- 2,811
546	63071	Vealmoor.....	Howard.....	Pennsylvanian.....	7,853- 7,870
547	63052	Vealmoor, East.....	...do.....	Canyon Reef, Pennsylvanian.....	7,485- 7,535
548	50044	Village Mills, East.....	Hardin.....	Yegua and Cockfield Eocene.....	7,118- 7,126
549	56048	Virey.....	Midland.....	Ellenburger, Cambro-Ordovician.....	13,276
550	54155	Waddell.....	Crane.....	Grayburg, Permian.....	3,500
551	54125	Walnut Bend.....	Cooke.....	Upper Strawn, Pennsylvanian.....	3,692- 3,706
552	54127	...do.....	...do.....	Winger, Strawn, Pennsylvanian.....	5,405- 5,435
553	54157	Ward, South.....	Ward.....	Yates, Permian.....	2,400
554	59176	Ward-Estes, North.....	...do.....	...do.....	2,696- 2,756
555	62033	Wasson (66).....	Yoakum.....	Clear Fork, Permian.....	6,338- 6,686
556	62034	Wasson (72).....	Gaines.....	...do.....	7,006- 7,340
557	58004	Wasson.....	...do.....	San Andres, Permian.....	4,900- 5,150
558	63210	...do.....	Yoakum.....	Wichita-Albany, Leonard, Permian.....	8,204- 8,404
559	58007	Webster.....	Harris.....	Marginulina, Frio, Oligocene.....	5,090- 5,110
560	48036	Welch.....	Dawson.....	San Andres, Permian.....	4,830- 4,935
561	56090	West Columbia.....	Brazoria.....	Frio Z, Oligocene.....	5,484- 5,585
562	52083	West Columbia, New.....	...do.....	Frio, Oligocene.....	4,918- 4,934
563	58121	West Ranch.....	Jackson.....	Frio, 41-A, Oligocene.....	5,736
564	58126	...do.....	...do.....	Frio, 98-A, Oligocene.....	6,145
565	59067	Westbrook.....	Mitchell.....	Clear Fork, Permian.....	3,100
566	55045	White Point, East.....	San Patricio.....	5,600 ft, Brigham, Frio, Oligocene.....	5,550- 5,580
567	52093	Willamar, West.....	Willacy.....	Frio 1, Oligocene.....	7,920- 7,950
568	63010	Wilshire.....	Upton.....	Ellenburger, Cambro-Ordovician.....	11,995-12,158
569	55073	Withers, North.....	Wharton.....	Frio C, Oligocene.....	5,312- 5,318
570	54177	World.....	Crockett.....	Grayburg, Permian.....	2,600
571	63057	Yarborough and Allen...	Ector.....	Ellenburger, Cambro-Ordovician.....	10,650-10,714
572	59156	Yates.....	Pecos.....	San Andres, Permian.....	973- 1,038
Utah:					
573	59164	Aneth.....	San Juan.....	Aneth, Upper Paradox, Hermosa, Pennsylvanian.	5,700- 5,840
574	PC-57-12	Ismay.....	...do.....	Upper Paradox, Pennsylvanian.....	5,585- 5,625
575	PC-60-194	Lisbon.....	...do.....	Mississippian.....	8,738- 8,750
576	PC-62-42	Red Wash (Walker Hollow)	Uintah.....	Green River, Tertiary.....	5,520- 5,626
Wyoming:					
577	PC-51-145	Beaver Creek.....	Fremont.....	Steel (Cody), Upper Cretaceous.....	3,632- 3,785
578	PC-50-357	Big Muddy.....	Converse.....	Wall Creek, Frontier, Upper Cretaceous.	3,069- 3,180
579	PC-49-78	Big Sand Draw.....	Fremont.....	Phosphoria, Permian.....	6,850- 7,257
580	PC-48-33	...do.....	...do.....	Tensleep, Pennsylvanian.....	7,281- 7,593

TABLE 1. - Summary of information regarding geographical and geological source of samples--Continued

Item	Sample	State and field	County or parish	Producing formation and age	Depth, feet
		Wyoming--Continued;			
581	PC-50-630	Byron.....	Big Horn.....	Tensleep, Pennsylvanian.....	5,163- 5,314
582	PC-56-148	Cottonwood Creek.....	Washakie.....	Phosphoria, Permian.....	7,270- 7,323
583	PC-60-111	Coyote Creek.....	Crook.....	Minnelusa, Pennsylvanian.....	6,368- 6,409
584	PC-57-147	Donkey Creek.....	...do.....	Dakota, Lower Cretaceous.....	6,259- 6,293
585	PC-50-552	Elk Basin.....	Park.....	Frontier, Upper or Middle Cretaceous...	1,540- 1,556
586	PC-50-550	...do.....	...do.....	Tensleep, Pennsylvanian.....	4,676- 4,856
587	PC-50-551	...do.....	...do.....	Madison, Mississippian.....	5,156- 5,668
588	PC-62-116	...do.....	...do.....	Jefferson, Devonian.....	5,468- 5,510
589	PC-62-117	...do.....	...do.....	Bighorn, Ordovician.....	5,918- 5,928
590	PC-54-46	Fiddler Creek.....	Weston.....	Newcastle (Muddy), Lower or Middle Cretaceous	5,266- 5,276
591	PC-56-333	Four Bear.....	Park.....	Madison, Mississippian.....	3,470- 3,702
592	PC-50-559	Frannie.....	...do.....	Tensleep, Pennsylvanian.....	2,734- 2,940
593	PC-50-625	Garland.....	Big Horn.....	Amsden, Pennsylvanian.....	4,026- 4,060
594	PC-50-626	...do.....	...do.....	Madison, Mississippian.....	4,025- 4,100
595	PC-58-65	Glenrock, South.....	Converse.....	Dakota, Lower Cretaceous.....	6,090- 6,118
596	PC-56-144	Grass Creek.....	Hot Springs.....	Crow Mountain, Curtis, Triassic.....	3,717- 3,781
597	PC-50-728	...do.....	...do.....	Embar, Permian.....	3,838- 3,897
598	PC-50-727	...do.....	...do.....	Tensleep, Pennsylvanian.....	4,236- 4,370
599	PC-58-66	Grieve.....	Natrona.....	Muddy, Lower or Middle Cretaceous.....	6,723- 6,780
600	PC-50-715	Hamilton Dome.....	Hot Springs.....	Embar, Permian.....	2,325- 2,617
601	PC-50-716	...do.....	...do.....	Tensleep, Pennsylvanian.....	2,602- 2,773
602	PC-56-143	...do.....	...do.....	Big Horn, Ordovician.....	3,522- 3,526
603	PC-50-640	Little Buffalo Basin....	...do.....	Phosphoria, Permian.....	4,404- 4,488
604	PC-50-639	...do.....	...do.....	Tensleep, Pennsylvanian.....	4,594- 4,853
605	PC-50-89	Lost Soldier.....	Sweetwater.....	...do.....	4,074- 4,456
606	PC-48-25	...do.....	...do.....	Madison, Mississippian.....	4,794- 5,410
607	PC-50-87	...do.....	...do.....	Cambrian.....	6,348- 7,323
608	PC-33-150	Meadow Creek.....	Johnson.....	Shannon, Upper Cretaceous.....	4,255- 4,262
609	PC-53-149	...do.....	...do.....	Tensleep, Pennsylvanian.....	9,060- 9,100
610	PC-56-142	Murphy Dome.....	Washakie.....	...do.....	4,752- 5,012
611	PC-56-340	Oregon Basin, West.....	Park.....	Phosphoria, Permian.....	4,311- 4,348
612	PC-50-565	Oregon Basin, North.....	...do.....	Tensleep, Pennsylvanian.....	3,380- 3,398
613	PC-50-566	...do.....	...do.....	Madison, Mississippian.....	3,930- 3,965
614	PC-63-78	Patrick Draw.....	Sweetwater.....	Almond, Upper Cretaceous.....	4,232- 4,249
615	PC-60-109	Rozet.....	Campbell.....	Muddy, Middle Cretaceous.....	6,935- 6,954
616	PC-53-98	Salt Creek.....	Natrona.....	Second Wall Creek, Upper or Middle Cretaceous.	2,605- 2,668
617	PC-53-102	...do.....	...do.....	Morrison, Jurassic.....	2,592- 2,610
618	PC-53-106	...do.....	...do.....	Tensleep, Pennsylvanian.....	3,908- 3,938
619	PC-55-443	Steamboat Butte.....	Fremont.....	Crow Mountain, Curtis, Triassic.....	5,524- 5,540
620	PC-49-120	...do.....	...do.....	Tensleep, Pennsylvanian.....	6,830- 6,923
621	PC-58-42	Sussex (Unit A).....	Johnson.....	Upper Parkman, Upper Cretaceous.....	3,073- 3,110
622	PC-53-147	Sussex (Unit B).....	...do.....	Amsden, Pennsylvanian.....	8,917- 9,098
623	PC-50-80	Wertz.....	Carbon.....	Tensleep, Pennsylvanian.....	5,999- 6,200
624	PC-50-79	...do.....	...do.....	Madison, Mississippian.....	6,670- 7,017
625	PC-49-96	Winkleman Dome.....	Fremont.....	Phosphoria, Permian.....	2,600- 2,921
626	44L-23	...do.....	...do.....	Tensleep, Pennsylvanian.....	2,915- 3,534

TABLE 2. - Summary of general characteristics and analytical and computed data

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight-percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight-percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline-free basis	Specific gravity, 60/60° F	
1	43.6	BB	0.38	40	1.3	10.7	23.5	30.8	16.6	16.7	9.5	30	26	0.956	1
2	28.6	BB	.65	105	6.8	6.1	11.3	24.9	19.3	37.8	17	41	46	.992	2
3	29.7	BB	.16	61	8.1	7.7	19.7	24.9	16.3	31.4	23	46	43	1.016	3
4	27.9	BB	1.47	135	9.1	4.7	13.6	21.6	19.3	40.7	11	38	50	.994	4
5	38.4	BG	.90	38	1.6	8.6	23.6	27.4	16.7	20.5	22	44	32	.951	5
6	36.6	GB	1.33	42	4.7	10.2	20.9	25.2	15.8	25.2	22	44	38	.976	6
7	32.8	BB	1.55	52	4.3	7.1	19.3	25.8	15.5	31.7	21	43	43	.978	7
8	22.5	BB	2.10	220	4.3	1.7	9.5	21.8	19.0	47.0	33	53	54	.985	8
9	30.2	BB	1.99	67	7.3	7.3	17.4	23.5	15.8	34.5	19	43	47	1.003	9
10	32.7	BB	1.58	56	5.1	8.1	17.0	27.3	15.6	30.1	19	45	41	.984	10
11	21.5	BB	.92	250	6.1	5.7	12.3	23.8	13.6	43.3	40	54	54	1.020	11
12	35.2	GB	.42	42	2.5	10.7	23.7	26.2	15.2	22.3	31	47	35	.980	12
13	35.0	GB	.59	40	2.7	10.4	25.1	29.6	12.6	22.2	29	46	34	.987	13
14	28.7	BB	.90	73	4.6	8.6	17.8	23.1	12.9	36.2	29	48	50	.998	14
15	15.0	BB	.23	2,440	5.9	-	2.1	25.7	21.1	49.4	-	72	51	1.021	15
16	24.0	BB	.75	135	6.0	4.4	15.0	24.8	16.3	37.7	35	56	48	1.016	16
17	30.6	BB	.59	46	3.9	10.1	23.8	24.1	12.1	28.0	36	61	44	.993	17
18	32.3	BB	.51	46	3.0	7.8	25.0	28.0	16.0	23.2	33	48	35	.990	18
19	19.0	BB	3.40	1,230	5.5	5.3	11.8	17.3	11.8	53.3	29	55	65	1.032	19
20	17.5	BB	5.07	3,000	9.9	3.8	9.5	17.1	13.0	55.7	24	52	65	1.038	20
21	35.2	GB	.53	41	3.5	11.4	25.9	24.1	14.1	23.1	27	47	38	.994	21
22	28.8	BB	.31	67	3.1	5.3	17.9	27.4	20.2	28.4	32	50	37	.989	22
23	31.5	BG	.25	48	2.2	6.2	18.9	28.5	19.9	24.8	33	46	34	.976	23
24	20.2	BB	.55	195	4.3	-	6.9	31.4	24.0	36.5	34	68	40	.998	24
25	34.0	GB	.39	43	3.0	11.2	23.8	22.3	15.0	25.3	32	52	40	.988	25
26	37.0	GB	.38	33	2.5	12.4	23.1	25.9	14.2	20.8	32	50	34	.982	26
27	40.0	BG	.12	35	1.4	13.0	32.8	25.9	12.5	12.4	31	45	24	.982	27
28	30.4	GB	.95	58	4.2	6.4	20.6	23.9	15.9	31.4	32	46	44	.989	28
29	32.3	GB	.82	50	2.4	6.3	23.6	25.2	15.1	29.2	30	47	43	.990	29
30	32.5	BB	.42	49	2.1	9.4	20.7	24.3	14.8	27.6	31	49	41	.997	30
31	12.7	BB	1.16	>6,000	6.8	-	-	26.4	13.2	59.4	-	77	60	1.023	31
32	32.3	BB	1.15	50	4.4	9.0	22.8	24.2	16.4	26.1	28	47	39	1.002	32
33	29.9	BB	.40	60	4.1	5.1	21.3	27.2	15.7	29.9	32	47	41	.993	33
34	25.2	BB	.20	115	4.7	3.1	17.7	24.7	16.3	38.0	35	53	48	.999	34

35	22.8	BB	.68	135	2.1	1.2	14.1	30.8	15.7	37.4	39	64	45	.992	35
36	17.5	BB	.93	1,750	5.6	-	2.1	19.8	23.2	54.4	-	55	56	.991	36
37	11.7	BB	5.93	>6,000	4.1	1.1	6.1	16.0	13.5	63.2	27	64	68	1.051	37
38	34.0	BB	.57	51	2.3	12.8	21.8	24.3	11.9	25.0	30	53	41	1.000	38
39	37.2	BB	.31	41	2.7	11.9	25.4	25.6	14.5	19.9	30	47	33	.986	39
40	36.8	GB	.63	40	2.6	13.3	24.4	25.8	15.0	20.7	30	44	34	.986	40
41	33.0	BB	.31	48	4.9	10.9	23.3	23.7	12.7	27.2	31	48	43	.996	41
42	37.6	BG	.40	37	1.7	11.8	25.7	29.0	12.7	17.8	34	46	30	.973	42
43	22.6	BB	1.57	210	3.0	7.5	12.5	20.9	15.6	43.1	36	52	54	1.015	43
44	18.1	BB	2.50	680	6.9	1.5	10.2	22.3	14.2	51.6	33	58	59	1.017	44
45	14.8	BB	.85	5,100	5.8	-	1.0	18.6	23.2	55.8	-	69	57	1.008	45
46	12.6	BB	1.19	>6,000	6.8	-	-	14.6	18.3	65.7	-	68	-	1.013	46
47	34.0	BB	.40	44	2.7	7.2	26.3	30.8	16.4	19.1	30	48	29	.988	47
48	29.8	BB	.58	49	3.1	6.8	22.1	30.1	12.7	27.4	35	58	39	.986	48
49	20.2	BB	3.66	500	7.6	2.9	16.0	20.5	13.9	46.3	30	62	57	1.027	49
50	22.6	BB	1.29	208	2.7	-	13.7	25.9	20.7	38.7	32	56	45	1.009	50
51	33.2	BG	.33	52	1.8	6.5	28.5	26.3	14.4	24.1	31	52	37	.963	51
52	15.6	BB	.96	-	2.0	-	2.8	28.1	23.7	43.7	-	77	46	1.018	52
53	22.6	BG	.94	160	4.3	3.7	15.4	23.8	16.8	39.8	37	63	50	1.003	53
54	17.3	BB	4.10	7,648	4.1	3.5	11.1	19.2	15.3	50.0	27	56	59	1.054	54
55	26.3	BB	.68	76	3.5	.7	13.9	32.3	21.1	31.8	34	49	37	.980	55
56	16.0	BB	.68	1,900	5.9	-	1.0	19.8	26.6	52.0	-	65	53	.998	56
57	35.0	BB	.36	100	2.9	12.4	22.6	24.3	14.7	23.5	32	48	38	.985	57
58	32.7	BB	.56	46	3.8	11.2	22.7	22.0	14.2	28.4	30	46	44	.999	58
59	20.2	BB	3.27	540	5.1	4.0	12.0	18.8	13.0	51.2	31	55	62	1.020	59
60	23.1	GB	2.48	580	4.0	2.9	17.2	22.2	13.9	43.7	28	48	55	1.011	60
61	25.7	BB	1.72	95	3.1	5.6	14.7	25.8	14.9	36.0	28	56	47	1.021	61
62	14.8	BB	.98	>6,000	5.6	-	-	26.5	16.1	55.3	-	70	-	1.018	62
63	23.8	BB	.45	145	5.5	2.1	14.9	24.3	18.7	39.4	36	54	48	.995	63
64	22.6	BB	1.86	230	5.5	3.1	15.8	22.4	15.6	42.9	31	54	53	1.016	64
65	28.2	GB	1.40	80	4.3	7.5	18.8	21.9	16.7	34.1	29	47	47	1.011	65
66	38.6	BG	.35	38	1.5	13.9	26.4	23.6	15.1	18.6	32	43	32	.966	66
67	34.8	GB	.52	43	2.8	5.7	30.1	29.9	13.3	20.5	31	45	32	.994	67
68	35.2	GB	.35	43	3.5	11.7	21.2	26.1	16.0	23.0	31	48	35	.990	68
69	11.1	BB	2.25	>6,000	3.4	-	1.0	15.9	9.5	72.0	-	64	74	1.025	69
70	29.7	BB	.83	59	2.3	6.9	20.4	25.4	16.3	30.3	28	51	42	.996	70
71	32.1	BB	.87	65	3.2	12.8	20.0	21.1	14.4	30.1	30	46	46	1.003	71
72	28.6	GB	.87	63	4.3	8.3	19.8	24.9	15.9	30.9	37	52	44	1.000	72
73	32.8	BB	.33	47	2.7	4.7	23.8	30.4	16.1	23.2	31	45	32	.986	73
74	14.7	BB	4.99	>6,000	9.7	2.0	9.3	16.4	10.2	61.3	30	57	71	1.038	74
75	32.7	GB	.94	45	3.1	7.7	22.4	26.8	10.7	31.9	29	44	46	.973	75
76	31.7	BB	.55	52	3.5	6.6	22.4	25.8	16.7	28.1	28	47	40	.991	76
77	23.3	BB	2.79	220	8.2	6.2	14.2	19.9	13.1	46.0	28	51	58	1.018	77
78	36.0	GB	.23	41	2.7	10.3	24.7	26.0	14.5	21.7	30	45	35	.982	78

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight-percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight-percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline-free basis	Specific gravity, 60/60° F	
79	40.0	DG	0.16	35	1.0	15.2	32.6	27.3	13.3	8.9	33	49	18	0.986	79
80	29.9	DG	.33	46	1.4	5.5	16.1	37.0	20.9	20.0	40	50	26	.973	80
81	34.2	BB	.45	43	3.0	9.9	23.6	25.8	13.9	25.0	30	48	39	.984	81
82	23.8	BB	1.84	160	6.1	3.6	14.3	23.3	16.1	41.9	33	53	52	1.004	82
83	31.3	BB	.94	56	4.8	9.9	20.1	21.4	15.3	31.5	29	46	46	.994	83
84	37.0	BG	.29	38	1.6	11.1	23.8	28.7	16.6	17.3	34	46	28	.966	84
85	22.1	BB	.53	124	3.5	-	14.8	28.6	16.9	39.1	40	62	46	.995	85
86	22.1	BB	1.44	190	5.4	4.1	12.9	22.8	16.7	43.5	33	57	52	1.007	86
87	13.6	BB	1.86	>6,000	6.4	-	-	23.4	14.7	61.0	-	71	-	1.015	87
88	38.2	BG	.07	40	1.3	10.2	21.8	21.5	16.4	27.9	28	32	42	.930	88
89	38.8	BG	.08	37	1.4	10.2	28.9	25.6	13.3	22.4	29	38	37	.941	89
90	39.6	DG	.20	41	1.6	8.5	19.5	28.2	18.6	22.2	20	36	31	.942	90
91	34.8	GB	.56	48	2.3	6.9	19.2	27.4	18.5	26.5	22	43	37	.962	91
92	48.1	BG	.12	33	.6	21.2	28.7	26.4	11.9	10.8	22	33	22	.929	92
93	35.2	GB	.18	51	1.6	5.8	23.8	25.7	15.3	29.2	25	37	42	.940	93
94	35.6	BG	.21	46	2.7	9.1	20.7	24.8	14.7	28.3	23	41	42	.960	94
95	37.2	GB	.19	44	3.1	11.1	21.8	25.3	15.7	25.1	22	38	38	.965	95
96	38.6	BG	.19	43	2.0	10.3	22.5	24.7	17.2	21.6	24	46	34	.941	96
97	36.4	BG	.15	49	1.4	7.7	21.4	24.1	16.0	30.0	23	36	43	.932	97
98	38.8	BG	.16	42	2.0	12.5	21.5	23.7	14.5	24.6	26	38	39	.949	98
99	39.8	BB	.27	43	2.1	11.4	21.1	25.0	15.4	22.5	24	37	36	.959	99
100	36.0	BG	.23	45	2.2	10.1	21.1	26.7	13.7	25.4	25	40	39	.967	100
101	37.4	BG	.20	44	2.6	11.3	21.3	24.6	15.3	25.4	25	39	39	.954	101
102	35.8	BG	.19	66	2.0	8.4	19.7	23.0	16.4	30.6	24	37	44	.941	102
103	36.6	GB	.25	47	2.1	8.4	21.3	24.5	15.8	28.4	24	36	41	.947	103
104	37.2	BG	.17	43	3.3	11.4	21.1	24.6	15.5	25.3	25	38	39	.959	104
105	35.2	BB	.20	47	3.5	8.7	22.2	24.9	16.4	27.5	22	37	40	.967	105
106	31.9	BB	.30	61	2.9	5.9	20.6	25.9	19.8	27.7	22	42	38	.982	106
107	34.6	BB	.57	52	4.0	8.3	20.0	24.8	15.5	29.5	22	39	42	.972	107
108	38.8	BB	.44	42	1.7	9.8	28.9	25.8	13.1	21.3	20	38	35	.972	108
109	36.8	BB	.18	43	2.3	6.2	25.9	31.0	16.7	19.5	19	40	29	.980	109
110	39.8	BB	.37	132	2.3	14.7	23.1	23.6	15.7	21.6	19	37	35	.965	110

111	32.5	BB	.76	74	1.8	8.3	18.0	25.5	18.6	27.2	18	49	38	1.001	111
112	43.6	BG	.12	32	1.0	14.8	28.2	26.9	13.8	13.7	22	39	25	.946	112
113	31.0	BB	.55	85	1.9	5.1	17.0	27.3	19.5	30.7	22	40	40	.970	113
114	39.4	GB	.34	43	2.1	10.6	25.6	27.2	14.0	21.1	21	34	34	.961	114
115	33.8	GB	.21	57	1.7	3.8	16.0	30.6	21.4	27.7	21	35	35	.948	115
116	38.8	BB	< .10	46	1.4	7.0	15.6	23.1	16.4	33.5	19	25	46	.910	116
117	28.8	GB	.59	69	4.7	3.8	15.5	28.5	18.6	32.0	27	42	40	.978	117
118	40.2	DG	.10	65	1.1	11.9	19.4	20.6	16.0	29.9	23	26	45	.913	118
119	43.0	BB	.27	38	2.6	15.5	25.4	27.7	12.7	17.6	19	37	30	.960	119
120	26.3	BB	.77	242	4.1	-	11.8	24.3	19.5	43.6	22	42	50	.974	120
121	27.3	BB	.67	130	6.4	.9	14.8	25.4	18.3	39.8	25	44	48	.970	121
122	35.8	BB	.36	53	2.5	6.9	17.7	24.4	15.9	31.8	23	37	44	.946	122
123	32.3	BB	.58	66	2.4	10.1	16.9	26.9	15.8	29.8	22	44	41	.990	123
124	23.5	BB	.93	84	6.1	5.0	17.8	23.3	16.1	36.7	24	47	48	1.063	124
125	39.2	GB	.41	41	2.6	11.4	22.9	26.4	14.5	23.4	21	36	37	.956	125
126	36.4	BB	.58	51	4.8	11.1	19.3	22.0	14.4	30.3	19	38	45	.972	126
127	36.4	BB	.14	52	2.8	8.9	20.1	23.7	15.6	28.7	21	39	42	.963	127
128	36.6	GB	.26	49	3.5	10.3	20.0	23.0	15.9	28.4	23	41	42	.958	128
129	37.4	GB	.40	43	2.0	13.4	17.8	21.2	16.6	27.3	30	39	42	.946	129
130	37.6	DG	.13	39	.6	8.3	23.0	33.9	16.7	16.5	27	44	25	.938	130
131	34.4	BG	.12	46	.7	3.6	14.6	36.4	23.1	20.3	26	40	25	.931	131
132	36.0	BG	.15	49	1.0	1.5	20.3	35.0	20.0	22.5	20	35	29	.941	132
133	38.2	BG	.15	41	.6	3.6	18.9	47.0	14.8	15.2	28	35	20	.930	133
134	33.6	BG	.27	52	1.4	3.5	15.8	34.7	19.8	25.2	26	40	32	.946	134
135	20.2	BG	.46	270	2.8	1.2	1.3	32.8	28.2	34.8	-	67	36	.988	135
136	33.6	BG	.39	49	1.2	2.2	19.0	34.4	19.2	24.5	26	40	31	.939	136
137	30.0	BG	.17	61	1.2	2.5	10.9	34.7	22.2	28.7	29	46	33	.935	137
138	36.0	BG	.20	49	.8	3.3	14.4	39.4	21.3	20.8	25	36	25	.931	138
139	36.2	BG	.16	44	.6	3.6	14.9	41.6	19.7	18.1	30	35	23	.928	139
140	41.1	BG	.11	36	.6	8.9	27.1	41.0	11.7	10.1	24	42	16	.946	140
141	34.4	BG	.19	46	1.2	2.6	16.8	35.9	18.7	24.5	25	37	31	.940	141
142	37.2	DG	.13	43	1.3	4.9	20.9	37.7	18.6	17.6	27	32	24	.945	142
143	35.2	BG	.16	44	.5	2.2	15.1	45.9	19.6	16.8	28	39	20	.931	143
144	36.8	GB	.34	43	1.9	7.7	20.1	31.2	18.0	21.8	22	38	31	.957	144
145	36.8	BB	.37	44	1.9	5.7	21.3	33.0	18.3	21.5	27	32	30	.930	145
146	35.4	GB	.23	45	1.6	6.4	21.7	31.4	16.6	23.1	24	42	32	.952	146
147	39.2	Green	< .10	41	.2	2.4	15.8	63.4	11.0	6.7	28	32	8	.930	147
148	37.8	Green	.10	47	.4	1.8	12.6	43.0	24.8	16.8	24	29	20	.916	148
149	36.8	BG	.10	42	.5	2.2	14.8	48.0	22.6	11.6	27	32	14	.933	149
150	46.5	Green	< .10	34	.4	16.0	30.3	26.9	12.9	9.3	22	36	19	.942	150
151	34.6	BG	.16	42	1.2	4.9	20.9	34.9	18.7	20.5	27	42	28	.944	151

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on	Specific	
													gasoline- free basis	gravity, 60/60° F	
152	33.6	DG	0.16	49	0.9	2.1	14.5	38.6	21.4	21.9	31	39	26	0.933	152
153	38.8	BG	< .10	38	.3	2.1	32.3	39.7	14.6	10.0	25	41	16	.934	153
154	65.6	<NPA 1	< .10	<32	trace	40.0	40.6	10.8	-	3.4	18	-	24	.823	154
155	31.9	BB	.38	56	2.3	5.0	15.4	32.3	19.3	27.2	24	45	35	.960	155
156	35.6	BG	< .10	42	.4	3.5	14.8	42.0	23.8	14.9	33	35	18	.922	156
157	41.7	BB	< .10	39	1.0	10.1	23.0	31.0	16.7	16.8	21	34	26	.940	157
158	34.4	GB	.27	52	2.4	4.1	18.5	32.3	18.8	26.3	23	36	34	.956	158
159	35.6	BB	.26	44	1.5	5.6	20.4	35.4	16.7	20.6	27	40	28	.948	159
160	36.4	BG	.14	44	.4	1.8	9.9	54.7	19.1	14.3	30	31	16	.921	160
161	39.2	BG	< .10	38	.4	4.2	16.7	53.8	13.5	10.5	28	34	13	.929	161
162	52.0	BG	.20	54	.8	4.2	10.8	40.9	23.4	20.5	29	46	24	.940	162
163	39.2	Green	.07	37	Nil	1.8	12.7	55.6	20.4	9.1	26	30	11	.905	163
164	39.2	Green	< .10	39	.1	1.3	11.7	61.4	16.8	8.4	26	31	10	.909	164
165	37.6	DG	.08	47	.6	2.2	13.4	44.2	22.3	16.9	21	31	20	.923	165
166	34.0	DG	.15	49	.9	4.1	20.2	36.8	18.4	20.1	25	44	27	.937	166
167	36.0	Green	.10	44	.2	1.8	11.4	42.7	27.6	16.3	27	32	19	.913	167
168	27.1	BB	.35	91	1.3	-	4.1	39.6	28.1	26.9	35	49	28	.947	168
169	37.4	DG	.16	42	.7	3.7	21.2	37.9	16.9	18.9	24	36	26	.931	169
170	34.0	GB	.11	49	.7	1.4	8.6	39.4	25.4	21.9	29	31	25	.918	170
171	34.8	BG	.22	49	1.3	5.2	18.4	31.0	22.1	20.9	28	43	28	.958	171
172	39.2	NrA 5	< .10	36	.01	3.9	16.1	44.8	25.0	9.6	23	31	12	.906	172
173	37.6	BG	.18	44	.5	3.3	15.8	39.4	23.3	17.4	26	30	22	.920	173
174	35.8	GB	.28	45	.6	2.8	14.2	44.1	21.9	16.8	29	31	20	.923	174
175	35.0	BG	.31	48	1.0	4.3	16.2	36.9	19.8	22.6	28	36	28	.935	175
176	36.4	Green	.18	40	.8	4.6	21.2	37.0	16.9	18.6	27	40	26	.941	176
177	34.6	Green	.22	46	.8	2.1	18.9	40.4	19.7	17.6	25	44	23	.947	177
178	33.6	BG	.23	56	1.5	3.7	14.3	36.6	19.7	24.6	24	41	30	.945	178
179	38.2	BB	.21	43	1.4	5.0	23.9	32.3	17.7	20.1	23	32	28	.932	179
180	27.1	GB	.17	75	.9	-	4.2	48.3	29.5	16.5	41	51	17	.941	180
181	29.7	BG	.30	57	1.5	2.2	16.0	38.1	14.1	29.5	33	52	37	.944	181
182	31.3	BG	.29	45	1.1	2.3	19.7	37.4	20.1	20.2	34	49	26	.945	182
183	41.1	BB	.66	42	3.2	11.1	26.0	24.5	15.1	23.3	14	31	37	.952	183
184	44.5	BB	.57	39	2.1	14.1	24.0	26.1	14.9	20.6	11	25	33	.932	184
185	29.9	BG	.20	49	.9	1.1	14.4	49.1	16.8	18.4	38	50	22	.947	185
186	35.8	DG	.15	44	.6	1.6	9.9	52.3	23.3	12.5	31	32	14	.927	186
187	40.9	Green	.05	38	.1	2.4	17.7	65.7	4.7	8.9	26	26	11	.903	187
188	54.9	NPA 4	< .10	34	Nil	29.8	37.2	21.4	2.0	5.7	25	31	20	.917	188
189	35.0	BG	.13	49	1.0	1.9	11.0	46.0	23.9	17.2	30	34	20	.936	189

190	36.2	GB	.30	45	1.1	4.1	16.7	36.3	21.3	21.3	25	34	27	.932	190
191	40.4	Green	.14	39	.3	7.8	28.4	38.2	10.8	14.0	23	39	22	.932	191
192	54.7	Green	.11	32	.1	25.4	35.6	28.0	4.9	2.0	20	40	6	.946	192
193	31.1	BB	.13	74	1.1	2.0	6.5	32.0	37.3	21.8	27	38	24	.937	193
194	34.6	BG	.21	45	.8	2.7	15.2	43.0	18.7	19.3	26	40	24	.941	194
195	35.4	DG	.14	47	.7	1.8	12.8	41.5	28.3	14.3	27	37	17	.944	195
196	38.6	GB	.17	39	1.0	6.2	25.9	32.4	18.6	16.2	25	34	24	.936	196
197	37.8	Green	.08	39	.9	3.7	15.0	49.9	18.4	11.7	28	35	15	.927	197
198	28.2	BB	.37	82	3.3	5.3	14.7	25.8	19.7	32.5	25	54	42	.985	198
199	35.4	BG	.20	45	1.1	1.3	25.5	34.1	17.2	21.7	24	41	30	.944	199
200	33.4	BB	1.04	71	4.3	3.5	20.3	24.2	16.2	34.9	10	33	46	.972	200
201	36.2	DG	.15	46	.8	2.7	14.6	41.2	23.7	17.6	22	33	21	.933	201
202	30.6	BG	.19	61	1.7	1.2	12.3	39.2	14.8	31.7	28	43	37	.944	202
203	30.6	BG	.25	61	2.0	2.6	13.4	32.3	21.3	29.6	29	43	36	.953	203
204	41.3	GB	< .10	36	.7	11.1	24.3	29.4	17.9	15.1	23	34	24	.934	204
205	29.9	BB	.15	63	2.0	.9	11.3	29.8	25.5	32.2	31	35	37	.950	205
206	45.6	Green	.06	40	.3	15.5	26.4	29.0	14.1	12.8	21	34	23	.931	206
207	45.4	Green	.03	34	.2	8.8	28.1	35.9	16.0	10.3	19	25	16	.915	207
208	36.0	BB	.23	41	.9	2.3	27.1	35.0	16.5	18.9	26	42	27	.940	208
209	33.8	BG	.13	53	.6	1.5	6.7	39.2	29.1	22.0	30	33	24	.921	209
210	46.3	Green	.04	35	.3	5.9	29.7	41.1	13.2	6.3	20	25	10	.920	210
211	34.0	BG	.19	45	1.0	4.3	17.8	39.1	17.6	20.1	27	45	26	.961	211
212	18.9	BG	.45	539	2.6	-	-	34.5	20.2	44.2	-	66	-	.980	212
213	31.9	GB	.27	52	1.8	4.4	15.2	33.2	19.8	26.8	30	43	34	.952	213
214	45.8	NPA 1	.02	34	Nil	10.1	29.7	37.8	13.5	7.0	25	27	12	.899	214
215	37.4	BB	.30	44	1.8	7.4	19.0	31.2	18.5	22.9	22	34	32	.947	215
216	28.2	BB	.35	71	2.8	5.2	16.3	25.0	21.1	29.6	28	55	39	.990	216
217	31.1	BB	.20	66	1.7	1.2	6.3	34.9	27.6	25.3	32	35	29	.940	217
218	29.1	BG	.36	78	1.4	-	8.7	37.7	24.5	27.7	27	46	31	.948	218
219	42.1	BB	.19	42	1.5	7.2	25.4	31.9	17.1	17.8	12	30	27	.936	219
220	40.2	BB	.26	46	1.5	7.2	25.1	26.1	16.2	24.6	11	32	37	.946	220
221	32.3	BG	.26	51	1.5	4.7	14.0	33.3	20.4	26.3	30	45	33	.951	221
222	35.6	DG	.18	43	1.5	5.7	23.3	35.4	16.7	18.3	27	39	26	.952	222
223	36.0	BG	.12	40	1.1	5.4	21.6	35.5	18.5	18.9	31	35	26	.940	223
224	34.0	BG	.11	49	.6	.9	5.8	47.2	29.1	16.8	28	32	18	.925	224
225	34.4	Green	.09	46	.6	1.5	10.8	49.1	22.9	15.6	24	36	18	.927	225
226	35.8	DG	.20	42	.8	1.3	26.1	40.8	16.5	15.3	27	42	21	.941	226
227	34.4	BG	.33	43	1.9	7.9	23.7	27.8	17.2	21.8	26	50	32	.969	227
228	35.8	BG	.18	48	.7	5.6	13.6	33.0	23.3	23.7	27	32	30	.923	228
229	37.6	GB	.24	41	1.3	6.5	23.9	33.8	16.4	19.2	27	37	28	.946	229
230	34.8	BB	.34	45	1.2	4.5	18.2	34.9	20.1	21.7	30	35	28	.940	230
231	61.5	<NPA 1	< .10	33	Nil	40.3	32.6	15.2	-	7.2	23	-	32	.848	231
232	33.2	BG	.19	51	1.2	3.8	16.3	36.8	20.6	22.4	27	43	29	.942	232
233	32.1	GB	.27	54	2.6	3.0	14.3	34.7	20.0	27.3	28	39	33	.947	233

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline- free basis	Specific gravity, 60/60° F	
234	27.0	GB	0.33	92	2.0	1.3	8.2	34.2	23.4	32.7	28	49	36	0.958	234
235	32.1	DG	.21	51	1.5	3.5	16.5	35.1	14.9	29.4	32	43	37	.944	235
236	35.0	BB	.37	48	2.0	5.5	16.6	31.1	18.4	26.8	21	38	35	.951	236
237	33.0	GB	.10	48	1.3	2.6	12.7	40.0	22.2	20.6	31	41	25	.943	237
238	35.0	NPA 6	< .10	41	.1	2.9	12.7	68.6	12.3	3.4	29	48	4	.924	238
239	41.9	Green	.10	44	1.0	9.1	19.8	25.9	14.1	25.7	14	31	39	.929	239
240	48.5	NPA 8	.30	35	.4	12.9	27.6	31.0	12.5	11.8	15	31	21	.913	240
241	38.2	Green	.78	43	1.2	8.2	21.3	25.8	16.1	27.3	23	36	39	.932	241
242	41.3	GB	.20	46	1.9	10.5	20.3	26.3	13.6	25.5	16	34	39	.940	242
243	41.5	DG	.16	40	1.2	10.8	20.4	27.0	14.0	25.1	16	32	38	.927	243
244	17.1	BB	2.71	1,480	9.4	.8	4.4	19.2	21.6	52.8	23	51	56	1.022	244
245	13.3	BB	1.77	>6,000	7.7	-	2.8	13.9	21.2	61.8	26	54	64	1.031	245
246	35.0	BG	.43	50	2.7	8.8	16.9	28.5	16.8	28.0	24	37	38	.965	246
247	37.2	BB	1.47	47	2.1	11.0	21.3	25.4	13.6	27.5	8.8	36	40	.995	247
248	38.2	BB	1.28	45	2.3	11.7	21.7	24.8	14.6	26.3	9.6	36	40	.987	248
249	32.5	GB	.18	56	2.8	5.2	15.5	28.5	14.1	35.8	26	37	46	.951	249
250	23.1	BB	3.89	360	9.7	6.9	11.7	18.4	17.6	43.5	16	51	55	1.039	250
251	23.3	BB	3.75	370	5.1	7.0	12.2	18.0	15.5	45.4	18	51	58	1.037	251
252	38.6	GB	.17	43	2.0	6.9	23.2	28.5	17.4	22.9	18	33	33	.947	252
253	38.0	DG	.16	43	1.3	10.4	23.0	26.6	17.7	21.6	23	35	33	.949	253
254	39.6	DG	.09	40	1.7	9.3	23.9	30.4	17.4	18.6	25	33	28	.942	254
255	26.8	BB	2.74	125	4.9	6.2	15.0	22.0	16.4	38.7	15	50	50	1.028	255
256	45.8	BG	.43	58	1.0	14.6	26.3	29.3	13.3	14.7	15	34	26	.935	256
257	41.1	BB	.89	41	2.3	12.0	24.5	29.4	14.1	19.4	13	37	31	.964	257
258	30.4	GB	1.02	79	3.6	5.7	15.2	23.5	17.6	37.8	12	44	48	.974	258
259	20.2	BB	3.98	960	10.3	5.3	9.9	16.7	15.7	51.6	16	51	61	1.036	259
260	32.5	BB	.47	56	8.7	6.3	16.3	28.0	13.7	33.3	12	39	43	1.004	260
261	37.3	BG	.80	39	1.3	10.8	22.0	29.0	17.2	19.8	24	44	30	.953	261
262	37.2	Black	1.05	38	2.3	12.9	22.3	26.5	17.9	18.9	26	47	30	.975	262
263	38.8	BG	.67	35	2.0	11.2	25.4	26.2	18.2	17.0	24	42	28	.966	263
264	30.8	BB	.42	62	9.3	3.5	15.5	31.3	13.8	33.6	15	40	43	1.006	264
265	31.5	BB	.48	67	8.4	6.3	16.7	24.7	12.8	36.6	11	36	49	.996	265
266	30.4	BB	.54	71	9.4	3.8	15.1	27.5	14.3	37.2	13	39	47	1.015	266
267	33.8	Black	.36	55	6.9	6.7	18.0	28.6	13.7	31.2	10	40	42	1.002	267

268	40.2	BG	.33	37	.7	9.1	25.0	29.9	17.1	17.7	19	39	27	.939	268
269	29.5	BB	.65	72	4.0	5.4	10.8	28.7	21.5	32.5	28	40	39	.970	269
270	36.2	BG	.14	48	2.6	7.8	18.9	24.1	16.2	30.6	23	33	43	.951	270
271	38.0	DG	.12	40	1.3	10.9	19.0	26.6	16.5	24.5	25	37	36	.948	271
272	46.0	NPA 7	.34	35	.2	2.8	33.6	39.2	16.7	7.6	9.4	26	12	.919	272
273	37.2	BG	.11	39	1.0	11.6	19.3	29.5	16.0	23.0	25	39	34	.942	273
274	43.2	Green	.17	35	.4	11.4	34.6	29.8	12.1	11.7	26	35	22	.926	274
275	37.0	BB	.59	47	2.3	8.7	22.1	25.1	16.3	26.4	20	35	39	.969	275
276	44.5	BG	.35	36	.5	2.7	31.7	39.5	16.8	9.1	11	29	14	.928	276
277	46.0	Green	.17	35	.5	14.5	29.8	27.7	13.2	11.5	24	35	22	.924	277
278	41.1	BG	.33	38	1.3	13.0	24.0	24.9	15.4	20.4	25	38	34	.941	278
279	41.1	Green	.27	37	.5	10.0	25.0	28.0	16.1	16.3	25	38	27	.920	279
280	33.8	GB	1.24	44	3.3	11.2	21.3	25.5	13.2	27.6	28	54	42	.966	280
281	34.0	BG	1.32	42	1.8	9.1	23.7	24.5	15.5	25.9	27	51	39	.969	281
282	28.8	BG	.97	54	3.3	8.1	19.8	25.0	16.2	27.6	28	52	40	.977	282
283	42.1	BG	.10	35	.7	17.4	29.2	26.2	13.6	12.4	31	40	24	.946	283
284	37.8	BG	.89	43	1.8	11.1	24.5	24.8	16.3	20.8	31	43	34	.959	284
285	37.4	GB	1.41	41	2.0	13.7	21.8	24.9	16.2	17.9	27	55	30	.992	285
286	37.4	BG	.11	46	2.0	5.7	17.7	24.6	17.1	32.0	19	32	43	.935	286
287	36.2	BB	1.22	47	1.5	10.5	22.3	25.3	17.6	21.6	25	42	33	.982	287
288	38.0	BG	.51	43	1.3	9.2	23.0	28.6	16.0	21.8	25	40	33	.944	288
289	37.0	DG	.43	43	1.2	7.8	20.3	27.6	18.1	24.5	23	39	35	.939	289
290	36.2	DG	.42	47	1.1	6.0	21.7	28.6	19.4	23.9	23	39	34	.937	290
291	36.4	Green	.12	35	.9	13.4	31.4	27.9	13.2	13.1	39	53	24	.959	291
292	28.9	BB	1.65	64	3.0	1.5	18.9	29.8	19.4	29.5	28	52	37	.975	292
293	55.9	NPA 3	.31	32	.04	26.0	36.1	23.9	4.1	7.2	17	30	20	.891	293
294	39.4	BG	.36	36	.9	15.2	25.8	24.6	13.0	18.0	34	45	32	.947	294
295	38.4	DG	.55	39	1.5	12.9	24.8	25.2	14.2	18.9	31	44	32	.956	295
296	41.7	Green	.11	34	.6	17.1	29.8	24.7	13.1	13.6	32	41	26	.943	296
297	35.0	BG	.95	42	2.2	7.9	25.6	27.4	15.7	22.2	32	46	34	.970	297
298	41.9	Green	.12	42	.7	10.1	20.9	24.3	15.4	27.0	22	28	40	.904	298
299	40.6	BG	.46	35	.7	13.9	22.8	26.8	14.1	17.4	28	42	30	.942	299
300	43.2	NPA 7	.24	35	.4	15.0	27.2	26.8	14.7	13.7	26	40	25	.931	300
301	38.2	Green	.14	55	.6	5.6	18.7	27.0	20.0	25.8	22	35	35	.914	301
302	41.1	BG	.52	34	.5	13.7	27.3	25.7	15.3	16.8	29	40	29	.938	302
303	43.0	NPA 6	.22	33	.4	14.9	28.2	29.6	13.4	12.3	26	42	22	.926	303
304	25.9	BB	2.79	80	8.3	5.6	13.5	24.6	16.6	38.5	22	48	48	1.017	304

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent				Residuum	Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)		Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline- free basis	Specific gravity, 60/60° F	
305	38.6	BG	0.60	35	1.1	14.3	23.9	25.4	15.3	19.1	28	44	32	0.957	305
306	41.3	NPA 8	.31	35	.5	12.9	27.8	27.2	15.3	15.2	26	41	26	.934	306
307	41.5	Green	.25	33	.7	13.1	27.4	25.6	13.6	18.3	26	39	32	.933	307
308	29.3	BB	.70	85	2.6	3.5	17.0	26.2	15.5	37.0	20	42	47	.972	308
309	38.0	BG	.49	47	2.3	10.1	19.8	23.5	16.1	25.7	21	41	39	.952	309
310	39.6	BG	.24	43	1.3	9.7	20.5	24.1	16.6	26.0	23	36	39	.925	310
311	36.2	BB	.52	50	4.2	9.1	20.4	25.5	14.9	28.7	19	40	42	.968	311
312	39.0	DG	.06	64	1.2	7.4	16.8	21.4	17.3	35.3	18	25	48	.904	312
313	33.2	GB	.47	56	1.8	1.5	27.4	23.0	18.0	29.8	24	36	42	.960	313
314	34.6	DG	.47	49	2.3	7.1	22.1	25.2	14.5	30.3	21	39	43	.957	314
315	37.8	Green	.41	44	1.7	10.1	19.3	24.2	15.8	26.2	21	40	40	.949	315
316	35.8	GB	.48	48	2.0	8.1	19.4	27.7	16.6	26.4	21	40	37	.948	316
317	42.1	DG	.22	38	1.1	13.0	28.2	27.5	13.2	17.0	22	37	29	.943	317
318	32.5	GB	.20	62	2.1	4.9	14.2	25.7	15.7	35.4	23	44	46	.944	318
319	39.2	BG	.19	46	1.2	10.7	21.6	23.7	16.6	23.5	24	37	37	.935	319
320	44.1	GB	.21	37	.7	15.1	25.0	24.6	14.5	19.3	21	33	33	.918	320
321	39.8	BG	.35	41	1.0	11.0	22.1	23.3	16.1	22.7	23	38	37	.941	321
322	38.0	BG	.27	42	1.0	9.4	23.2	24.3	16.5	24.6	24	36	38	.938	322
323	37.4	BB	.31	42	1.7	8.0	24.3	28.9	15.2	23.0	25	38	34	.946	323
324	42.1	NPA 8	.11	39	.7	11.0	23.6	26.2	14.3	22.3	19	34	35	.914	324
325	35.0	GB	.22	56	2.4	4.7	19.6	28.3	16.4	30.4	22	35	40	.943	325
326	42.1	NPA 8	.14	38	.7	11.1	25.9	26.4	15.7	20.2	19	33	32	.918	326
327	41.1	Green	.19	41	.9	10.6	22.1	27.6	18.6	19.0	21	35	29	.927	327
328	41.9	Green	.21	38	1.1	14.3	23.3	23.0	15.2	21.2	23	37	36	.931	328
329	28.9	BB	.92	110	4.3	4.3	12.9	25.7	20.1	36.7	27	40	44	.966	329
330	37.0	GB	.65	49	2.7	8.3	20.3	23.9	15.7	29.0	20	38	42	.954	330
331	40.4	Green	.47	40	1.1	13.0	21.9	23.1	14.7	24.3	18	38	39	.941	331
332	39.2	NPA 2	.08	49	.02	1.3	20.1	35.1	22.3	20.1	21	28	26	.892	332
333	40.4	Green	< .10	42	.6	9.4	22.9	31.2	18.4	16.8	21	37	25	.921	333
334	39.8	Green	.25	42	1.1	9.5	21.7	25.0	16.5	25.6	22	34	38	.920	334
335	37.6	GB	.16	45	1.2	7.0	20.5	26.4	18.3	26.0	23	35	37	.928	335
336	38.8	BG	.27	42	1.4	11.9	22.6	24.7	17.1	22.5	21	39	35	.945	336
337	38.6	GB	.13	44	1.2	7.3	23.2	26.5	16.0	26.8	22	29	39	.920	337
338	28.0	BB	1.41	115	5.2	6.1	16.1	20.7	15.2	40.9	25	46	53	.982	338
339	40.9	BG	.27	41	.8	9.9	24.3	26.1	15.2	22.5	19	34	35	.927	339

340	32.3	GB	1.00	74	2.0	6.6	17.1	22.3	15.4	37.4	21	38	50	.966	340
341	27.0	GB	1.34	131	4.9	3.2	14.5	22.2	9.4	48.9	24	49	61	.972	341
342	21.0	BB	1.68	550	5.0	2.6	11.9	18.1	8.7	55.9	24	46	68	1.012	342
343	29.1	BB	1.36	87	4.5	6.2	15.0	22.7	14.0	40.4	24	48	52	.973	343
344	42.8	Green	.11	36	.8	10.4	24.3	24.9	15.1	21.8	17	34	35	.920	344
345	44.3	NPA 8	.12	38	.8	14.2	24.3	24.5	13.3	21.2	18	33	36	.914	345
346	41.1	Green	.11	44	.4	6.5	24.2	25.1	17.6	25.0	22	25	37	.900	346
347	33.0	GB	2.04	44	3.1	10.9	21.0	23.7	16.2	26.4	31	47	40	.985	347
348	40.4	BB	.38	37	1.0	15.1	28.1	26.1	14.5	15.0	30	51	27	.947	348
349	43.6	BG	.04	35	.4	5.0	22.7	52.6	12.2	6.5	17	32	9	.956	349
350	27.7	BG	.24	56	.9	3.3	11.5	44.1	20.9	20.0	39	55	24	.948	350
351	33.2	BG	.23	48	.9	1.7	16.0	41.3	19.2	21.6	28	40	26	.939	351
352	43.2	BG	.22	38	1.1	11.4	23.5	29.4	14.2	20.0	16	33	31	.930	352
353	39.0	GB	.11	41	1.5	11.6	22.2	25.4	15.2	24.2	26	36	37	.935	353
354	45.2	BB	.11	37	1.5	13.9	23.1	31.9	13.5	16.0	8.0	35	26	.943	354
355	36.8	BG	.10	49	1.6	7.0	25.0	27.5	15.2	25.0	25	35	37	.937	355
356	36.2	BG	.14	46	1.2	9.2	22.3	22.9	15.2	29.4	26	37	44	.938	356
357	44.7	Green	.16	37	.2	14.4	28.0	26.5	14.2	15.0	23	31	27	.908	357
358	45.6	BG	.21	<32	1.3	12.4	24.3	32.1	11.6	18.2	12	33	29	.900	358
359	39.4	Green	<.10	40	.6	8.9	25.0	25.5	17.1	22.7	24	32	35	.923	359
360	37.4	DG	.41	40	1.2	10.1	25.7	23.9	15.7	22.4	30	39	36	.945	360
361	26.1	DG	.27	85	1.3	.2	8.5	39.1	21.1	29.7	33	56	33	.944	361
362	41.5	GB	.23	41	1.5	3.0	27.9	32.8	15.3	19.4	9.3	30	29	.940	362
363	42.6	BG	.21	41	.9	4.1	29.3	34.5	15.7	15.5	11	31	24	.945	363
364	36.6	BB	.59	49	1.8	9.2	20.1	22.6	14.4	30.6	20	40	45	.952	364
365	42.8	Green	.06	36	.3	9.0	25.5	44.5	12.9	6.5	24	36	10	.960	365
366	45.6	Green	.11	34	.4	17.7	27.1	26.2	13.2	12.5	23	36	24	.928	366
367	42.1	Green	<.10	35	.2	9.8	32.5	40.2	11.3	4.3	28	44	8	.983	367
368	28.4	GB	2.45	59	4.0	7.7	20.6	23.0	15.0	32.9	32	51	46	1.005	368
369	41.5	BG	.32	40	1.0	6.4	26.4	35.5	16.7	14.0	16	38	21	.930	369
370	32.5	GB	2.12	45	3.3	11.3	20.5	23.6	16.4	27.0	31	49	40	.987	370
371	33.8	GB	.58	48	2.2	4.2	23.2	32.0	16.3	24.1	25	44	33	.956	371
372	25.7	BB	.18	100	1.4	-	2.3	42.6	25.6	28.3	-	49	29	.949	372
373	41.7	GB	.38	37	1.8	15.7	22.5	24.5	19.9	19.9	25	38	34	.950	373
374	44.7	DG	.04	40	.6	14.6	31.9	29.0	13.0	10.4	25	34	20	.930	374
375	37.6	Green	.15	35	.4	6.8	27.8	43.8	13.9	7.5	38	37	12	.946	375
376	38.2	BG	.24	43	2.0	4.9	26.5	30.9	15.4	21.6	17	38	32	.951	376
377	30.4	BB	1.89	51	3.7	5.2	22.5	25.9	16.7	29.7	28	46	41	.984	377
378	38.0	BG	.80	41	1.5	11.5	21.7	25.5	15.0	23.0	29	43	36	.948	378

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline- free basis	Specific gravity, 60/60° F	
379	34.6	BG	1.77	44	1.1	11.0	21.6	23.2	14.4	26.8	30	47	42	0.976	379
380	39.6	Green	.21	41	.9	8.0	25.1	25.7	16.0	23.2	25	33	36	.922	380
381	36.8	BB	.78	46	1.8	2.3	23.4	32.2	18.2	23.2	14	33	31	.948	381
382	45.4	BG	.20	35	.9	18.8	24.2	23.5	12.5	16.1	28	37	31	.933	382
383	38.2	BG	.57	41	1.8	12.7	23.1	23.7	14.3	24.7	24	41	39	.951	383
384	41.5	BG	.23	40	1.6	9.1	22.5	33.7	13.2	21.4	10	32	31	.936	384
385	41.3	GB	.36	39	2.1	11.0	21.4	30.7	14.4	22.2	13	34	33	.948	385
386	52.0	NPA 6	< .10	34	.9	16.2	28.4	32.6	12.1	8.6	12	23	16	.899	386
387	29.7	GB	3.11	57	2.9	5.7	18.7	25.9	14.2	35.0	29	45	47	.978	387
388	39.4	BB	.32	40	1.7	13.5	22.1	25.3	14.5	22.9	26	36	37	.954	388
389	41.7	GB	.13	38	1.1	13.0	23.6	24.7	15.3	20.4	23	34	34	.930	389
390	49.2	DG	< .10	35	.6	16.1	25.9	34.2	12.6	8.8	14	32	16	.923	390
391	34.6	BB	1.31	43	1.6	9.7	21.7	26.4	15.1	25.1	26	53	38	.966	391
392	45.6	Green	.24	33	.3	11.6	24.5	27.8	17.8	13.4	16	31	23	.910	392
393	32.3	Green	.15	45	.5	2.1	17.6	47.0	16.9	16.3	32	47	20	.934	393
394	36.0	Green	< .10	75	.7	3.3	14.9	22.6	16.8	41.2	22	24	51	.900	394
395	40.2	BG	< .10	46	1.0	10.8	20.3	21.4	15.2	29.9	19	29	45	.913	395
396	35.8	GB	.13	46	.8	1.6	14.1	41.2	26.7	13.8	21	39	17	.940	396
397	39.4	GB	.48	38	1.5	11.4	24.1	27.0	15.4	19.8	22	40	32	.948	397
398	44.3	DG	.09	37	.6	14.5	26.6	26.4	15.1	16.0	22	32	28	.918	398
399	34.2	BB	1.53	44	2.2	9.6	22.0	25.6	15.8	26.5	29	44	39	.964	399
400	31.3	BB	2.06	47	2.7	10.0	23.1	24.6	14.4	27.7	32	51	41	1.000	400
401	44.7	Green	.26	37	.6	15.0	25.4	24.7	14.7	17.3	23	33	31	.922	401
402	39.6	BG	.47	40	1.4	9.6	25.5	35.5	15.9	21.0	23	37	34	.938	402
403	42.1	BG	< .10	35	.2	8.1	27.8	46.9	5.6	10.2	22	39	16	.946	403
404	36.4	GB	.51	42	2.5	11.1	23.4	25.3	15.3	23.9	28	41	37	.950	404
405	42.1	BG	.10	38	.6	13.0	25.6	25.6	14.7	19.3	25	34	32	.920	405
406	38.0	DG	.11	38	.8	7.0	21.3	42.9	16.3	12.2	26	39	17	.947	406
407	38.0	GB	.52	46	1.5	8.0	22.4	26.1	16.3	24.1	22	39	36	.944	407
408	38.0	BG	.57	44	1.4	6.9	23.3	27.0	16.5	24.6	21	37	36	.938	408
409	38.4	GB	1.16	40	1.7	12.9	22.5	23.0	15.2	21.7	29	45	36	.964	409
410	35.0	BG	.13	42	.8	5.0	17.1	41.3	18.7	17.7	29	42	23	.936	410
411	21.6	Green	.22	82	.6	-	2.0	53.6	25.2	19.2	-	71	20	.989	411
412	23.7	BG	.17	66	.7	-	5.5	56.5	22.5	15.3	48	69	16	.991	412
413	27.0	BG	.22	74	1.2	.4	6.5	43.6	23.0	25.4	40	50	27	.941	413
414	34.2	BG	1.18	44	2.3	8.2	23.5	25.5	15.7	26.2	29	45	39	.964	414

415	29.7	BB	2.38	49	2.3	9.4	21.1	22.6	11.6	33.0	33	54	49	1.005	415
416	31.0	GB	.15	55	1.1	2.9	12.9	39.5	19.2	23.0	31	48	28	.942	416
417	31.7	BG	.24	48	1.0	5.0	14.8	41.3	18.0	20.9	33	47	26	.943	417
418	26.8	BB	2.19	135	2.9	6.5	14.2	20.5	14.9	43.1	16	47	56	1.005	418
419	51.1	BG	< .10	35	.2	14.2	28.8	33.0	12.8	9.8	11	21	18	.897	419
420	25.4	BB	1.73	89	3.5	.8	14.1	31.2	20.0	33.8	25	58	40	.975	420
421	27.3	BG	.26	79	1.4	.9	9.2	44.5	24.2	21.0	37	51	23	.961	421
422	21.0	Green	.26	91	.8	-	3.4	52.9	22.1	21.5	-	74	22	.991	422
423	28.7	BB	1.92	57	2.8	4.6	16.5	26.8	17.6	32.7	26	50	42	.983	423
424	31.1	Green	.35	41	.7	2.6	30.8	33.3	15.3	17.5	29	67	26	.956	424
425	35.6	GB	.61	43	2.2	4.8	27.5	28.1	16.2	23.0	24	40	34	.961	425
426	45.6	Green	< .10	34	.3	14.4	36.0	30.7	10.1	4.8	25	53	11	.951	426
427	42.3	DG	.19	37	.5	10.8	27.8	28.9	16.6	15.5	19	31	25	.919	427
428	46.5	Green	< .10	43	.3	15.4	26.4	24.0	13.4	16.0	20	32	30	.911	428
429	31.5	BB	1.47	45	2.6	11.0	20.7	25.0	14.7	27.0	36	53	40	.995	429
430	50.1	BG	.01	36	.2	13.6	29.6	34.2	12.3	9.0	12	25	16	.904	430
431	40.9	Green	< .10	34	.3	6.0	30.3	30.6	15.0	17.1	22	31	27	.912	431
432	44.3	Green	< .10	36	.2	12.0	29.7	26.4	14.5	15.6	22	30	27	.904	432
433	37.4	Green	.11	43	1.2	10.9	21.7	22.9	14.4	27.8	28	40	43	.935	433
434	33.2	BB	1.48	46	2.8	6.8	22.9	27.3	16.5	26.4	27	45	38	.969	434
435	32.1	BB	.46	-	2.5	7.2	18.2	21.7	12.4	39.5	24	39	54	.963	435
436	38.6	GB	.29	38	1.4	12.4	27.1	26.9	15.3	18.3	28	40	30	.945	436
437	40.6	BG	.13	35	.7	9.4	29.1	41.5	12.3	6.8	25	48	11	1.001	437
438	36.6	GB	.94	42	1.9	11.3	23.5	24.9	16.1	22.8	26	46	36	.958	438
439	34.2	Green	.95	48	1.7	2.1	24.0	29.7	16.5	26.7	25	39	37	.949	439
440	42.1	Green	.13	40	.5	8.7	21.3	32.9	16.6	19.1	16	30	29	.917	440
441	37.8	Green	.63	43	1.3	6.4	25.3	28.5	15.8	23.3	22	37	34	.944	441
442	40.0	DG	.31	39	1.4	10.1	26.8	28.3	14.3	18.7	25	40	31	.945	442
443	23.7	Green	.20	60	.7	-	6.6	59.9	20.9	12.1	46	73	13	1.001	443
444	40.9	BB	.29	40	1.9	11.5	21.1	30.1	14.4	22.6	14	36	34	.945	444
445	31.1	GB	2.12	48	2.8	9.7	21.3	22.7	16.4	28.3	32	49	42	.997	445
446	37.8	GB	.14	44	2.0	9.5	23.6	26.1	11.0	27.7	26	37	43	.942	446
447	27.0	Green	.17	55	.7	.7	10.8	47.4	22.1	18.0	34	59	21	.959	447
448	28.6	GB	.86	90	2.5	.7	12.0	30.7	21.2	35.4	25	45	41	.947	448
449	31.9	GB	2.19	47	4.2	9.7	20.3	23.0	15.6	29.3	29	51	43	.993	449
450	25.2	BG	.19	62	.6	-	5.9	55.0	18.5	20.4	46	59	22	.943	450
451	40.2	GB	.30	38	.9	11.7	26.8	26.8	15.6	18.9	26	34	31	.929	451
452	27.1	GB	.16	76	.7	-	7.6	41.1	24.2	24.4	37	53	27	.934	452
453	34.8	BG	.11	42	.5	1.8	12.7	53.5	19.5	12.3	30	38	14	.938	453
454	42.5	GB	.30	39	2.3	11.9	21.0	29.3	12.7	21.5	14	35	34	.951	454
455	38.2	BG	.16	35	.5	10.8	26.0	42.8	14.0	6.2	30	59	10	.997	455
456	26.1	BB	2.26	93	4.7	2.9	14.5	26.5	18.3	37.1	26	55	45	.981	456
457	31.5	BG	2.37	53	3.5	7.1	17.6	26.4	17.7	29.6	29	47	40	.977	457
458	41.7	Green	.14	35	.2	12.5	32.0	37.7	8.2	7.3	31	52	14	.967	458

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline- free basis	Specific gravity, 60/60° F	
459	31.1	BB	1.38	61	1.9	9.2	19.6	23.4	13.7	32.5	24	43	47	1.009	459
460	30.0	BB	2.40	54	3.0	9.0	20.7	23.1	15.4	30.9	30	51	45	1.001	460
461	35.6	GB	1.11	46	3.9	10.7	20.6	22.5	15.4	28.5	23	40	43	.973	461
462	29.3	BB	.36	105	3.3	3.5	10.9	27.9	18.7	37.3	28	42	44	.956	462
463	39.6	Green	.13	40	.8	12.0	24.6	24.6	14.7	22.1	28	37	36	.926	463
464	39.0	Green	< .10	37	.2	3.2	20.0	54.6	15.6	6.2	22	39	8	.958	464
465	41.1	BG	.13	39	2.2	12.3	21.7	23.9	16.8	19.7	27	35	33	.941	465
466	44.9	Green	< .10	38	.4	16.1	28.1	25.6	11.8	16.9	22	31	31	.913	466
467	36.8	DG	.14	43	1.0	5.3	19.5	38.1	16.9	19.6	28	38	26	.937	467
468	36.6	DG	.18	43	1.0	3.7	16.0	42.3	19.4	17.3	25	35	22	.937	468
469	40.4	DG	.55	47	1.7	11.1	20.0	22.4	16.0	27.2	23	29	41	.934	469
470	39.8	DG	.97	39	1.8	14.9	22.9	23.0	14.1	21.6	24	46	37	.960	470
471	53.2	NPA 4	< .01	33	.1	14.9	28.9	33.8	13.0	4.6	8.4	27	9	.906	471
472	33.8	BB	1.44	47	2.8	8.6	22.1	23.1	17.0	26.4	27	48	40	.976	472
473	33.2	BB	1.69	45	2.6	8.2	22.8	25.4	15.7	27.7	28	46	40	.965	473
474	41.7	Green	.20	39	.4	9.1	22.7	27.6	19.5	20.1	23	28	30	.902	474
475	37.2	BG	.12	39	.9	10.4	29.6	31.5	14.2	14.3	33	50	24	.950	475
476	28.8	BG	.15	44	.7	2.6	17.2	51.2	17.5	9.8	30	72	12	1.006	476
477	39.6	Green	.14	35	.3	7.9	29.9	45.3	10.9	5.3	28	52	9	.995	477
478	39.4	Green	< .10	35	< .1	7.8	41.2	37.6	2.8	9.3	36	39	19	.936	478
479	38.2	Green	.04	31	.1	6.0	45.3	37.6	3.6	7.0	38	51	15	.955	479
480	39.0	Green	< .10	33	.1	6.6	40.8	40.2	-	11.5	37	-	22	.927	480
481	25.9	BB	2.60	54	3.3	7.8	21.6	24.6	15.6	30.3	35	62	43	1.031	481
482	28.6	BB	2.68	47	1.8	11.0	20.9	24.7	15.0	27.2	36	61	41	1.030	482
483	45.4	Green	.17	35	.4	10.3	36.7	27.0	11.8	12.7	23	27	25	.907	483
484	43.8	GB	.92	39	1.9	17.6	26.2	24.7	12.8	18.4	15	39	33	.963	484
485	26.8	GB	.19	57	1.3	1.4	10.8	40.2	22.7	22.6	37	53	26	.964	485
486	39.2	GB	< .10	44	.9	4.7	14.7	36.8	23.3	17.6	16	30	23	.932	486
487	33.8	BG	1.77	42	2.0	11.0	21.9	23.0	14.7	26.5	30	48	41	.992	487
488	34.4	Green	.12	37	.7	8.8	24.6	44.4	10.8	10.4	27	68	16	.998	488
489	38.8	BG	.10	36	.4	10.8	30.0	41.5	12.6	4.5	30	64	8	1.015	489
490	44.5	Green	.15	36	.6	18.4	25.5	23.1	13.5	16.6	28	34	31	.923	490
491	43.0	BG	.05	33	.3	13.3	31.6	41.0	10.1	3.4	32	41	6	.991	491
492	29.9	BB	1.95	49	2.2	7.7	21.4	23.1	15.8	31.4	33	51	45	.980	492
493	34.8	BG	.79	44	2.4	8.9	22.6	25.7	17.2	25.0	27	42	37	.960	493
494	38.0	BB	.46	48	1.5	1.9	14.2	38.7	21.3	23.3	17	27	28	.923	494

415	29.7	BB	2.38	49	2.3	9.4	21.1	22.6	11.6	33.0	33	54	49	1.005	415
416	31.0	GB	.15	55	1.1	2.9	12.9	39.5	19.2	23.0	31	48	28	.942	416
417	31.7	BG	.24	48	1.0	5.0	14.8	41.3	18.0	20.9	33	47	26	.943	417
418	26.8	BB	2.19	135	2.9	6.5	14.2	20.5	14.9	43.1	16	47	56	1.005	418
419	51.1	BG	< .10	35	.2	14.2	28.8	33.0	12.8	9.8	11	21	18	.897	419
420	25.4	BB	1.73	89	3.5	.8	14.1	31.2	20.0	33.8	25	58	40	.975	420
421	27.3	BG	.26	79	1.4	.9	9.2	44.5	24.2	21.0	37	51	23	.961	421
422	21.0	Green	.26	91	.8	-	3.4	52.9	22.1	21.5	-	74	22	.991	422
423	28.7	BB	1.92	57	2.8	4.6	16.5	26.8	17.6	32.7	26	50	42	.983	423
424	31.1	Green	.35	41	.7	2.6	30.8	33.3	15.3	17.5	29	67	26	.956	424
425	35.6	GB	.61	43	2.2	4.8	27.5	28.1	16.2	23.0	24	40	34	.961	425
426	45.6	Green	< .10	34	.3	14.4	36.0	30.7	10.1	4.8	25	53	11	.951	426
427	42.3	DG	.19	37	.5	10.8	27.8	28.9	16.6	15.5	19	31	25	.919	427
428	46.5	Green	< .10	43	.3	15.4	26.4	24.0	13.4	16.0	20	32	30	.911	428
429	31.5	BB	1.47	45	2.6	11.0	20.7	25.0	14.7	27.0	36	53	40	.995	429
430	50.1	BG	.01	36	.2	13.6	29.6	34.2	12.3	9.0	12	25	16	.904	430
431	40.9	Green	< .10	34	.3	6.0	30.3	30.6	15.0	17.1	22	31	27	.912	431
432	44.3	Green	< .10	36	.2	12.0	29.7	26.4	14.5	15.6	22	30	27	.904	432
433	37.4	Green	.11	43	1.2	10.9	21.7	22.9	14.4	27.8	28	40	43	.935	433
434	33.2	BB	1.48	46	2.8	6.8	22.9	27.3	16.5	26.4	27	45	38	.969	434
435	32.1	BB	.46	-	2.5	7.2	18.2	21.7	12.4	39.5	24	39	54	.963	435
436	38.6	GB	.29	38	1.4	12.4	27.1	26.9	15.3	18.3	28	40	30	.945	436
437	40.6	BG	.13	35	.7	9.4	29.1	41.5	12.3	6.8	25	48	11	1.001	437
438	36.6	GB	.94	42	1.9	11.3	23.5	24.9	16.1	22.8	26	46	36	.958	438
439	34.2	Green	.95	48	1.7	2.1	24.0	29.7	16.5	26.7	25	39	37	.949	439
440	42.1	Green	.13	40	.5	8.7	21.3	32.9	16.6	19.1	16	30	29	.917	440
441	37.8	Green	.63	43	1.3	6.4	25.3	28.5	15.8	23.3	22	37	34	.944	441
442	40.0	DG	.31	39	1.4	10.1	26.8	28.3	14.3	18.7	25	40	31	.945	442
443	23.7	Green	.20	60	.7	-	6.6	59.9	20.9	12.1	46	73	13	1.001	443
444	40.9	BB	.29	40	1.9	11.5	21.1	30.1	14.4	22.6	14	36	34	.945	444
445	31.1	GB	2.12	48	2.8	9.7	21.3	22.7	16.4	28.3	32	49	42	.997	445
446	37.8	GB	.14	44	2.0	9.5	23.6	26.1	11.0	27.7	26	37	43	.942	446
447	27.0	Green	.17	55	.7	.7	10.8	47.4	22.1	18.0	34	59	21	.959	447
448	28.6	GB	.86	90	2.5	.7	12.0	30.7	21.2	35.4	25	45	41	.947	448
449	31.9	GB	2.19	47	4.2	9.7	20.3	23.0	15.6	29.3	29	51	43	.993	449
450	25.2	BG	.19	62	.6	-	5.9	55.0	18.5	20.4	46	59	22	.943	450
451	40.2	GB	.30	38	.9	11.7	26.8	26.8	15.6	18.9	26	34	31	.929	451
452	27.1	GB	.16	76	.7	-	7.6	41.1	24.2	24.4	37	53	27	.934	452
453	34.8	BG	.11	42	.5	1.8	12.7	53.5	19.5	12.3	30	38	14	.938	453
454	42.5	GB	.30	39	2.3	11.9	21.0	29.3	12.7	21.5	14	35	34	.951	454
455	38.2	BG	.16	35	.5	10.8	26.0	42.8	14.0	6.2	30	59	10	.997	455
456	26.1	BB	2.26	93	4.7	2.9	14.5	26.5	18.3	37.1	26	55	45	.981	456
457	31.5	BG	2.37	53	3.5	7.1	17.6	26.4	17.7	29.6	29	47	40	.977	457
458	41.7	Green	.14	35	.2	12.5	32.0	37.7	8.2	7.3	31	52	14	.967	458

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

495	41.3	BG	.26	44	1.0	14.5	25.2	25.0	15.7	18.3	26	36	31	.936	495
496	36.8	GB	.55	46	2.0	7.5	21.4	27.8	15.0	27.8	17	34	39	.950	496
497	39.6	BG	.13	37	.8	10.8	23.7	27.0	16.5	21.4	25	35	33	.930	497
498	34.6	GB	1.23	39	2.7	14.1	24.1	23.5	14.9	21.7	35	51	36	.990	498
499	40.2	GB	.31	37	2.0	12.6	23.3	25.2	13.8	22.1	24	40	36	.957	499
500	33.4	BB	.58	59	3.7	7.8	18.7	22.6	15.8	33.9	22	40	47	.963	500
501	30.0	BB	.82	76	1.7	7.6	17.6	21.6	14.4	38.0	23	47	51	.977	501
502	35.4	GB	.57	41	2.6	10.2	22.9	27.1	10.2	29.6	26	41	44	.953	502
503	37.6	BG	.58	45	1.5	7.1	23.5	31.6	16.4	19.7	22	38	29	.953	503
504	31.7	BB	3.33	45	2.8	10.2	24.1	23.9	16.4	23.9	31	51	37	1.039	504
505	36.4	BB	.79	43	2.2	9.3	24.2	25.8	4.9	34.4	25	39	52	.943	505
506	34.0	DG	1.00	47	2.2	7.0	23.2	27.7	18.0	23.7	25	45	34	.965	506
507	41.3	BG	< .10	35	.4	7.0	32.0	42.9	11.3	5.4	27	45	9	.990	507
508	41.9	NPA 8	< .10	34	.2	7.5	31.3	45.1	11.1	4.0	26	45	7	.982	508
509	33.6	BB	1.86	43	2.9	9.9	22.8	24.3	16.1	26.0	29	48	39	.983	509
510	31.9	GB	2.11	48	2.6	10.4	23.6	24.6	15.4	25.4	30	51	39	1.007	510
511	37.4	BB	.25	46	1.7	3.4	23.1	30.3	17.7	25.2	21	31	35	.936	511
512	27.1	BB	2.04	58	2.5	7.9	19.0	23.0	15.9	33.0	32	55	46	1.018	512
513	36.4	BB	.35	44	1.8	8.6	21.3	26.6	14.1	28.1	22	40	41	.947	513
514	35.6	BB	.35	48	1.8	7.4	20.1	25.4	15.8	29.0	22	41	41	.952	514
515	36.0	DG	1.34	41	2.4	11.1	23.6	25.6	14.7	23.9	27	46	37	.971	515
516	31.3	BB	2.09	48	4.0	11.3	21.0	23.1	16.5	28.0	31	48	41	.995	516
517	45.6	Green	< .10	35	.3	12.5	29.6	30.1	16.0	8.7	27	32	16	.925	517
518	31.0	GB	1.46	80	4.2	10.2	19.6	23.1	15.9	28.9	31	52	43	1.000	518
519	40.6	DG	.14	39	.5	9.0	27.4	29.9	15.9	16.7	30	34	27	.919	519
520	28.6	BG	.15	51	.5	1.8	12.4	45.6	21.8	17.6	36	54	21	.942	520
521	37.2	BG	.17	41	1.9	11.9	24.2	23.4	14.0	25.5	28	40	41	.959	521
522	34.0	BG	.19	52	1.4	8.2	19.1	23.1	14.7	33.3	25	39	47	.947	522
523	35.0	BG	.18	48	2.3	8.8	22.5	23.1	13.9	28.4	29	41	43	.953	523
524	33.4	GB	.17	49	1.1	1.9	14.5	42.6	20.9	19.6	30	39	24	.940	524
525	43.0	BG	< .10	34	.6	9.6	31.3	43.0	10.2	4.7	25	42	8	1.002	525
526	49.2	NPA 4	< .10	47	.8	16.7	44.4	30.3	5.5	1.7	26	36	5	.984	526
527	36.6	Green	.10	37	3.0	3.0	23.9	53.9	12.6	5.8	25	58	8	1.002	527
528	20.5	GB	3.00	520	9.7	-	10.7	19.6	19.0	50.7	23	47	57	1.012	528
529	43.0	Green	.16	42	.5	6.2	22.3	31.2	18.2	17.2	15	29	26	.915	529
530	23.8	BB	.25	140	1.5	-	1.4	40.1	24.3	33.5	-	50	34	.945	530
531	40.5	BG	< .10	35	.6	5.8	31.9	42.7	13.1	6.4	25	42	10	.985	531
532	41.3	Green	.26	38	.6	12.8	22.4	25.4	15.9	20.4	26	36	33	.921	532
533	31.1	Green	.16	39	.7	5.8	23.7	42.7	16.3	10.0	33	73	15	1.008	533
534	34.6	Green	.18	37	.6	8.5	22.4	43.7	8.9	14.0	33	58	21	.989	534
535	34.8	BG	.17	39	.5	8.0	22.6	43.2	14.9	9.5	30	62	14	1.001	535
536	41.1	NPA 6	< .10	35	.1	6.4	26.3	50.4	12.3	4.1	30	36	6	.950	536
537	36.2	BG	.11	41	.3	4.1	19.8	44.3	16.3	13.6	28	42	18	.937	537
538	42.1	BB	< .10	40	1.0	10.5	24.4	28.7	14.5	19.4	24	32	31	.930	538

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data (Con.)

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline- free basis	Specific gravity, 60/60° F	
539	39.0	BB	0.30	44	1.3	11.1	23.4	25.9	15.5	22.7	24	38	35	0.941	539
540	43.4	Green	.23	39	1.0	11.1	22.1	28.4	13.9	21.0	16	31	33	.929	540
541	36.4	Green	.54	47	1.7	8.8	21.5	24.0	15.7	28.5	24	38	42	.947	541
542	44.7	Green	< .10	36	.5	14.1	25.0	26.8	13.4	17.4	22	33	30	.917	542
543	37.0	DG	.57	39	1.5	12.1	24.3	26.4	14.2	21.0	30	43	34	.959	543
544	41.7	Green	.14	37	3.9	10.0	27.7	27.3	16.0	17.6	24	31	29	.916	544
545	34.8	GB	.80	56	3.0	8.0	19.0	25.5	11.7	35.3	16	41	49	.951	545
546	42.1	Green	.09	38	.5	13.1	27.0	26.2	14.3	17.9	26	35	31	.917	546
547	42.3	BG	.13	38	.6	15.8	27.2	24.7	14.1	17.8	27	35	31	.919	547
548	39.6	BG	< .10	39	.4	6.5	20.0	39.5	21.0	11.4	25	33	16	.929	548
549	52.0	NPA 6	< .10	34	.2	15.1	27.6	32.9	12.0	8.7	12	25	16	.898	549
550	33.6	GB	1.69	46	3.0	9.6	21.3	25.5	15.8	26.8	28	45	38	.980	550
551	44.1	GB	.17	38	.8	13.6	23.9	26.0	14.3	20.6	20	30	34	.914	551
552	31.0	BB	.86	77	3.3	7.3	17.2	23.1	16.4	35.7	23	44	47	.971	552
553	35.8	DG	1.12	42	2.2	9.9	23.9	26.3	15.7	23.8	26	48	36	.961	553
554	34.0	GB	1.17	45	2.3	10.4	21.2	25.2	15.4	26.8	26	51	40	.965	554
555	31.9	BB	1.40	44	3.8	11.5	22.4	23.9	15.6	24.1	33	57	38	1.005	555
556	33.2	GB	1.01	42	3.0	11.6	24.3	25.9	15.2	21.7	33	54	35	.993	556
557	32.8	BB	1.76	43	1.7	10.3	23.0	24.0	14.4	27.8	30	48	42	.987	557
558	41.3	BB	.31	37	1.5	15.2	24.5	24.7	14.5	17.2	29	42	30	.955	558
559	29.3	GB	.21	64	1.4	2.9	11.6	36.1	20.5	27.6	35	49	33	.944	559
560	32.3	GB	2.14	45	3.6	9.6	22.1	23.8	16.5	27.0	30	48	40	.983	560
561	28.0	BG	.23	65	1.3	1.4	12.3	34.8	22.6	28.6	30	51	33	.957	561
562	28.6	BB	.19	63	1.8	1.3	12.8	37.0	21.7	26.9	30	51	31	.958	562
563	31.5	Green	.17	41	.4	5.1	20.6	45.7	16.7	9.7	33	65	13	.987	563
564	39.8	Green	.11	35	.3	6.6	28.6	45.3	12.6	5.6	24	49	9	.992	564
565	24.7	BG	2.51	78	3.8	7.3	19.0	21.2	17.0	33.7	34	59	47	1.043	565
566	38.4	NPA 8	.13	35	.3	11.0	29.5	41.4	10.7	6.6	31	61	11	.980	566
567	29.9	BG	.44	73	2.8	-	6.4	42.3	22.4	27.6	19	39	30	.967	567
568	53.7	Green	.07	33	.2	16.7	27.0	32.9	11.8	6.8	13	25	15	.897	568
569	36.4	DG	.10	40	.4	2.0	15.9	55.1	15.6	10.2	28	40	13	.936	569
570	28.2	BB	.70	105	2.9	1.4	15.9	24.3	18.5	39.1	30	47	48	.955	570
571	41.3	BB	.14	39	2.0	9.5	20.0	30.8	13.0	23.7	12	34	35	.951	571
572	30.2	BB	1.54	59	3.5	5.3	18.8	24.8	17.8	31.6	26	54	43	.969	572
573	40.4	DG	.20	38	.8	11.9	23.1	26.3	16.5	21.2	25	31	33	.915	573
574	44.1	BG	.05	33	.5	15.3	26.9	25.8	14.8	14.0	26	33	26	.917	574

TABLE 2. - Summary of general characteristics and analytical and computed data (Con.)

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight-percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue, Conradson, weight-percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline-free basis		
													Specific gravity, 60/60° F		
539	39.0	BB	0.30	44	1.3	11.1	23.4	25.9	15.5	22.7	24	38	35	0.941	539
540	43.4	Green	.23	39	1.0	11.1	22.1	28.4	13.9	21.0	16	31	33	.929	540
541	36.4	Green	.54	47	1.7	8.8	21.5	24.0	15.7	28.5	24	38	42	.947	541
542	44.7	Green	< .10	36	.5	14.1	25.0	26.8	13.4	17.4	22	33	30	.917	542
543	37.0	DG	.57	39	1.5	12.1	24.3	26.4	14.2	21.0	30	43	34	.959	543
544	41.7	Green	.14	37	3.9	10.0	27.7	27.3	16.0	17.6	24	31	29	.916	544
545	34.8	GB	.80	56	3.0	8.0	19.0	25.5	11.7	35.3	16	41	49	.951	545
546	42.1	Green	.09	38	.5	13.1	27.0	26.2	14.3	17.9	26	35	31	.917	546
547	42.3	BG	.13	38	.6	15.8	27.2	24.7	14.1	17.8	27	35	31	.919	547
548	39.6	BG	< .10	39	.4	6.5	20.0	39.5	21.0	11.4	25	33	16	.929	548
549	52.0	NPA 6	< .10	34	.2	15.1	27.6	32.9	12.0	8.7	12	25	16	.898	549
550	33.6	GB	1.69	46	3.0	9.6	21.3	25.5	15.8	26.8	28	45	38	.980	550
551	44.1	GB	.17	38	.8	13.6	23.9	26.0	14.3	20.6	20	30	34	.914	551
552	31.0	BB	.86	77	3.3	7.3	17.2	23.1	16.4	35.7	23	44	47	.971	552
553	35.8	DG	1.12	42	2.2	9.9	23.9	26.3	15.7	23.8	26	48	36	.961	553
554	34.0	GB	1.17	45	2.3	10.4	21.2	25.2	15.4	26.8	26	51	40	.965	554
555	31.9	BB	1.40	44	3.8	11.5	22.4	23.9	15.6	24.1	33	57	38	1.005	555
556	33.2	GB	1.01	42	3.0	11.6	24.3	25.9	15.2	21.7	33	54	35	.993	556
557	32.8	BB	1.76	43	1.7	10.3	23.0	24.0	14.4	27.8	30	48	42	.987	557
558	41.3	BB	.31	37	1.5	15.2	24.5	24.7	14.5	17.2	29	42	30	.955	558
559	29.3	GB	.21	64	1.4	2.9	11.6	36.1	20.5	27.6	35	49	33	.944	559
560	32.3	GB	2.14	45	3.6	9.6	22.1	23.8	16.5	27.0	30	48	40	.983	560
561	28.0	BG	.23	65	1.3	1.4	12.3	34.8	22.6	28.6	30	51	33	.957	561
562	28.6	BB	.19	63	1.8	1.3	12.8	37.0	21.7	26.9	30	51	31	.958	562
563	31.5	Green	.17	41	.4	5.1	20.6	45.7	16.7	9.7	33	65	13	.987	563
564	39.8	Green	.11	35	.3	6.6	28.6	45.3	12.6	5.6	24	49	9	.992	564
565	24.7	BG	2.51	78	3.8	7.3	19.0	21.2	17.0	33.7	34	59	47	1.043	565
566	38.4	NPA 8	.13	35	.3	11.0	29.5	41.4	10.7	6.6	31	61	11	.980	566
567	29.9	BG	.44	73	2.8	-	6.4	42.3	22.4	27.6	19	39	30	.967	567
568	53.7	Green	.07	33	.2	16.7	27.0	32.9	11.8	6.8	13	25	15	.897	568
569	36.4	DG	.10	40	.4	2.0	15.9	55.1	15.6	10.2	28	40	13	.936	569
570	28.2	BB	.70	105	2.9	1.4	15.9	24.3	18.5	39.1	30	47	48	.955	570
571	41.3	BB	.14	39	2.0	9.5	20.0	30.8	13.0	23.7	12	34	35	.951	571
572	30.2	BB	1.54	59	3.5	5.3	18.8	24.8	17.8	31.6	26	54	43	.969	572
573	40.4	DG	.20	38	.8	11.9	23.1	26.3	16.5	21.2	25	31	33	.915	573
574	44.1	BG	.05	33	.5	15.3	26.9	25.8	14.8	14.0	26	33	26	.917	574

575	62.6	NPA 2	.21	<32	Nil	41.5	37.7	14.7	2.3	1.8	22	41	10	.926	575
576	24.2	BB	.11	360	4.8	-	7.8	15.5	16.8	59.7	29	39	65	.952	576
577	33.8	BG	.20	48	1.7	2.1	22.3	28.5	19.4	26.8	24	36	36	.955	577
578	35.8	BG	.12	47	1.6	7.7	18.6	23.4	17.1	31.2	26	36	44	.935	578
579	62.1	<NPA 1	.32	<32	Nil	38.0	45.4	11.7	-	2.7	21	-	19	.860	579
580	34.2	BB	1.35	43	3.1	4.8	21.8	31.7	18.6	21.8	17	48	30	.989	580
581	24.3	BB	2.50	140	6.1	2.6	9.7	21.9	19.0	45.9	18	50	53	.988	581
582	28.6	BB	2.52	63	4.5	5.2	15.0	27.9	20.8	28.9	23	56	37	.999	582
583	40.9	BG	.06	36	1.1	10.5	26.0	25.2	16.1	21.2	24	33	34	.930	583
584	39.4	BG	.12	37	1.1	12.1	22.3	23.0	16.5	24.3	26	34	38	.937	584
585	44.5	Green	.07	33	.5	17.8	29.4	24.3	14.4	12.5	27	36	24	.938	585
586	30.8	GB	1.95	49	3.9	8.1	18.7	22.9	18.1	30.1	25	53	42	.992	586
587	27.3	BB	1.92	68	6.4	5.2	15.9	23.7	19.3	34.9	20	54	45	1.009	587
588	26.8	BB	1.50	71	7.3	3.7	14.9	23.2	19.0	38.6	18	49	48	.995	588
589	25.7	BB	1.77	98	8.0	3.2	13.7	22.2	19.3	40.8	16	48	50	.998	589
590	42.6	Green	.10	35	.6	16.9	25.1	24.1	14.4	17.7	26	35	31	.934	590
591	13.8	BB	3.58	>6,000	12.8	.4	1.7	24.7	20.4	52.9	19	64	55	1.044	591
592	27.5	BB	2.43	66	4.6	4.5	14.5	25.2	19.4	35.2	20	57	44	.994	592
593	22.0	BB	2.88	180	8.9	1.5	11.8	24.8	18.8	42.8	19	55	50	1.021	593
594	19.8	BB	3.10	410	9.6	.7	9.1	21.9	19.6	47.6	17	54	53	1.021	594
595	34.4	GB	.16	55	2.5	5.1	19.8	20.7	18.1	34.7	26	32	47	.942	595
596	24.2	BB	2.58	175	9.0	4.1	11.5	30.4	15.6	36.0	19	64	44	1.022	596
597	24.5	BB	2.64	145	7.4	3.7	12.7	20.8	18.6	41.7	20	52	51	1.011	597
598	24.2	BB	2.68	135	7.8	3.5	12.4	22.8	17.5	42.5	17	52	51	1.010	598
599	38.2	BG	.08	42	1.6	9.7	19.1	25.5	16.9	25.8	27	36	38	.939	599
600	23.8	BB	2.68	165	7.8	2.9	11.5	22.6	18.3	44.1	15	51	52	1.008	600
601	22.6	BB	2.98	230	7.5	1.0	10.2	22.1	21.2	45.1	12	52	51	1.007	601
602	14.5	BB	3.47	2,860	10.6	-	2.2	22.8	22.0	52.9	27	62	54	1.030	602
603	20.7	BB	3.31	340	8.2	2.6	9.5	18.9	18.8	49.3	18	55	57	1.013	603
604	20.7	BB	3.14	320	9.5	2.9	9.9	19.4	18.4	49.2	16	56	57	1.019	604
605	35.4	BB	1.18	42	2.7	9.5	20.5	27.0	17.8	23.5	22	48	34	.977	605
606	35.6	BB	1.22	42	3.0	8.1	20.5	27.3	17.7	24.1	19	49	35	.976	606
607	35.2	Black	1.23	41	3.1	8.4	20.7	28.2	17.8	23.5	20	49	34	.978	607
608	41.7	Green	.08	35	.7	13.6	24.6	26.9	15.6	17.4	22	37	29	.937	608
609	29.7	Black	1.91	62	6.1	4.1	17.2	30.1	19.6	29.0	15	50	37	1.007	609
610	32.8	BB	1.82	43	3.9	7.0	21.6	35.4	13.7	21.6	17	61	31	1.006	610
611	15.9	Black	3.93	1,420	10.7	1.5	5.7	19.4	19.5	52.9	22	60	58	1.028	611
612	23.0	BB	3.20	170	7.2	4.1	11.8	19.9	18.2	44.9	20	55	54	1.014	612
613	22.0	BB	3.18	230	9.0	4.5	11.9	19.9	18.1	45.5	18	55	54	1.025	613
614	43.0	NPA 3	.01	32	Nil	5.9	31.6	39.7	15.6	5.1	30	32	8	.919	614
615	35.4	BG	.13	44	3.2	10.5	15.4	23.1	15.9	31.9	27	35	45	.948	615
616	34.6	BG	.13	45	1.5	7.1	19.8	27.1	21.4	23.4	30	41	33	.946	616

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

TABLE 2. - Summary of general characteristics and analytical and computed data - Continued

Item	General characteristics					Volume-percent					Correlation index		Characteristics of residuum		Item
	Gravity, ° API	Color ¹	Sulfur weight- percent	Viscosity, Saybolt, at 100° F, seconds	Carbon residue Conradson, weight- percent	Fractions 1-3 (light gasoline)	Fractions 4-7 (naphtha)	Fractions 8-12 (kerosine and gas oil)	Fractions 13-15 (lubricating oil)	Residuum	Average of fractions 4-7	Average of fractions 13-15	Percent on gasoline- free basis	Specific gravity, 60/60° F	
617	30.6	BB	0.32	73	3.1	2.4	14.1	29.2	20.8	33.1	26	38	40	0.953	617
618	25.4	Black	2.36	135	7.6	-	11.9	28.8	20.6	38.7	12	46	44	1.007	618
619	29.3	BB	1.65	62	5.3	7.0	14.4	28.7	17.2	31.3	23	47	41	.994	619
620	28.2	Black	2.18	66	6.0	4.3	15.0	27.7	19.0	33.1	16	50	41	1.004	620
621	35.2	BG	.22	41	1.6	7.1	20.1	25.7	17.7	27.9	25	39	39	.947	621
622	31.9	Black	1.81	50	4.1	5.3	18.0	29.3	18.7	28.3	17	49	37	.986	622
623	33.6	GB	1.32	43	2.8	7.6	20.9	28.4	18.4	24.3	21	51	34	.976	623
624	35.6	GB	1.17	41	2.5	10.0	18.9	28.3	17.7	22.3	21	50	33	.975	624
625	25.7	Black	2.59	93	7.0	3.0	13.0	26.0	19.1	37.3	20	53	45	1.006	625
626	23.1	BG	3.17	165	7.2	2.9	11.7	24.2	20.1	41.8	21	53	49	1.009	626

¹Colors of crude oils in this table are designated as follows: Black, no abbreviation; brownish black, BB; brownish green, BG; dark green, DG; greenish black, GB; green, no abbreviation; and NPA numbers (National Petroleum Association color scale).

CRUDE PETROLEUM ANALYSES

The following pages contain the analysis sheets for each of the 626 oils. These data sheets are presented in sequence by item number as shown in tables 1 and 2.

CRUDE PETROLEUM ANALYSIS

Bureau of Mines Item 1
Bartlesville Laboratory
Sample 61053

IDENTIFICATION

Citronelle field Alabama
Rodessa, Lower Glen Rose, Lower Cretaceous Mobile County
10,708-11,200 feet

GENERAL CHARACTERISTICS

Gravity specific 0.808 Gravity ° API 43.6 Pour point, ° F, 30
Sulfur percent 0.38 Color brownish black
Viscosity, Saybolt Universal at 100° F, 40 sec Nitrogen percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refract ve index n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	2.6	2.6	0.666	81.0					
2	167	3.5	6.1	.674	78.4	9.4	1.37257	127.7		
3	212	4.6	10.7	.689	73.9	6.6	1.38750	127.2		
4	257	5.7	16.4	.710	67.8	8.0	1.39815	127.0		
5	302	5.8	22.2	.728	62.9	8.5	1.40734	128.6		
6	347	5.8	28.0	.745	58.4	9.7	1.41645	127.8		
7	392	6.2	34.2	.762	54.2	12	1.42487	128.0		
8	437	6.0	40.2	.776	50.9	13	1.43241	130.3		
9	482	7.1	47.3	.793	46.9	15	1.43978	131.2		
10	527	7.6	54.9	.805	44.3	16	1.44764	137.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	58.7	0.829	39.2	24	1.45865	142.9	40	30
12	437	6.3	65.0	.837	37.6	24	1.46297	140.9	45	40
13	482	5.3	70.3	.849	35.2	26	1.46985	145.9	56	65
14	527	6.4	76.7	.866	31.9	31			80	80
15	572	4.9	81.6	.879	29.5	34			150	95
Residuum		16.7	98.3	.956	16.5					

Carbon residue, Conradson Residuum 6.7 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.7	0.676	77.8	
Total gasoline and naphtha	34.2	0.718	65.6	
Kerosene distillate	20.7	.792	47.2	
Gas oil	9.6	.834	38.2	
Nonviscous lubricating distillate	10.7	.842-.870	36.6-31.1	50-100
Medium lubricating distillate	6.4	.870-.885	31.1-28.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.7	.956	16.5	
Distillation loss	1.7			

Bureau of Mines Item 2
Bartlesville Laboratory
Sample 54023

IDENTIFICATION

Pollard field Alabama
Upper & Lower Tuscaloosa, Cretaceous Escambia County
5,710-5,920 feet

GENERAL CHARACTERISTICS

Gravity specific 0.884 Gravity ° API 28.6 Pour point, ° F, 10
Sulfur percent 0.65 Color brownish black
Viscosity Saybolt Universal at 100° F, 105 sec., at 130° F, 73 sec Nitrogen percent 0.062

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refract ve index n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	2.1	2.1	0.629	93.5					
2	167	2.3	4.4	.656	84.2	0.8				
3	212	1.7	6.1	.691	73.3	7.5	1.37895	125.1		
4	257	2.6	8.7	.714	66.7	9.4	1.40059	127.2		
5	302	3.1	11.8	.744	58.7	16	1.41565	131.1		
6	347	2.9	14.7	.766	53.2	20	1.42762	133.7		
7	392	2.7	17.4	.785	48.8	23	1.43656	132.8		
8	437	4.0	21.4	.806	44.1	27	1.44540	131.7		
9	482	4.1	25.5	.822	40.6	29	1.45365	133.7		
10	527	6.3	31.8	.837	37.6	32	1.46246	139.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	35.4	0.855	34.0	36			41	Below 5
12	437	6.9	42.3	.865	32.1	37			46	15
13	482	5.8	48.1	.876	29.9	39			58	35
14	527	6.7	54.8	.888	27.9	41			84	50
15	572	6.8	61.6	.897	26.3	43			145	70
Residuum		37.8	99.4	.992	11.1					

Carbon residue, Conradson Residuum 16.1 percent crude 6.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.1	0.656	84.2	
Total gasoline and naphtha	17.4	0.719	65.3	
Kerosene distillate	8.1	.814	42.3	
Gas oil	15.5	.851	34.8	
Nonviscous lubricating distillate	12.2	.868-.890	31.5-27.5	50-100
Medium lubricating distillate	8.4	.890-.901	27.5-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	37.8	.992	11.1	
Distillation loss	.6			

Bureau of Mines
Sample
Item 3
Laramie
PC-58-352
Laboratory

IDENTIFICATION

Swanson River field
Hemlock zone, Tertiary
Below 11,000 feet

Alaska

GENERAL CHARACTERISTICS

Gravity, specific 0.878 Gravity, ° API, 29.7 Pour point, ° F below 5
Sulfur, percent, 0.16 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 61 sec., at 77° F, 105 sec. Nitrogen, percent, 0.203

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.655	84.5					
2	167	2.9	4.8	.697	71.5	20	1.38618	126.4		
3	212	2.9	7.7	.725	63.7	24	1.40248	126.5		
4	257	5.2	12.9	.737	60.5	20	1.41024	128.8		
5	302	6.0	18.9	.756	55.7	22	1.41925	130.1		
6	347	4.5	23.4	.773	51.6	23	1.42893	133.3		
7	392	4.0	27.4	.790	47.6	25	1.43788	138.5		
8	437	4.3	31.7	.807	43.8	27	1.44685	141.2		
9	482	4.8	36.5	.822	40.6	29	1.45673	149.3		
10	527	6.7	43.2	.837	37.6	32	1.46715	156.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.2	46.4	0.858	33.4	37	1.47582	158.3	39	10
12	437	5.9	52.3	.864	32.3	37	1.48024	162.4	45	20
13	482	5.3	57.6	.878	29.7	40	1.48757	161.8	56	45
14	527	4.6	62.2	.900	25.7	47			83	65
15	572	6.4	68.6	.912	23.7	50			155	80
Residuum		31.4	100.0	1.016	7.8					

Carbon residue, Conradson Residuum 22.3 percent, crude 8.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.7	0.697	71.5	
Total gasoline and naphtha	27.4	0.744	58.7	
Kerosene distillate	9.1	.815	42.1	
Gas oil	15.4	.852	34.6	
Nonviscous lubricating distillate	9.3	.870-.903	31.1-25.2	50-100
Medium lubricating distillate	7.4	.903-.919	25.2-22.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	31.4	1.016	7.8	
Distillation loss	.0			

Bureau of Mines
Sample
Item 4
Bartlesville
47025
Laboratory

IDENTIFICATION

Fouke field
1st Sturgis, Paluxy, Lower Cretaceous
3,633-3,642 feet

Arkansas
Miller County

GENERAL CHARACTERISTICS

Gravity, specific 0.888 Gravity, ° API, 27.9 Pour point, ° F -
Sulfur, percent, 1.47 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 135 sec., at 130° F, 86 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 97 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7							
2	167	1.8	2.5	0.652	85.5	-	1.36871	135.1		
3	212	2.2	4.7	.689	73.9	6.6	1.38670	124.1		
4	257	2.7	7.4	.712	67.2	8.5	1.39840	123.7		
5	302	3.3	10.7	.730	62.3	9.4	1.40762	124.8		
6	347	3.6	14.3	.750	57.2	12	1.41847	127.3		
7	392	4.0	18.3	.769	52.5	15	1.42904	131.4		
8	437	3.5	21.8	.787	48.3	18	1.43803	132.1		
9	482	4.3	26.1	.804	44.5	21	1.44608	133.4		
10	527	6.7	32.8	.822	40.6	24	1.45574	139.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	1.2	34.0	0.842	36.6	30			40	10
12	437	5.9	39.9	.853	34.4	31			44	25
13	482	6.5	46.4	.865	32.1	34			55	45
14	527	5.8	52.2	.881	29.1	38			76	60
15	572	7.0	59.2	.894	26.8	41			135	80
Residuum		40.7	99.9	.994	10.9					

Carbon residue, Conradson Residuum 20.0 percent, crude 9.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.7	0.669	80.0	
Total gasoline and naphtha	18.3	0.724	63.9	
Kerosene distillate	14.5	.808	43.6	
Gas oil	7.5	.850	35.0	
Nonviscous lubricating distillate	11.6	.860-.886	33.0-28.2	50-100
Medium lubricating distillate	7.3	.886-.901	28.2-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	40.7	.994	10.9	
Distillation loss	.1			

Bureau of Mines
Sample
Item 5
Bartlesville
61011
Laboratory

IDENTIFICATION

Magnolia field
Reynolds Smackover, Jurassic
7,392-7,570 feet

Arkansas
Columbia County

GENERAL CHARACTERISTICS

Gravity specific 0.833 Gravity ° API 38.4 Pour point, ° F below 5
Sulfur percent 0.90 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen percent 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr., 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.661	82.6					
2	167	3.0	4.3	.664	81.6	4.6	1.37422	123.7		
3	212	4.3	8.6	.699	70.9	11	1.39287	126.9		
4	257	5.7	14.3	.730	62.3	17	1.41147	139.9		
5	302	6.3	20.6	.757	55.4	22	1.42443	144.5		
6	347	6.6	27.2	.778	50.4	25	1.43654	154.4		
7	392	5.0	32.2	.791	47.4	25	1.44388	156.3		
8	437	5.3	37.5	.801	45.2	24	1.44853	154.2		
9	482	5.2	42.7	.813	42.6	25	1.45437	155.6		
10	527	7.6	50.3	.831	38.8	29	1.46475	162.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	53.9	0.851	34.8	34	1.47540	167.4	40	20
12	437	5.7	59.6	.861	32.8	35	1.48075	169.1	45	40
13	482	6.5	66.1	.881	29.1	41	1.49130	-	59	55
14	527	4.3	70.4	.895	26.6	45	1.49747	-	85	70
15	572	5.9	76.3	.901	25.6	45	-	-	150	85
Residuum		20.5	96.8	.951	17.3					

Carbon residue, Conradson Residuum 6.7 percent crude 1.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.6	0.681	76.3	
Total gasoline and naphtha	32.2	0.742	59.2	
Kerosine distillate	10.5	.807	43.8	
Gas oil	22.2	.849	35.2	
Nonviscous lubricating distillate	9.2	.868-.896	31.5-26.4	50-100
Medium lubricating distillate	2.2	.896-.899	26.4-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.5	.951	17.3	
Distillation loss	3.2			

Bureau of Mines
Sample
Item 6
Bartlesville
64031
Laboratory

IDENTIFICATION

Midway field
Smackover, Jurassic
6,200 feet

Arkansas
Lafayette County

GENERAL CHARACTERISTICS

Gravity, specific, 0.842 Gravity, ° API, 36.6 Pour point, ° F, below 5
Sulfur, percent, 1.33 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen, percent, 0.041

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr., 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.9	2.9	0.637	90.6					
2	167	3.3	6.2	.667	80.6	6.1	1.37650	129.5		
3	212	4.0	10.2	.703	69.6	13	1.39472	131.4		
4	257	5.0	15.2	.731	62.1	17	1.40970	138.5		
5	302	5.3	20.5	.756	55.7	22	1.42452	146.5		
6	347	5.5	26.0	.775	51.1	24	1.43592	151.5		
7	392	5.1	31.1	.792	47.2	26	1.44371	152.0		
8	437	5.1	36.2	.805	44.3	26	1.45039	151.9		
9	482	5.1	41.3	.819	41.3	28	1.45643	158.2		
10	527	5.4	46.7	.836	37.8	31	1.46724	164.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.1	50.8	0.859	33.2	38	1.47664	168.1	40	20
12	437	5.5	56.3	.869	31.3	39	1.48192	172.0	47	40
13	482	5.3	61.6	.881	29.1	41	1.49117	162.8	59	65
14	527	4.8	66.4	.895	26.6	45	1.49878	-	85	80
15	572	5.7	72.1	.903	25.2	45	-	-	150	90
Residuum		25.2	97.3	.976	13.5					

Carbon residue, Conradson Residuum 16.1 percent crude 4.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.2	0.673	78.9	
Total gasoline and naphtha	31.1	0.734	61.3	
Kerosine distillate	10.2	.812	42.6	
Gas oil	13.6	.852	34.5	
Nonviscous lubricating distillate	10.3	.872-.897	30.8-26.3	50-100
Medium lubricating distillate	6.9	.897-.907	26.3-24.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.2	.976	13.5	
Distillation loss	2.1			

Distillation discontinued at 516° F

Item 7
Bureau of Mines Bartlesville Laboratory
Sample 48098

IDENTIFICATION

Schuler field
Cotton Valley, Jurassic
7,553-7,584 feet

Arkansas
Union County

GENERAL CHARACTERISTICS

Gravity, specific, 0.861 Gravity, ° API, 32.8 Pour point, ° F, below 5
Sulfur, percent, 1.55 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 65 sec. at 100° F., 52 sec. Nitrogen, percent, —

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.645	87.9					
2	167	2.0	3.4	.665	81.3	5.1	1.37489	128.2		
3	212	3.7	7.1	.700	70.6	12	1.39220	129.5		
4	257	4.5	11.6	.727	63.1	16	1.40646	133.1		
5	302	4.9	16.5	.750	57.2	19	1.41957	140.2		
6	347	5.7	22.2	.773	51.6	23	1.43218	137.7		
7	392	4.2	26.4	.790	47.6	25	1.44144	146.9		
8	437	6.0	32.4	.805	44.3	26	1.44949	149.6		
9	482	3.5	35.9	.818	41.5	27	1.45646	150.4		
10	527	6.1	42.0	.831	38.8	29	1.46323	154.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.1	47.1	0.849	35.2	33			41	20
12	437	5.1	52.2	.860	33.0	35			46	40
13	482	5.2	57.4	.880	29.3	41			58	60
14	527	4.8	62.2	.893	27.0	44			82	75
15	572	5.5	67.7	.902	25.4	45			140	90
Residuum		31.7	99.4	.978	13.2					

Carbon residue, Conradson Residuum 12.0 percent, crude 4.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.1	0.679	76.9	
Total gasoline and naphtha	26.4	0.738	60.2	
Kerosene distillate	2.5	.810	43.2	
Gas oil	15.5	.846	35.8	
Nonviscous lubricating distillate	10.0	.869-.896	31.3-26.4	50-100
Medium lubricating distillate	6.3	.896-.907	26.4-24.5	100-200
Viscous lubricating distillate				Above 200
Residuum	31.7	.978	13.2	
Distillation loss	.6			

Item 8
Bureau of Mines Bartlesville Laboratory
Sample 57112

IDENTIFICATION

Smackover (asphalt) field

Arkansas
Union County

GENERAL CHARACTERISTICS

Gravity, specific, 0.919 Gravity, ° API, 22.5 Pour point, ° F, below 5
Sulfur, percent, 2.70 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 220 sec. at 130° F., 125 sec. Nitrogen, percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 160 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.7	1.7	0.741	59.5					
4	257	1.8	3.5	.748	57.7	26				
5	302	1.7	5.2	.777	50.6	32				
6	347	2.9	8.1	.799	45.6	35	1.42713	137.0		
7	392	3.1	11.2	.818	41.5	38	1.45638	153.8		
8	437	3.3	14.5	.839	37.2	42	1.46379	156.5		
9	482	4.2	18.7	.847	35.6	41	1.47093	155.6		
10	527	5.4	24.1	.859	33.2	42	1.47957	171.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	27.8	0.873	30.6	45	1.48768	174.3	41	Below 5
12	437	5.2	33.0	.885	28.4	46	1.49127		47	do
13	482	6.4	39.4	.892	25.9	50	1.49922		61	10
14	527	5.9	45.3	.914	23.3	54	1.50771		93	30
15	572	6.7	52.0	.922	22.0	55	1.51153		175	55
Residuum		47.0	99.0	.985	12.2					

Carbon residue, Conradson Residuum 8.5 percent crude 4.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.7	0.741	59.5	
Total gasoline and naphtha	11.2	0.784	49.0	
Kerosene distillate				
Gas oil	20.6	.860	33.0	
Nonviscous lubricating distillate	11.1	.888-.915	27.9-23.1	50-100
Medium lubricating distillate	7.8	.915-.925	23.1-21.5	100-200
Viscous lubricating distillate	1.3	.925-.926	21.5-21.3	Above 200
Residuum	47.0	.985	12.2	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 9
Bartlesville
46083
Laboratory

IDENTIFICATION

Stephens-Smart field
Travis Peak sand, Lower Cretaceous
3,650-3,652 feet

Arkansas
Ouachita County

GENERAL CHARACTERISTICS

Gravity, specific 0.875 Gravity, ° API, 30.2 Pour point, ° F -
Sulfur, percent, 1.29 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 67 sec., at 77° F., 97 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.636	91.0					
2	167	3.7	5.4	.669	80.0	7.0	1.37610	124.7		
3	212	1.9	7.3	.702	70.1	13	1.39316	131.2		
4	257	3.9	11.2	.724	63.9	14	1.40391	127.9		
5	302	4.2	15.4	.747	57.9	18	1.41664	134.1		
6	347	4.6	20.0	.768	52.7	21	1.42921	140.3		
7	392	4.7	24.7	.788	48.1	24	1.43934	145.6		
8	437	4.4	29.1	.803	44.7	25	1.44669	146.1		
9	482	4.5	33.6	.815	42.1	26	1.45392	147.8		
10	527	6.4	40.0	.832	38.6	29	1.46386	156.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.0	43.0	0.852	34.6	35			41	10
12	437	5.2	48.2	.863	32.5	36			46	30
13	482	5.1	53.3	.879	29.5	40			58	45
14	527	4.7	58.0	.893	27.0	44			72	60
15	572	6.0	64.0	.901	25.6	45			135	85
Residuum		34.5	98.5	1.003	9.6					

Carbon residus, Conradson Residuum 18.5 percent, crude 7.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.3	0.670	79.7	
Total gasoline and naphtha	24.7	0.732	61.8	
Kerosene distillate	8.9	.809	43.4	
Gas oil	13.8	.846	35.8	
Nonviscous lubricating distillate	10.6	.869-.897	31.3-26.3	50-100
Medium lubricating distillate	6.0	.897-.906	26.3-24.7	100-200
Viscous lubricating distillate				Above 200
Residuum	34.5	1.003	9.6	
Distillation loss	1.5			

Bureau of Mines
Sample
Item 10
Bartlesville
48043
Laboratory

IDENTIFICATION

Wesson field
Hogg sand, Glen Rose, L Cretaceous
3,099-3,112 feet

Arkansas
Ouachita County

GENERAL CHARACTERISTICS

Gravity, specific, 0.862 Gravity, ° API, 32.7 -- Pour point, ° F, --
Sulfur, percent, 1.58 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 75 sec., at 100° F., 56 sec. Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.5	2.5	0.634	91.7					
2	167	2.4	4.9	.658	83.6	1.8	1.37323	124.8		
3	212	3.2	8.1	.696	71.8	10	1.38920	124.3		
4	257	3.9	12.0	.723	64.2	14	1.40453	129.0		
5	302	4.3	16.3	.747	57.9	18	1.41734	134.3		
6	347	4.5	20.8	.769	52.5	21	1.42938	140.9		
7	392	4.3	25.1	.787	48.3	23	1.43900	142.3		
8	437	3.7	28.8	.800	45.4	24	1.44603	143.5		
9	482	4.7	33.5	.814	42.3	25	1.45327	145.9		
10	527	5.9	39.4	.830	39.0	-	1.46266	153.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	8.0	47.4	0.855	34.0	-			44	25
12	437	5.0	52.4	.872	30.8	40			54	50
13	482	4.0	56.4	.885	28.4	43			69	60
14	527	7.3	63.7	.899	25.9	47			110	85
15	572	4.3	68.0	.903	25.2	-			135	90
1/Residuum		30.1	98.1	.984	12.3					

Carbon residus, Conradson Residuum 14.8 percent, crude 5.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.1	0.666	81.0	
Total gasoline and naphtha	25.1	0.728	62.9	
Kerosene distillate	8.4	.808	43.6	
Gas oil	13.9	.844	36.2	
Nonviscous lubricating distillate	1.4	.866-.869	31.9-31.3	50-100
Medium lubricating distillate	19.2	.869-.905	31.3-24.9	100-200
Viscous lubricating distillate				Above 200
Residuum	30.1	.984	12.3	
Distillation loss	1.9			

1/ Distillation discontinued at 549° F.

Bureau of Mines Item 11
Bartlesville
 Sample 55166 Laboratory

IDENTIFICATION

Aliso Canyon field
 Senon sand, Miocene-Liasian
 8,350-8,670 feet

California
 Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.925 Gravity ° API 21.5 Pour point, ° F, 20
 Sulfur, percent 0.92 Color, brownish black
 Viscosity, Saybolt Universal at 100° F., 250 sec., at 130° F., 140 sec Nitrogen percent, 0.208

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 755 mm Hg
 First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122	0.2	0.2	0.699	70.9					
2	167	2.6	2.8	.713	67.0	28	1.40138	134.6		
3	212	2.9	5.7	.762	54.2	41	1.42111	141.4		
4	257	3.0	8.7	.778	50.4	40	1.43173	146.1		
5	302	3.1	11.8	.792	47.2	39	1.44036	152.2		
6	347	3.0	14.8	.806	44.1	39	1.44758	154.6		
7	392	3.2	18.0	.823	40.4	41	1.45522	150.4		
8	437	3.6	21.6	.843	36.4	44	1.46574	156.1		
9	482	5.3	26.9	.859	33.2	47	1.47664	166.2		
10	527	5.8	32.7	.873	30.6	49	1.48436	171.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	36.4	0.881	29.1	48	1.48903	156.2	43	Below 5
12	437	5.4	41.8	.890	27.5	49	1.49335	168.6	50	25
13	482	4.7	46.5	.906	24.7	53	1.50192	-	71	40
14	527	4.7	51.2	.916	23.0	55	1.51003	-	135	55
15	572	4.2	55.4	.933	20.2	-	-	-	290	65
Residuum		43.3	98.7	1.020	7.2					

Carbon residue, Conradson Residuum 12.8 percent crude 6.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.7	0.737	60.5	
Total gasoline and naphtha	18.0	0.780	49.9	
Kerosene distillate	21.1	.868	31.5	
Gas oil	7.6	.890-.911	27.5-23.8	50-100
Nonviscous lubricating distillate	4.1	.911-.923	23.8-21.8	100-200
Medium lubricating distillate	4.6	.923-.941	21.8-18.9	Above 200
Viscous lubricating distillate	43.3	1.020	7.2	
Residuum	1.3			
Distillation loss				

1/ Distillation discontinued at 540° F

Bureau of Mines Item 12
Bartlesville Laboratory
 Sample 64074

IDENTIFICATION

Asphalto field
 Stevens, Miocene
 5,677 - 5,745 feet

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.849 Gravity, ° API, 35.2 Pour point, ° F, below 5
 Sulfur percent 0.42 Color, greenish black
 Viscosity, Saybolt Universal at 100° F., 42 sec., Nitrogen percent, 0.291

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
 First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122	2.1	2.1	0.650	86.2					
2	167	2.4	4.5	.686	74.8	15	1.38280	128.5		
3	212	6.2	10.7	.732	61.8	27	1.40472	130.2		
4	257	7.0	17.7	.755	55.2	29	1.41710	132.6		
5	302	6.3	24.0	.774	51.3	30	1.42765	138.6		
6	347	5.6	29.6	.792	47.2	32	1.43800	142.3		
7	392	4.8	34.4	.808	43.6	33	1.44681	143.9		
8	437	5.1	39.5	.823	40.4	35	1.45508	146.4		
9	482	5.8	45.3	.836	37.8	36	1.46337	154.0		
10	527	5.7	51.0	.848	35.4	37	1.47129	162.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.0	55.0	0.864	32.3	40	1.47798	-	42	15
12	437	5.6	60.6	.874	30.4	42	1.48231	-	50	35
13	482	4.4	65.0	.882	28.9	42	1.49102	-	65	60
14	527	4.5	69.5	.899	25.9	47	1.49898	-	105	75
15	572	6.1	75.6	.916	23.0	52	-	-	245	95
Residuum		22.3	98.1	.980	12.9					

Carbon residue, Conradson Residuum 2.6 percent crude 2.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.7	0.706	69.0	
Total gasoline and naphtha	34.4	0.757	55.5	
Kerosene distillate	5.1	.823	40.4	
Gas oil	18.3	.851	34.7	
Nonviscous lubricating distillate	8.9	.874-.897	30.4-26.3	50-100
Medium lubricating distillate	4.2	.897-.911	26.3-23.9	100-200
Viscous lubricating distillate	4.9	.911-.926	23.9-21.3	Above 200
Residuum	22.3	.980	12.9	
Distillation loss	1.9			

Bureau of Mines Item 13
Bartlesville Laboratory
 Sample 53057

IDENTIFICATION

Belgian Anticline field
 Oceanic, Oligocene
 5,395-5,495 feet

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.850 Gravity, ° API, 35.0 Pour point, ° F, below 5
 Sulfur, percent, 0.52 Color, greenish black
 Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 730 mm. Hg
 First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.9	1.9							
2	167	2.3	4.2	0.668	80.3	-	1.37411	95.1		
3	212	6.2	10.4	.726	63.4	24	1.40224	128.6		
4	257	7.8	18.2	.750	57.2	27	1.41415	130.9		
5	302	6.9	25.1	.769	52.5	28	1.42507	133.7		
6	347	5.4	30.5	.788	48.1	30	1.43582	136.6		
7	392	5.0	35.5	.806	44.1	32	1.44540	140.0		
8	437	5.5	41.0	.820	41.1	33	1.45357	141.7		
9	482	5.0	46.0	.832	38.6	34	1.46093	147.8		
10	527	6.4	52.4	.843	36.4	34	1.46881	149.3		

Stage 2—Distillation continued at 40 mm. Hg

11	392	6.9	59.3	0.857	33.6	37			41	20
12	437	5.8	65.1	.869	31.3	39			50	40
13	482	5.2	70.3	.887	28.0	44			70	60
14	527	2.9	73.2	.898	26.1	46			105	80
15	572	4.5	77.7	.911	23.8	49			120	95
Residue		22.2	99.9	.987	11.9					

Carbon residue, Conradson Residue 10.6 percent crude 2.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.4	0.703	69.8	
Total gasoline and naphtha	35.5	0.753	56.4	
Kerosene distillate	5.5	.820	41.1	
Gas oil	21.2	.848	35.4	
Nonviscous lubricating distillate	9.0	.869-.896	31.3-26.4	50-100
Medium lubricating distillate	4.7	.896-.912	26.4-23.7	100-200
Viscous lubricating distillate	1.8	.912-.919	23.7-22.5	Above 200
Residue	22.2	.987	11.9	
Distillation loss	.1			

Bureau of Mines Item 14
Bartlesville Laboratory
 Sample 64022

IDENTIFICATION

Belmont field
 Deep zone, Miocene
 5,810 - 6,509 feet

California
 Orange County
 Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.883 Gravity, ° API, 28.7 Pour point, ° F, 10
 Sulfur, percent 0.90 Color, brownish black
 Viscosity, Saybolt Universal at 77° F., 141 sec., 100° F., 73 sec. Nitrogen, percent, 0.475

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
 First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.3	1.3	0.668	80.3					
2	167	3.2	4.5	.699	70.9	21	1.38877	126.7		
3	212	4.1	8.6	.726	63.4	24	1.40354	127.2		
4	257	6.2	14.8	.746	58.2	25	1.41318	129.1		
5	302	3.5	18.3	.769	52.5	28	1.42524	133.5		
6	347	4.4	22.7	.789	47.8	31	1.43578	137.3		
7	392	3.7	26.4	.807	43.8	33	1.44565	139.5		
8	437	4.4	30.8	.821	40.9	34	1.45383	143.7		
9	482	4.9	35.7	.833	38.4	34	1.46177	148.3		
10	527	5.1	40.8	.846	35.4	37	1.46850	166.8		

Stage 2—Distillation continued at 40 mm. Hg

11	392	3.4	44.2	0.866	31.9	41	1.47633	-	42	25
12	437	5.3	49.5	.874	30.4	41	1.48223	-	51	40
13	482	4.1	53.6	.886	28.2	44	1.49142	-	69	60
14	527	5.0	58.6	.903	25.2	48	1.50004	-	125	75
15	572	3.8	62.4	.914	23.3	51		-	200	90
Residue		36.2	96.6	.998	10.3					

Carbon residue, Conradson Residue 11.3 percent, crude 4.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.6	0.707	68.6	
Total gasoline and naphtha	26.4	0.752	56.6	
Kerosene distillate	4.4	.821	40.9	
Gas oil	15.6	.850	34.9	
Nonviscous lubricating distillate	7.7	.873-.895	30.6-26.5	50-100
Medium lubricating distillate	6.4	.895-.914	26.5-23.3	100-200
Viscous lubricating distillate	1.9	.914-.919	23.3-22.5	Above 200
Residue	36.2	.998	10.3	
Distillation loss	1.4			

1/ Distillation discontinued at 522°F

2/ Distillation discontinued at 545°F

Bureau of Mines Item 15
Bartlesville Laboratory
 Sample 55146

IDENTIFICATION

Belridge, South field

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.966 Gravity, ° API, 15.0 Pour point, ° F, 30
 Sulfur percent 0.23 Color, brownish black
 Viscosity, Saybolt Universal at 100° F., 2.440 sec. Nitrogen, percent, 0.273
 at 130° F., 740 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
 First drop 127 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392	2.1	2.1	0.805	44.3	-	1.43980	125.3		
8	437	3.3	5.4	.846	35.8	46	1.45897	125.4		
9	482	4.9	10.3	.865	32.1	50	1.47034	132.9		
10	527	6.7	17.0	.883	28.1	53	1.48267	120.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.8	19.8	0.906	24.7	60	1.49673	121.0	48	Below 5
12	437	8.0	27.8	.921	22.1	64	1.50526	127.7	64	do.
13	482	6.2	34.0	.939	19.2	69	1.51830	-	69	do.
14	527	7.8	41.8	.956	16.5	74	1.52926	-	74	do.
15	572	7.1	48.9	.976	13.5	-	-	-	-	do.
Residuum		49.4	98.3	1.021	7.1					

Carbon residue, Conradson Residuum 11.3 percent crude 5.9 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	2.1	0.805	44.3	
Kerosene distillate	-	-	-	
Gas oil	17.2	.874	30.4	
Nonviscous lubricating distillate	8.8	.908-.932	24.3-20.3	50-100
Medium lubricating distillate	4.7	.932-.943	20.3-18.6	100-200
Viscous lubricating distillate	16.1	.943-.986	18.6-12.0	Above 200
Residuum	49.4	1.021	7.1	
Distillation loss	1.7			

1/ Distillation discontinued at 550° F.

Bureau of Mines Item 16
Bartlesville Laboratory
 Sample 55177

IDENTIFICATION

Brea-Olinda field
 Miocene sand
 3,390-3,899 feet

California
 Orange County

GENERAL CHARACTERISTICS

Gravity, specific 0.910 Gravity, ° API, 24.0 Pour point, ° F, below 5
 Sulfur percent 0.75 Color, brownish black
 Viscosity, Saybolt Universal at 100° F., 135 sec. at 130° F., 100 sec. Nitrogen, percent, 0.525

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
 First drop 167 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	4.4	4.4	0.724	63.9	-	1.40455	129.4		
4	257	3.9	8.3	.757	55.4	30	1.41815	120.5		
5	302	4.0	12.3	.780	47.6	33	1.43030	132.1		
6	347	3.4	15.7	.800	45.4	36	1.44109	137.2		
7	392	3.7	19.4	.820	41.1	39	1.45239	138.4		
8	437	4.0	23.4	.834	38.2	40	1.46048	142.5		
9	482	5.1	28.5	.847	35.6	41	1.46777	149.0		
10	527	6.1	34.6	.860	33.0	42	1.47633	153.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.2	38.8	0.874	30.4	45	1.48405	147.8	44	15
12	437	5.4	44.2	.885	28.4	46	1.48973	153.9	53	30
13	482	4.9	49.1	.901	25.6	51	1.49912	165.6	76	45
14	527	5.2	54.3	.913	23.5	53	1.50882	-	150	55
15	572	6.2	60.5	.940	19.0	63	-	-	Over 400	70
Residuum		37.7	98.2	1.016	7.8					

Carbon residue, Conradson Residuum 14.2 percent, crude 6.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.4	0.724	63.9	
Total gasoline and naphtha	19.4	0.774	51.3	
Kerosene distillate	-	-	-	
Gas oil	20.7	.856	33.8	
Nonviscous lubricating distillate	8.2	.882-.904	28.9-25.0	50-100
Medium lubricating distillate	4.6	.904-.918	25.0-22.6	100-200
Viscous lubricating distillate	7.6	.918-.954	22.6-16.8	Above 200
Residuum	37.7	1.016	7.8	
Distillation loss	1.8			

Item 17
Bureau of Mines Bartlesville -- Laboratory
Sample -- 46050 --

IDENTIFICATION

Buena Vista field
27-B pool, Basal Etchegoin, Pliocene
3,272-3,343 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.873 -- Gravity, ° API, -- 30.6 -- Pour point, ° F, --
Sulfur, percent, 0.52 -- Color, brownish black
Viscosity, Saybolt Universal at 100° F., 46 sec. -- Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.665	81.3					
2	167	2.4	4.4	.678	77.2	11	1.38011	127.0		
3	212	5.7	10.1	.729	62.6	26	1.40361	128.3		
4	257	8.0	18.1	.760	54.7	31	1.41905	132.0		
5	302	6.7	24.8	.783	49.2	35	1.43240	139.2		
6	347	4.8	29.6	.805	44.3	38	1.44442	141.9		
7	392	4.3	33.9	.823	40.4	41	1.45441	145.7		
8	437	4.7	38.6	.839	37.2	42	1.46349	148.6		
9	482	5.4	44.0	.854	34.2	44	1.47307	155.9		
10	527	6.1	50.1	.870	31.1	47	1.48289	169.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.7	52.8	0.882	28.9	49			43	Below 5
12	437	5.2	58.0	.893	27.0	50			52	do.
13	482	3.6	61.6	.916	23.0	58			81	do.
14	527	3.4	65.0	.931	20.5	62			155	do.
15	572	5.1	70.1	.939	19.2	63			Over 400	do.
Residuum		28.0	98.1	.993	11.0					

Carbon residue, Conradson Residuum 12.1 percent, crude 3.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.704	69.5	
Total gasoline and naphtha	33.9	0.762	54.2	
Kerosene distillate				
Gas oil	21.2	.863	32.5	
Nonviscous lubricating distillate	5.6	.892-.920	27.1-22.3	50-100
Medium lubricating distillate	3.4	.920-.932	22.3-20.3	100-200
Viscous lubricating distillate	5.0	.932-.944	20.3-18.4	Above 200
Residuum	28.0	.993	11.0	
Distillation loss	1.9			

Item 18
Bureau of Mines Bartlesville -- Laboratory
Sample -- 53061 --

IDENTIFICATION

Costaic Hills field
Sterling, Upper Miocene
5,600-5,850 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.864 Gravity, ° API, -- 32.3 -- Pour point, ° F, -- 25
Sulfur, percent 0.51 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 46 sec. -- Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 730 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.6	2.6	0.676	77.8		1.38076	124.6		
3	212	5.2	7.8	.738	60.8	29	1.40971	130.5		
4	257	7.3	15.1	.758	55.2	30	1.41995	135.3		
5	302	6.8	21.9	.777	50.6	32	1.43132	138.0		
6	347	5.9	27.8	.797	46.0	34	1.44186	143.6		
7	392	5.0	32.8	.813	42.6	36	1.45079	143.8		
8	437	5.4	38.2	.828	39.4	37	1.45908	150.4		
9	482	6.2	44.4	.843	36.4	39	1.46766	155.7		
10	527	6.6	51.0	.854	34.2	40	1.47499	162.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.5	55.5	0.865	32.1	41			41	10
12	437	5.3	60.8	.873	30.6	41			47	30
13	482	4.4	65.2	.887	28.0	44			61	55
14	527	6.3	71.5	.902	25.4	48			110	70
15	572	5.3	76.8	.918	22.6	53			250	90
Residuum		23.2	100.0	.990	11.4					

Carbon residue, Conradson Residuum 11.3 percent crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.8	0.716	66.1	
Total gasoline and naphtha	32.8	0.767	53.0	
Kerosene distillate				
Gas oil	26.5	.851	34.8	
Nonviscous lubricating distillate	8.0	.876-.899	30.0-25.9	50-100
Medium lubricating distillate	4.8	.899-.912	25.9-23.7	100-200
Viscous lubricating distillate	4.7	.912-.925	23.7-21.5	Above 200
Residuum	23.2	.990	11.4	
Distillation loss	.0			

Item 19
Bureau of Mines Bartlesville Laboratory
Sample 55125

IDENTIFICATION

Castaic Junction field
Zone 10 sand, Miocene
10,640-10,790 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity specific 0.940 Gravity ° API 19.0 Pour point, ° F, 10
Sulfur percent 3.40 Color brownish black
Viscosity, Saybolt Universal at 100° F., 1,230 sec., Nitrogen, percent, 0.871
at 130° F., 620 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific d spers on	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.654	84.9					
2	167	1.4	3.0	.681	76.3	13				
3	212	2.3	5.3	.723	64.2	23	1.38771	123.8		
4	257	3.3	8.6	.747	57.9	25	1.41300	128.1		
5	302	3.3	11.9	.769	52.5	28	1.42458	130.6		
6	347	2.8	14.7	.788	48.1	30	1.43525	132.5		
7	392	2.4	17.1	.810	43.2	34	1.44654	136.1		
8	437	2.8	19.9	.829	39.2	38	1.45638	141.3		
9	482	3.8	23.7	.847	35.6	41	1.46643	147.8		
1/ 10	527	4.0	27.7	.860	33.0	-	1.47581	157.6		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.9	30.6	0.878	29.7	-	1.48395	150.9	41	10
12	437	3.8	34.4	.886	28.2	47	1.48868	157.4	48	30
13	482	3.6	38.0	.905	24.9	53			63	45
14	527	5.6	43.6	.918	22.6	56			115	60
2/ 15	572	2.6	46.2	.934	20.0	-			180	85
Residuum		53.3	99.5	1.032	5.6					

Carbon residue, Conradson Residuum 2.4 percent crude 5.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.691	73.3	
Total gasoline and naphtha	17.1	0.749	57.4	
Kerosene distillate	-	-	-	
Gas oil	16.0	.859	33.2	
Nonviscous lubricating distillate	6.4	.888-.914	27.9-23.3	50-100
Medium lubricating distillate	6.7	.914-.939	23.3-19.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	53.3	1.032	5.6	
Distillation loss	.5			

1/ Distillation discontinued at 509°F
2/ Distillation discontinued at 545°F.

Item 20
Bureau of Mines Bartlesville Laboratory
Sample 53055

IDENTIFICATION

Cat Canyon, West field
Los Flores, Miocene
4,612-5,386 feet

California
Santa Barbara County

GENERAL CHARACTERISTICS

Gravity specific 0.950 Gravity, ° API 17.5 Pour point, ° F, 15
Sulfur percent 5.07 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 3,000 sec., Nitrogen, percent, -
at 130° F., 1,250 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.8	3.8	0.682	76.0	-	1.38365	149.3		
4	257	2.2	6.0	.733	61.5	18	1.40930	130.0		
5	302	2.6	8.6	.758	55.2	23	1.42227	136.2		
6	347	2.3	10.9	.779	50.1	26	1.43302	137.4		
7	392	2.4	13.3	.798	45.8	29	1.44284	140.4		
8	437	2.6	15.9	.815	42.1	31	1.45212	143.2		
9	482	3.4	19.3	.833	38.4	34	1.46157	148.5		
1/ 10	527	4.6	23.9	.853	34.4	-	1.47242	156.9		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.2	26.1	0.873	30.6	-			38	15
12	437	4.3	30.4	.886	28.2	47			45	30
13	482	4.2	34.6	.898	26.1	49			58	50
14	527	4.2	38.8	.914	23.3	54			91	65
15	572	4.6	43.4	.927	21.1	=			155	80
2/ Residuum		55.7	99.1	1.038	4.8					

Carbon residue, Conradson Residuum 16.3 percent crude 9.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.8	0.682	76.0	
Total gasoline and naphtha	13.3	0.743	58.9	
Kerosene distillate	2.6	.815	42.1	
Gas oil	14.0	.859	33.2	
Nonviscous lubricating distillate	7.5	.890-.916	27.5-23.0	50-100
Medium lubricating distillate	6.0	.916-.934	23.0-20.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	55.7	1.038	4.8	
Distillation loss	.9			

1/ Distillation discontinued at 518°F.
2/ Distillation discontinued at 554°F.

Bureau of Mines Item 21
Bartlesville Sample 64113 Laboratory

IDENTIFICATION

Cheviot Hills field
B, Miocene
9,000 - 9,500 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.849 Gravity, ° API, 35.2 Pour point, ° F, below 5
Sulfur percent, 0.53 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen, percent, 0.353

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.643	88.6					
2	167	2.7	5.4	.674	78.4	9.4	1.37922	129.0		
3	212	6.0	11.4	.721	64.8	22	1.40108	131.1		
4	257	8.9	20.3	.745	58.4	24	1.41435	136.4		
5	302	6.7	27.0	.766	53.2	26	1.42582	139.9		
6	347	5.8	32.8	.785	48.8	29	1.43631	142.6		
7	392	4.5	37.3	.801	45.2	30	1.44529	145.4		
8	437	5.1	42.4	.816	41.9	32	1.45363	149.4		
9	482	4.9	47.3	.831	38.8	33	1.46262	157.4		
10	527	5.8	53.1	.845	36.0	35	1.47129	165.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	56.8	0.859	33.2	38	1.47839	-	41	20
12	437	4.6	61.4	.871	31.0	40	1.48329	-	48	40
13	482	4.7	66.1	.884	28.6	43	1.49256	-	63	65
14	527	4.2	70.3	.901	25.5	48		105	85	
15	572	5.2	75.5	.915	23.1	51		225	95	
Residuum		23.1	98.6	.994	10.9					

Carbon residue, Conradson Residuum 13.0 percent, crude 3.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.4	0.691	73.3	
Total gasoline and naphtha	37.3	0.745	58.4	
Kerosene distillate	5.1	.816	41.9	
Gas oil	17.3	.848	35.4	
Nonviscous lubricating distillate	7.6	.873-.899	30.6-25.9	50-100
Medium lubricating distillate	5.0	.899-.912	25.9-23.7	100-200
Viscous lubricating distillate	3.2	.912-.920	23.7-22.3	Above 200
Residuum	23.1	.994	10.9	
Distillation loss	1.4			

Bureau of Mines Item 22
Bartlesville Sample 61060 Laboratory

IDENTIFICATION

Coalinga, East field
Main Gatchell, Eocene
7,443-8,100 feet

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific 0.883 Gravity, ° API, 28.8 Pour point, ° F, 70
Sulfur percent 0.31 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 92 sec., 100°F, 67 sec. Nitrogen, percent, 0.28

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 109 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.4	1.4	0.710	67.8	-	1.39546	129.9		
3	212	3.9	5.3	.733	61.5	27	1.40847	131.6		
4	257	4.7	10.0	.757	55.4	30	1.42146	139.3		
5	302	4.5	14.5	.777	50.6	32	1.43291	142.6		
6	347	4.8	19.3	.793	46.9	32	1.44180	144.0		
7	392	3.9	23.2	.809	43.4	34	1.45013	145.7		
8	437	4.8	28.0	.826	39.8	36	1.46028	152.8		
9	482	6.7	34.7	.843	36.4	39	1.47155	163.8		
10	527	7.1	41.8	.857	33.6	41	1.47922	162.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.9	43.7	0.867	31.7	42	1.48441	166.5	41	35
12	437	6.9	50.6	.882	28.9	45	1.48797	169.9	47	40
13	482	6.7	57.3	.897	26.3	49	1.49607	174.1	60	50
14	527	6.9	64.2	.906	24.7	50	1.50474	-	96	75
15	572	6.6	70.8	.915	23.1	51			195	95
Residuum		28.4	99.2	.989	11.6					

Carbon residue, Conradson Residuum 9.9 percent crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.727	63.1	
Total gasoline and naphtha	23.2	0.770	52.3	
Kerosene distillate	-	-	-	
Gas oil	26.0	.853	34.4	
Nonviscous lubricating distillate	11.8	.886-.906	28.2-24.7	50-100
Medium lubricating distillate	9.8	.906-.919	24.7-22.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	28.4	.989	11.6	
Distillation loss	.8			

Item 23
Bureau of Mines Bartlesville Laboratory
Sample 58027

IDENTIFICATION

Coalinga, Nose field
Catchell, Eocene
7,686-8,217 feet

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific, 0.868 Gravity, ° API, 31.5 Pour point, ° F, 25
Sulfur, percent, 0.25 Color, brownish green
Viscosity, Saybolt Universal at 77° F, 58 sec. at 100° F, 48 sec. Nitrogen, percent, 0.194

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122	1.3	1.3	0.659	83.2					
2	167	2.7	2.0	.696	71.8	20				
3	212	4.2	6.2	.731	62.1	27	1.39658	129.2		
4	257	5.7	11.9	.762	54.2	32	1.42148	141.7		
5	302	4.7	16.6	.780	49.9	33	1.43330	140.2		
6	347	4.2	20.8	.795	46.5	33	1.44190	145.5		
7	392	4.3	25.1	.810	43.2	34	1.44933	144.3		
8	437	4.6	29.7	.826	39.8	36	1.45832	146.1		
9	482	6.2	35.9	.844	36.2	40	1.46932	163.9		
10	527	6.8	42.7	.857	33.6	41	1.47813	170.0		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
11	392	4.1	46.8	0.860	33.0	38	1.48172	173.5	39	10
12	437	6.8	53.6	.872	30.8	40	1.48535	164.7	44	40
13	482	7.3	60.9	.885	28.4	43	1.49259	174.2	55	56
14	527	6.0	66.9	.897	26.3	46	1.49901	-	80	70
15	572	6.6	73.5	.912	23.7	50			150	86
Residuum		24.8	98.3	.976	13.5					

Carbon residue, Conradson Residuum 8.0 percent, crude 2.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.2	0.712	67.2	
Total gasoline and naphtha	25.1	0.767	53.0	
Kerosene distillate	-	-	-	
Gas oil	32.2	.856	33.8	
Nonviscous lubricating distillate	8.4	.885-.900	28.4-25.7	50-100
Medium lubricating distillate	7.8	.900-.919	25.7-22.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.8	.976	13.5	
Distillation loss	1.7			

Item 24
Bureau of Mines Bartlesville Laboratory
Sample 58001

IDENTIFICATION

Coalinga, West field
Temblor, Miocene
2,278-2,378 feet

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific, 0.933 Gravity, ° API, 20.2 Pour point, ° F, below 5
Sulfur, percent, 0.55 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 195 sec. at 130° F, 105 sec Nitrogen, percent, 0.326

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 223 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	0.2	0.2	0.730	62.3	-				
5	302	1.2	1.4	.767	53.0	27				
6	347	2.4	3.8	.797	46.0	34	1.43005	120.9		
7	392	3.1	6.9	.822	40.6	40	1.44908	129.5		
8	437	4.2	11.1	.845	36.0	45	1.46158	135.1		
9	482	6.7	17.8	.865	32.1	50	1.47472	146.8		
10	527	8.2	26.0	.885	28.4	54	1.48778	169.1		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
11	392	3.6	29.6	0.896	26.4	55	1.49737	168.7	43	Below 5
12	437	8.7	38.3	.908	24.3	57	1.50444	-	51	do
13	482	8.1	46.4	.926	21.3	63	1.51365	-	78	do
14	527	7.7	54.1	.947	17.9	69	1.52195	-	160	do
15	572	8.2	62.3	.962	15.6	73	1.52781	-	480	do
Residuum		36.5	98.8	.998	10.3					

Carbon residue, Conradson Residuum 10.9 percent, crude 4.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	8.9	0.801	45.2	
Kerosene distillate	-	-	-	
Gas oil	26.5	.878	29.7	
Nonviscous lubricating distillate	11.1	.907-.931	24.5-20.5	50-100
Medium lubricating distillate	8.8	.931-.949	20.5-17.6	100-200
Viscous lubricating distillate	11.0	.949-.970	17.6-14.4	Above 200
Residuum	36.5	.998	10.3	
Distillation loss	1.2			

Item 25
Bureau of Mines Bartlesville Laboratory
Sample 55109

IDENTIFICATION

Coles-Levee, North field
Miocene

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API, 34.0 Pour point, ° F, 15
Sulfur, percent 0.39 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen percent, 0.309

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.6	2.6	0.661	82.6					
2	167	2.5	5.1	.682	76.0	13	1.38542	123.0		
3	212	6.1	11.2	.728	62.9	25	1.40422	125.8		
4	257	8.3	19.5	.755	55.9	29	1.41820	132.1		
5	302	6.0	25.5	.776	50.9	31	1.43045	141.8		
6	347	5.3	30.8	.795	46.5	33	1.44064	142.0		
7	392	4.2	35.0	.810	43.2	34	1.44930	141.6		
8	437	4.8	39.8	.826	39.8	36	1.45819	147.7		
9	482	4.6	44.4	.841	36.8	38	1.46743	154.7		
10	527	6.0	50.4	.855	34.0	40	1.47613	162.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	52.9	0.868	31.5	42			42	15
12	437	4.4	57.3	.875	30.2	42	1.48595	157.3	47	30
13	482	5.1	62.4	.895	26.6	48			63	45
14	527	4.4	66.8	.909	24.2	51			105	65
15	572	5.5	72.3	.929	20.8	58			230	80
Residuum		25.3	97.6	.988	11.7					

Carbon residue, Conradson Residuum 10.3 percent crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.2	0.702	70.1	
Total gasoline and naphtha	35.0	0.754	56.2	
Kerosene distillate	-	-	-	
Gas oil	21.0	.850	35.0	
Nonviscous lubricating distillate	8.1	.878-.907	29.7-24.5	50-100
Medium lubricating distillate	4.6	.907-.923	24.5-21.8	100-200
Viscous lubricating distillate	3.6	.923-.936	21.8-19.7	Above 200
Residuum	25.3	.988	11.7	
Distillation loss	2.4			

Item 26
Bureau of Mines Bartlesville Laboratory
Sample 46059

IDENTIFICATION

Coles Levee, South field
Stevens, Miocene
9,540-9,920 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.840 Gravity, ° API, 37.0 Pour point, ° F, -
Sulfur percent 0.38 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 33 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.9	2.9	0.648	86.9					
2	167	3.3	6.2	.677	77.5	11	1.38018	124.3		
3	212	6.2	12.4	.724	63.9	23	1.40236	130.8		
4	257	7.4	19.8	.755	55.9	29	1.41882	136.8		
5	302	6.8	26.6	.777	50.6	32	1.43098	142.0		
6	347	5.2	31.8	.796	46.3	34	1.44116	145.3		
7	392	3.7	35.5	.810	43.2	34	1.44911	145.7		
8	437	5.4	40.9	.826	39.8	36	1.45771	150.7		
9	482	5.3	46.2	.841	36.8	38	1.46704	157.9		
10	527	5.8	52.0	.854	34.2	40	1.47504	165.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	55.8	0.861	32.8	39			42	15
12	437	5.6	61.4	.873	30.6	41			48	35
13	482	4.7	66.1	.896	26.4	48			66	60
14	527	4.6	70.7	.906	24.7	50			115	70
15	572	4.9	75.6	.919	22.5	53			240	90
Residuum		20.8	96.4	.982	12.6					

Carbon residue, Conradson Residuum 10.4 percent crude 2.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.4	0.694	72.4	
Total gasoline and naphtha	35.5	0.750	57.2	
Kerosene distillate	-	-	-	
Gas oil	23.7	.848	35.4	
Nonviscous lubricating distillate	7.7	.876-.902	30.0-25.4	50-100
Medium lubricating distillate	4.7	.902-.915	25.4-23.1	100-200
Viscous lubricating distillate	4.0	.915-.926	23.1-21.3	Above 200
Residuum	20.8	.982	12.6	
Distillation loss	3.6			

Bureau of Mines
Sample

Item 21
Bartlesville
C-2

Laboratory

Concept on field
Alegria, Oligocene
3,011 - 3,469 feet

IDENTIFICATION

California
Santa Barbara County
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.885 Gravity, ° API 40.0 Pour point, ° F, below 5
Sulfur percent, 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 73 mm Hg
First drop 11° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.640	69.0					
2	167	3.2	4.5	0.640	74.6	15	1.3606	129.2		
3	212	1.2	5.7	0.731	62.1	20	1.40644	34.4		
4	257	12.1	17.8	0.754	56.2	20	1.42903	140.0		
5	302	0.2	18.0	0.75	51.1	30	1.4373	140.4		
6	347	0.2	18.2	0.792	41.8	32	1.44067	149.4		
7	392	5.6	23.8	0.806	43.0	33	1.44900	152.1		
8	437	5.4	29.2	0.820	39.6	36	1.45844	157.1		
9	482	6.1	35.3	0.843	36.4	39	1.47024	165.3		
10	527	5.0	40.3	0.854	34.2	40	1.47730	172.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.4	43.7	0.866	32.5	42	1.48339	171.5	41	20
12	437	5.1	48.8	0.876	30.0	42	1.48768	173.2	40	40
13	482	4.2	53.0	0.881	28.0	44	1.49566	-	61	65
14	527	3.1	56.1	0.899	27.1	40			93	80
15	572	4.0	60.1	0.904	23.0	44			195	100
Residuum		16.4	76.5	0.904	23.0					

Carbon residue, Conradson Residuum 2.0 percent crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.0	0.710	67.9	
Total gasoline and naphtha	45.6	0.756	55.3	
Kerosine distillate				
Gas oil	24.0	0.850	35.0	
Nonviscous lubricating distillate	6.2	0.876-0.891	29.7-27.4	50-100
Medium lubricating distillate	4.1	0.891-0.912	27.4-23.6	100-200
Viscous lubricating distillate	2.1	0.912-0.923	23.6-21.8	Above 200
Residuum	12.4	0.922	12.6	
Distillation loss	3.4			

1/ Distillation discontinued at 520 F

Bureau of Mines
Sample

Item 28
Bartlesville
57092

Laboratory

Coyote, East field
Repetto, Pliocene
3,950-3,956 feet

IDENTIFICATION

California
Orange County

GENERAL CHARACTERISTICS

Gravity, specific 0.874 Gravity, ° API 30.4 Pour point, ° F, below 5
Sulfur percent, 0.95 Color, greenish black
Viscosity, Saybolt Universal at 77° F, 77 sec., 100° F, 58 sec. Nitrogen percent, 0.336

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 148 mm Hg
First drop 86° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7	0.657	83.9					
2	167	3.4	4.1	0.698	71.2	21	1.38551	126.1		
3	212	2.3	6.4	0.738	60.2	30	1.40758	128.5		
4	257	5.4	11.8	0.755	55.9	29	1.41695	129.3		
5	302	5.7	17.5	0.775	51.1	31	1.42765	133.7		
6	347	5.1	22.6	0.793	46.9	32	1.43783	138.5		
7	392	4.4	27.0	0.810	43.2	34	1.44684	139.0		
8	437	4.8	31.8	0.826	39.8	36	1.45508	138.8		
9	482	5.6	37.4	0.839	37.2	37	1.46361	139.5		
10	527	5.6	43.0	0.854	34.2	40	1.47166			

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.2	45.2	0.860	33.0	38	1.47863	-	40	22
12	437	5.7	50.9	0.871	31.0	40	1.48141	-	46	34
13	482	5.5	56.4	0.882	28.9	42	1.48898	-	58	50
14	527	4.6	61.0	0.898	26.1	46			91	70
15	572	5.8	66.8	0.913	23.5	50			185	82
Residuum		31.4	98.2	0.989	11.6					

Carbon residue, Conradson Residuum 11.8 percent, crude 4.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.4	0.708	68.4	
Total gasoline and naphtha	27.0	0.764	53.7	
Kerosine distillate				
Gas oil	23.0	0.848	35.4	
Nonviscous lubricating distillate	9.2	0.875-0.899	30.2-25.9	50-100
Medium lubricating distillate	5.7	0.899-0.915	25.9-23.1	100-200
Viscous lubricating distillate	1.9	0.915-0.921	23.1-22.1	Above 200
Residuum	31.4	0.989	11.6	
Distillation loss	1.8			

Item 29
Bureau of Mines Bartlesville Laboratory
Sample 55164

IDENTIFICATION

Coyote, West Field
Emery, Pliocene
4,900-6,500 feet

California
Orange County

GENERAL CHARACTERISTICS

Gravity, specific, 0.869 Gravity, ° API, 32.3 Pour point, ° F, 25
Sulfur, percent, 0.82 Color, greenish black
Viscosity, Saybolt Universal at 77° F., 59 sec. 100° F., 50 sec. Nitrogen, percent, 0.347

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 99 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.5	1.5	0.676	77.8					
3	212	4.8	6.3	.726	63.4	24	1.39490	127.5		
4	257	7.1	13.4	.751	56.9	27	1.41411	128.6		
5	302	5.7	19.1	.770	52.3	28	1.42513	132.8		
6	347	5.9	25.0	.782	47.8	31	1.43514	136.8		
7	392	4.9	29.9	.802	43.8	33	1.44666	135.4		
8	437	4.6	34.5	.821	40.9	34	1.45302	137.3		
9	482	5.6	40.1	.835	38.0	35	1.46131	150.7		
10	527	5.4	45.5	.849	35.2	37	1.47150	159.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.9	49.4	0.866	31.9	41	1.47885	160.8	41	10
12	437	5.7	55.1	.873	30.6	41	1.48224	154.4	47	30
13	482	5.3	60.4	.886	28.2	44	1.49224	158.2	65	55
14	527	4.5	64.9	.896	26.4	45	1.49285	164.6	105	65
15	572	5.3	70.2	.915	23.1	51			210	80
Residuum		29.2	99.4	.990	11.4					

Carbon residue, Conradson Residuum 11.6 percent, crude 2.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.3	0.714	66.7	
Total gasoline and naphtha	29.9	0.764	53.7	
Kerosene distillate	4.6	.821	40.9	
Gas oil	18.8	.853	34.4	
Nonviscous lubricating distillate	8.9	.875-.895	30.2-26.6	50-100
Medium lubricating distillate	4.9	.895-.913	26.6-23.5	100-200
Viscous lubricating distillate	3.1	.913-.925	23.5-21.5	Above 200
Residuum	29.2	.990	11.4	
Distillation loss	.6			

Item 30
Bureau of Mines Bartlesville Laboratory
Sample 58018

IDENTIFICATION

Cuyama, South field
Dibbiee, Miocene
4,195-4,540 feet

California
Santa Barbara County

GENERAL CHARACTERISTICS

Gravity, specific, 0.863 Gravity, ° API, 32.5 Pour point, ° F, 20
Sulfur, percent, 0.42 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 49 sec. Nitrogen, percent, 0.337

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.642	88.9					
2	167	2.2	4.1	.677	77.5	11	1.37297	122.3		
3	212	5.3	9.4	.726	63.4	24	1.40222	124.9		
4	257	6.2	15.6	.753	56.4	28	1.41587	126.6		
5	302	5.5	21.1	.773	51.6	30	1.42765	134.5		
6	347	4.9	26.0	.792	47.2	32	1.43888	137.2		
7	392	4.1	30.1	.810	43.2	34	1.44900	138.7		
8	437	4.6	34.7	.825	40.0	36	1.45706	143.2		
9	482	5.0	39.7	.838	37.4	37	1.46568	151.0		
10	527	5.7	45.4	.851	34.8	38	1.47397	161.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.3	48.7	0.860	33.0	38	1.48078	167.2	40	14
12	437	5.7	54.4	.876	30.0	42	1.48373	161.8	47	34
13	482	4.6	59.0	.888	27.9	45	1.49372	-	63	54
14	527	4.2	63.2	.904	25.0	49	1.40224	-	98	70
15	572	6.0	69.2	.916	23.0	52			220	80
Residuum		27.6	96.8	.997	10.4					

Carbon residue, Conradson Residuum 6.5 percent, crude 2.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.4	0.698	71.2	
Total gasoline and naphtha	30.1	0.753	56.4	
Kerosene distillate	4.6	.825	40.0	
Gas oil	17.9	.853	34.4	
Nonviscous lubricating distillate	8.6	.878-.904	29.7-25.0	50-100
Medium lubricating distillate	4.2	.904-.914	25.0-23.3	100-200
Viscous lubricating distillate	3.8	.914-.923	23.3-21.8	Above 200
Residuum	27.6	.997	10.4	
Distillation loss	3.2			

Bureau of Mines Item 31
Bartlesville Laboratory
Sample - 61051

IDENTIFICATION

Cymric field
Tulare, Pleistocene-Pliocene
655-1,042 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity specific 0.981 Gravity, ° API, 12.7 Four point, ° F, 40
Sulfur percent 1.16 Color, brownish black
Viscosity, Saybolt Universal at 100° F., over 6000 sec., Nitrogen, percent, 0.63

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 275 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392									
8	437	1.8	1.8	0.803	44.7	-				
9	482	4.1	5.9	.851	34.8	43				
10	527	7.1	13.0	.882	28.9	53				

STAGE 2—Distillation continued at 40 mm Hg

11	392	9.8	22.8	0.919	22.5	66	1.50350	150.7	58	Below 5
12	437	3.6	26.4	.942	18.7	73	1.51568	155.8	105	do.
1/13	482	13.2	39.6	.956	16.5	77	1.52788	179.7	255	do.
14	527									
15	572									
Residuum		59.4	99.0	1.023	6.8					

Carbon residue, Conradson Residuum 11.0 percent, crude 6.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosene distillate	1.8	0.803	44.7	
Gas oil	11.2	.871	31.0	
Nonviscous lubricating distillate	10.9	902-.940	25.4-19.0	50-100
Medium lubricating distillate	6.1	940-.951	19.0-17.3	100-200
Viscous lubricating distillate	9.6	951-.966	17.3-15.0	Above 200
Residuum	59.4	1.023	6.8	
Distillation loss	1.0			

1/ Distillation discontinued at 464° F.

Bureau of Mines Item 32
Bartlesville Laboratory
Sample - 55147

IDENTIFICATION

Del Valle field
Del Valle, upper Miocene
6,467-6,962 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.864 Gravity, ° API, 32.3 Four point, ° F, 30
Sulfur percent, 1.15 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 62 sec., 100° F., 50 sec. Nitrogen, percent, 0.331

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 154 mm. Hg
First drop 100 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.655	84.5					
2	167	1.8	3.9	.679	76.9	12	1.37959	130.1		
3	212	5.1	9.0	.716	66.1	19	1.39803	124.0		
4	257	7.4	16.4	.746	58.2	25	1.41289	138.9		
5	302	5.6	22.0	.767	53.0	27	1.42432	134.7		
6	347	5.2	27.2	.786	48.5	29	1.43474	135.0		
7	392	4.6	31.8	.803	44.7	31	1.44449	137.4		
8	437	4.3	36.1	.819	41.3	33	1.45345	141.6		
9	482	5.2	41.3	.832	38.6	34	1.46166	149.0		
10	527	5.6	46.9	.848	35.4	37	1.47029	161.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.4	50.3	0.861	32.8	39	1.47834	159.4	40	15
12	437	5.7	56.0	.870	31.1	39	1.48190	155.7	46	40
13	482	4.8	60.8	.885	28.4	43	1.49122	161.6	62	55
14	527	5.1	65.9	.895	26.6	45	1.49958	-	100	70
15	572	6.5	72.4	.920	22.3	54			250	85
Residuum		26.1	98.5	1.002	9.7					

Carbon residue, Conradson Residuum 14.4 percent, crude 4.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.0	0.694	72.4	
Total gasoline and naphtha				
Kerosene distillate	31.8	0.750	57.2	
Gas oil	4.3	.819	41.3	
Nonviscous lubricating distillate	18.4	.851	34.8	
Medium lubricating distillate	8.9	.873-.895	30.6-26.6	50-100
Viscous lubricating distillate	3.8	.895-.912	26.6-23.7	100-200
Residuum	5.2	.912-.933	23.7-20.2	Above 200
Distillation loss	26.1	1.002	9.7	

Bureau of Mines Item 33
Bartlesville Laboratory
Sample 55139

IDENTIFICATION

Dominguez field
Pliocene-Miocene
4,000-8,000 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.877 Gravity, ° API, 29.9 Pour point, ° F, 25
Sulfur, percent, 0.40 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 83 sec.; 100° F, 60 sec Nitrogen, percent, 0.360

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 142 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refract. index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.4	0.4	0.686	74.8					
2	167	1.4	1.8	.703	69.8	23				
3	212	3.3	5.1	.725	63.7	24	1.39573	129.0		
4	257	6.6	11.7	.756	55.7	29	1.41913	134.0		
5	302	5.3	17.0	.777	50.6	32	1.43013	136.7		
6	347	5.1	22.1	.794	49.0	33	1.43908	140.3		
7	392	4.3	26.4	.808	43.6	33	1.44720	140.5		
8	437	5.5	31.9	.823	40.4	35	1.45471	139.4		
9	482	4.7	36.6	.836	37.8	36	1.46174	142.4		
10	527	6.5	43.1	.846	35.8	36	1.46917	143.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.4	48.5	0.862	32.7	39	1.47703	150.0	41	15
12	437	5.1	53.6	.876	30.0	42	1.48202	154.6	49	30
13	482	5.1	58.7	.887	28.0	44	1.49056	-	67	45
14	527	4.7	63.4	.896	26.4	45	1.49745	-	110	65
15	572	5.9	69.3	.915	23.1	51		250		75
Residuum		29.9	99.2	.993	11.0					

Carbon residue, Conradson Residuum 12.2 percent, crude 4.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.1	0.716	66.1	
Total gasoline and naphtha	26.4	0.768	52.7	
Kerosene distillate	5.5	.823	40.4	
Gas oil	19.5	.852	34.6	
Nonviscous lubricating distillate	8.6	.877-.894	29.9-26.8	50-100
Medium lubricating distillate	4.5	.894-.908	26.8-24.3	100-200
Viscous lubricating distillate	4.8	.908-.925	24.3-21.5	Above 200
Residuum	29.9	.993	11.0	
Distillation loss	.8			

Bureau of Mines Item 34
Bartlesville Laboratory
Sample 55149

IDENTIFICATION

Edison field
Chanac, Jurassic
4,008-4,073 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.903 Gravity, ° API, 25.2 Pour point, ° F, 20
Sulfur, percent 0.20 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 115 sec.; 130° F, 75 sec Nitrogen, percent, 0.446

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 756 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refract. index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.8	0.8	0.672	79.1					
2	167	.7	1.5	.686	74.8	15				
3	212	1.6	3.1	.720	65.0	21				
4	257	4.7	7.8	.755	55.9	29	1.41286	119.5		
5	302	5.3	13.1	.780	49.9	33	1.42908	124.6		
6	347	4.3	17.4	.801	45.2	36	1.44073	128.6		
7	392	3.4	20.8	.823	40.4	41	1.45214	123.1		
8	437	4.0	24.8	.840	37.0	43	1.46289	132.9		
9	482	5.5	30.3	.854	34.2	44	1.47202	147.9		
10	527	5.5	35.8	.866	31.9	45	1.48054	155.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.3	39.1	0.877	29.9	46	1.48547	164.1	42	Below 5
12	437	6.4	45.5	.884	28.6	46	1.49006	160.2	50	35
13	482	4.3	49.8	.903	25.2	52	1.49876	179.4	70	50
14	527	5.1	54.9	.909	24.2	51	1.50588	188.4	125	65
15	572	6.9	61.8	.927	21.1	57		280		80
Residuum		38.0	99.8	.999	10.1					

Carbon residue, Conradson Residuum 11.2 percent, crude 4.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.1	0.700	70.6	
Total gasoline and naphtha	20.8	0.774	51.3	
Kerosene distillate	-	-	-	
Gas oil	21.5	.862	32.7	
Nonviscous lubricating distillate	8.0	.884-.906	28.6-24.7	50-100
Medium lubricating distillate	5.0	.906-.917	24.7-22.8	100-200
Viscous lubricating distillate	6.5	.917-.937	22.8-19.5	Above 200
Residuum	38.0	.999	10.1	
Distillation loss	2			

Bureau of Mines
Sample

Item 35
Bartlesville
59157

Laboratory

IDENTIFICATION

Elk Hills field
Shallow, Pleistocene-Miocene
3,000-3,200 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity specific 0.917 Gravity, ° API, 22.8 Pour point, ° F, below 5
Sulfur percent 0.68 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 135 Sec. Nitrogen percent, 0.472
at 130° F, 77 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 737 mm Hg
First drop 171 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refract ve index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.2	1.2	0.724	63.9	-	1.40106	124.4		
4	257	2.6	3.8	.759	54.9	31	1.41654	125.8		
5	302	3.6	7.4	.781	49.7	34	1.43116	130.2		
6	347	3.7	11.1	.813	42.6	42	1.44560	138.4		
7	392	4.2	15.3	.836	37.8	47	1.45870	143.4		
8	437	5.6	20.9	.852	34.6	49	1.46832	148.0		
9	482	6.9	27.8	.865	32.1	50	1.47806	163.5		
10	527	7.6	35.4	.881	29.1	52	1.48833	172.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.0	40.4	0.897	26.3	56	1.49786	165.8	46	Below 5
12	437	5.7	46.1	.905	24.9	56	1.50326	-	58	do
13	482	6.5	52.6	.924	21.6	62	1.51153	-	97	do
14	527	5.2	57.8	.938	19.4	65	1.51876	-	230	do
15	572	4.0	61.8	.945	18.2	65		Over 400		do
Residuum		37.4	99.2	.992	11.1					

Carbon residue, Conradson Residuum 4.6 percent crude 2.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.2	0.724	63.9	
Total gasoline and naphtha	11.1	0.780	49.9	
Kerosene distillate	-	-	-	
Gas oil	28.7	.867	31.7	
Nonviscous lubricating distillate	9.8	.900-.925	25.7-21.5	50-100
Medium lubricating distillate	4.4	.925-.935	21.5-19.8	100-200
Viscous lubricating distillate	7.8	.935-.948	19.8-17.8	Above 200
Residuum	37.4	.992	11.1	
Distillation loss	.8			

Bureau of Mines
Sample

Item 36
Bartlesville
55133

Laboratory

IDENTIFICATION

Fruitvale field
Chanac, Pliocene-Miocene
3,602-4,399 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity specific 0.950 Gravity, ° API, 17.5 Pour point, ° F, 15
Sulfur percent, 0.93 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 1,750 Sec. Nitrogen, percent, 0.527
at 130° F, 630 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 302 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347	0.7	0.7	0.809	43.4	-				
7	392	1.4	2.1	.829	39.2	43				
8	437	2.8	4.9	.851	34.8	48	1.45792	135.6		
9	482	2.2	8.1	.868	31.5	51	1.47587	147.3		
10	527	5.3	13.4	.877	29.9	50	1.48269	154.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.1	17.5	0.887	28.0	51	1.48926	151.8	44	5
12	437	4.4	21.9	.895	26.6	51	1.49365	159.6	50	15
13	482	8.6	30.5	.907	24.5	54	1.50048	178.7	69	25
14	527	6.2	36.7	.917	22.8	55	1.51128	-	130	45
1/15	572	8.4	45.1	.936	19.7	-	1.51541	-	330	60
Residuum		54.4	99.5	.991	11.3					

Carbon residue, Conradson Residuum 9.8 percent crude 5.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	0.7	0.809	43.4	
Kerosene distillate	-	-	-	
Gas oil	19.0	.872	30.8	
Nonviscous lubricating distillate	10.3	.895-.912	26.6-23.7	50-100
Medium lubricating distillate	6.1	.912-.923	23.7-21.8	100-200
Viscous lubricating distillate	9.0	.923-.946	21.8-18.1	Above 200
Residuum	54.4	.991	11.3	
Distillation loss	5			

1/ Distillation discontinued at 568° F.

Item 37
Bureau of Mines Bartlesville Laboratory
Sample 55132

IDENTIFICATION

Gato Ridge field
Monterey, Miocene
2,118-3,534 feet

California
Santa Barbara County

GENERAL CHARACTERISTICS

Gravity, specific, 0.988 Gravity, ° API, 11.7 Pour point, ° F, 45
Sulfur, percent, 5.93 Color, brownish black
Viscosity, Saybolt Universal at 100° F., over 6,000 sec. Nitrogen, percent, 0.747

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 162 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.1	1.1	0.695	72.1	-				
4	257	1.2	2.3	.731	62.1	18				
5	302	1.6	3.9	.767	53.0	27				
6	347	1.6	5.5	.787	48.3	30				
7	392	1.7	7.2	.810	43.2	34				
8	437	2.8	10.0	.834	38.2	40	1.43372	132.6		
1/9	482	6.3	16.3	.856	33.8	-	1.47134	151.4		
10	527									

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	3.4	19.7	0.893	27.0	-	1.49196	-163.6	42	Below 5
12	437	3.5	23.2	.906	24.7	56	1.49901	-177.4	52	do.
13	482	4.5	27.7	.924	21.6	62	1.50823	176.3	78	do.
2/14	527	4.5	32.2	.936	19.7	64	-	-	155	do.
15	572	4.5	36.7	.947	17.9	66	-	-	270	do.
Residuum		63.2	99.9	1.051	3.1					

Carbon residue, Conradson Residuum 6.0 percent, crude 4.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.1	0.695	72.1	
Total gasoline and naphtha	7.2	0.765	53.5	
Kerosene distillate	-	-	-	
Gas oil	13.6	.864	32.3	
Nonviscous lubricating distillate	5.9	.902-.927	25.4-21.1	50-100
Medium lubricating distillate	5.0	.927-.940	21.1-19.0	100-200
Viscous lubricating distillate	2.0	.940-.952	19.0-17.1	Above 200
Residuum	63.2	1.051	3.1	
Distillation loss	.1			

1/ Distillation discontinued at 482° F.

2/ Distillation discontinued at 561° F.

Item 38
Bureau of Mines Bartlesville Laboratory
Sample 61058

IDENTIFICATION

Gosford, East field
Lower Stevens, Miocene
9,464-9,567 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API, 34.0 Pour point, ° F, below 5
Sulfur, percent, 0.57 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 54 sec. at 100° F, 51 sec. Nitrogen, percent, 0.35

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	3.4	3.4	0.660	82.9					
2	167	3.1	6.5	.680	76.6	12	1.38505	119.0		
3	212	6.3	12.8	.727	63.1	25	1.40230	123.7		
4	257	6.7	19.5	.751	56.9	27	1.41518	126.6		
5	302	5.8	25.3	.771	52.0	29	1.42596	130.5		
6	347	5.0	30.3	.790	47.6	31	1.43788	136.0		
7	392	4.3	34.6	.810	43.2	34	1.44768	140.8		
8	437	4.4	39.0	.827	39.6	37	1.45690	145.0		
9	482	5.0	44.0	.841	36.8	38	1.46519	147.4		
1/10	527	5.9	49.9	.852	34.6	39	1.47322	151.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	3.0	52.9	0.867	31.7	42	1.48146	158.7	44	20
12	437	6.0	58.9	.881	29.1	45	1.48877	160.1	54	40
13	482	2.6	61.5	.902	25.4	51	1.49810	152.8	78	60
14	527	4.5	66.0	.913	23.5	53	1.50579	-	130	80
2/15	572	4.8	70.8	.926	21.3	56		-	325	90
Residuum		25.0	95.8	1.000	10.0					

Carbon residue, Conradson Residuum 8.0 percent, crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.8	0.698	71.2	
Total gasoline and naphtha	34.6	0.748	57.7	
Kerosene distillate	-	-	-	
Gas oil	19.6	.847	35.5	
Nonviscous lubricating distillate	7.5	.876-.907	30.0-24.5	50-100
Medium lubricating distillate	3.7	.907-.918	24.5-22.6	100-200
Viscous lubricating distillate	5.4	.918-.932	22.6-20.2	Above 200
Residuum	25.0	1.000	10.0	
Distillation loss	4.2			

1/ Distillation discontinued at 518° F.

2/ Distillation discontinued at 536° F.

Item 39
Bureau of Mines Bartlesville Laboratory
Sample 55162

IDENTIFICATION

Greeley field
Lower Miocene
11,260-11,500 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.839 Gravity, ° API, 37.2 Pour point, ° F, below 5
Sulfur, percent, 0.31 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 44 sec., 100° F., 41 sec. Nitrogen, percent, 0.266

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 752 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco. 100° F	Cloud test ° F
1	122	2.6	2.6	0.656	84.2					
2	167	3.4	6.0	.672	79.1	8.4	1.37830	130.0		
3	212	5.9	11.9	.724	63.9	23	1.40138	126.8		
4	257	8.7	20.6	.750	57.2	27	1.41511	129.4		
5	302	6.3	26.9	.771	52.0	29	1.42664	132.9		
6	347	5.9	32.8	.790	47.6	31	1.43795	140.3		
7	392	4.5	37.3	.807	43.8	33	1.44775	143.0		
8	437	5.1	42.4	.824	40.2	35	1.45619	146.5		
9	482	5.3	47.7	.837	37.6	36	1.46489	151.5		
10	527	5.9	53.6	.850	35.0	38	1.47309	160.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.9	57.5	0.860	33.0	38	1.42885	177.2	41	15
12	437	5.4	62.9	.871	31.0	40	1.48421	160.4	48	35
13	482	4.8	67.7	.889	27.7	45	1.49384	159.0	64	55
14	527	4.5	72.2	.898	26.1	46		100	70	70
15	572	5.2	77.4	.914	23.3	51		210	80	80
Residuum		19.9	97.3	.986	12.0					

Carbon residue, Conradson Residuum 11.3 percent, crude 2.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.9	0.694	72.4	
Total gasoline and naphtha	37.3	0.749	57.4	
Kerosene distillate	5.1	.824	40.2	
Gas oil	18.5	.852	34.6	
Nonviscous lubricating distillate	9.1	.873-.898	30.6-26.1	50-100
Medium lubricating distillate	4.3	.898-.912	26.1-23.7	100-200
Viscous lubricating distillate	3.1	.912-.922	23.7-22.0	Above 200
Residuum	19.9	.986	12.0	
Distillation loss	2.7			

Item 40
Bureau of Mines Bartlesville Laboratory
Sample 49038

IDENTIFICATION

Guajarral Hills field
Leda, Kreyenhagen, Oligocene
8,658-8,730 feet

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific, 0.841 Gravity, ° API, 36.8 Pour point, ° F, 15
Sulfur, percent, 0.63 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.266

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco. 100° F	Cloud test ° F
1	122	3.8	3.8	0.644	88.2					
2	167	2.7	6.5	.682	76.0	13	1.38128	123.5		
3	212	6.8	13.3	.719	65.3	21	1.40065	125.6		
4	257	8.3	21.6	.749	57.4	26	1.41366	128.2		
5	302	6.4	28.0	.770	52.3	28	1.42547	133.3		
6	347	5.5	33.5	.791	47.4	32	1.43692	138.1		
7	392	4.2	37.7	.809	43.4	34	1.44685	142.2		
8	437	4.4	42.1	.822	40.6	34	1.45514	145.7		
9	482	4.8	46.9	.836	37.8	36	1.46267	150.5		
10	527	5.9	52.8	.846	35.8	36	1.46965	157.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.9	57.7	0.853	34.4	35			40	20
12	437	5.8	63.5	.867	31.7	38			46	35
13	482	4.6	68.1	.882	28.9	42			58	60
14	527	4.9	73.0	.897	26.3	46			88	75
15	572	5.5	78.5	.913	23.5	-			210	90
1/Residuum		20.7	99.2	.986	12.0					

Carbon residue, Conradson Residuum 10.9 percent, crude 2.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.3	0.690	73.6	
Total gasoline and naphtha	37.7	0.745	58.4	
Kerosene distillate	4.4	.822	40.6	
Gas oil	20.3	.850	35.0	
Nonviscous lubricating distillate	6.3	.872-.898	30.8-26.1	50-100
Medium lubricating distillate	4.6	.898-.907	26.1-24.5	100-200
Viscous lubricating distillate	5.2	.907-.918	24.5-22.6	Above 200
Residuum	20.7	.986	12.0	
Distillation loss	.8			

1/ Distillation discontinued at 563° F.

Bureau of Mines Item 41
Sample Bartlesville
55106 Laboratory

IDENTIFICATION

Helm field
Wyant, Eocene
8,075-8,090 feet

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific 0.860 Gravity, ° API, 33.0 Pour point, ° F, 30
Sulfur percent 0.31 Color brownish black
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, 0.300

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillate on at atmospheric pressure 744 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.5	1.5	0.649	86.5					
2	167	2.9	4.4	.684	75.4	14	1.37916	125.9		
3	212	6.5	10.9	.731	62.1	27	1.40606	122.0		
4	257	8.4	19.3	.755	55.9	29	1.41873	135.6		
5	302	6.0	25.3	.773	51.6	30	1.42842	137.3		
6	347	4.9	30.2	.790	47.6	31	1.43723	140.0		
7	392	4.0	34.2	.807	43.8	33	1.44731	141.7		
8	437	4.2	38.4	.824	40.2	35	1.45684	147.1		
9	482	4.7	43.1	.837	37.6	36	1.46632	157.7		
10	527	5.5	48.6	.851	34.8	38	1.47399	157.6		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.1	51.7	0.868	31.5	42	1.47976	156.6	43	20
12	437	6.2	57.9	.873	30.6	41	1.48489	154.4	50	45
13	482	3.7	61.6	.887	28.0	44	1.49285	170.9	68	55
14	527	3.7	65.3	.899	25.9	47			105	70
15	572	5.3	70.6	.917	22.8	52			210	80
Residuum		27.2	97.8	.996	10.6					

Carbon residue, Conradson Residuum 15.7 percent crude 4.9 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.9	0.707	68.6	
Total gasoline and naphtha	34.2	0.754	56.2	
Kerosene distillate	4.2	.824	40.2	
Gas oil	16.4	.854	34.2	
Nonviscous lubricating distillate	8.2	.873-.897	30.6-26.3	50-100
Medium lubricating distillate	4.6	.897-.914	26.3-23.3	100-200
Viscous lubricating distillate	3.0	.914-.927	23.3-21.1	Above 200
Residuum	27.2	.996	10.6	
Distillation loss	2.2			

Bureau of Mines Item 42
Sample Bartlesville
53058 Laboratory

IDENTIFICATION

Honor Rancho field
Wayside, Upper Miocene
6,600 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.837 Gravity, ° API 37.6 Pour point, ° F, 25
Sulfur percent 0.40 Color brownish green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	2.2	2.2	0.660	82.9					
2	167	3.0	5.2	.677	77.5	11	1.38545	131.5		
3	212	6.6	11.8	.730	62.3	26	1.40676	132.0		
4	257	8.6	20.4	.760	54.7	31	1.42166	138.5		
5	302	6.5	26.9	.781	49.7	34	1.43410	144.4		
6	347	5.8	32.7	.798	45.8	35	1.44375	146.6		
7	392	4.8	37.5	.814	42.3	36	1.45166	147.5		
8	437	5.3	42.8	.828	39.4	37	1.45948	152.7		
9	482	6.0	48.8	.841	36.8	38	1.46799	158.9		
10	527	6.5	55.3	.853	34.4	39	1.47525	164.9		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	5.9	61.2	0.863	32.5	40			40	10
12	437	5.3	66.5	.871	31.0	40			48	35
13	482	4.3	70.8	.885	28.4	43			63	60
14	527	4.0	74.8	.897	26.3	46			96	75
15	572	4.4	79.2	.909	24.2	48			175	90
Residuum		17.8	97.0	.973	13.9					

Carbon residue, Conradson Residuum 8.0 percent crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.8	0.703	69.8	
Total gasoline and naphtha	37.5	0.759	54.9	
Kerosene distillate	-	-	-	
Gas oil	27.0	.850	35.0	
Nonviscous lubricating distillate	8.5	.873-.897	30.6-26.3	50-100
Medium lubricating distillate	5.3	.897-.912	26.3-23.7	100-200
Viscous lubricating distillate	.9	.912-.915	23.7-23.1	Above 200
Residuum	17.8	.973	13.9	
Distillation loss	3.0			

Item 43
Bureau of Mines Bartlesville Laboratory
Sample 58014

IDENTIFICATION

Huntington Beach field California
(South Main Area) Orange County
Puente, Miocene

GENERAL CHARACTERISTICS

Gravity, specific, 0.918 Gravity, ° API, 22.6 Pour point, ° F, below 5
Sulfur, percent, 1.57 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 210 sec., 130° F., 140 sec. Nitrogen, percent, 0.648

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 102° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	1.8	1.8	0.680	76.6	-				
3	212	5.7	7.5	.747	57.9	34	1.40535	124.2		
4	257	1.7	9.2	.768	52.7	35				
5	302	3.9	13.1	.778	50.4	32	1.42567	126.5		
6	347	3.9	17.0	.800	45.4	36	1.43913	131.3		
7	392	3.0	20.0	.821	40.9	40	1.45053	142.1		
8	437	3.8	23.8	.837	37.6	42	1.46041	145.9		
9	482	3.7	27.5	.849	35.2	42	1.46780	148.9		
10	527	5.5	33.0	.860	33.0	42	1.47564	149.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	35.6	0.873	30.6	45	1.48527	159.8	43	Below 5
12	437	5.3	40.9	.884	28.6	46	1.48886	161.5	49	20
13	482	4.5	45.4	.898	26.1	49	1.49701	164.3	66	34
14	527	4.5	49.9	.917	22.8	55	1.50749	-	120	54
15	572	6.6	56.5	.936	19.7	-	1.51572	-	310	70
Residuum		43.1	99.6	1.015	7.9					

Carbon residue, Conradson Residuum 6.2 percent crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.5	0.731	62.1	
Total gasoline and naphtha	20.0	0.770	52.3	
Kerosene distillate	-	-	-	
Gas oil	18.6	.858	33.4	
Nonviscous lubricating distillate	7.4	.885-.910	28.4-24.0	50-100
Medium lubricating distillate	3.6	.910-.925	24.0-21.5	100-200
Viscous lubricating distillate	6.9	.925-.953	21.5-17.0	Above 200
Residuum	43.1	1.015	7.9	
Distillation loss	.4			

1/ Distillation discontinued 568° F

Item 44
Bureau of Mines Bartlesville Laboratory
Sample 55140

IDENTIFICATION

Inglewood field California
Vickers, Lower Miocene Los Angeles County
2,300 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.946 Gravity, ° API, 18.1 Pour point, ° F, below 5
Sulfur, percent, 2.50 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 680 sec., 130° F., 290 sec. Nitrogen, percent, 0.640

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 144° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.5	1.5	0.747	57.9	-				
4	257	1.5	3.0	.761	54.4	32				
5	302	2.4	5.4	.779	50.1	33	1.42294	122.0		
6	347	2.9	8.3	.793	46.9	32	1.43729	139.7		
7	392	3.4	11.7	.814	42.3	36	1.44750	133.7		
8	437	4.3	16.0	.837	37.6	42	1.45984	140.1		
9	482	3.9	19.9	.855	34.0	45	1.47082	147.1		
10	527	5.6	25.5	.871	31.0	-	1.48078	159.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	28.0	0.890	27.5	-	1.49110	160.6	42	Below 5
12	437	6.0	34.0	.896	26.4	52	1.49578	160.5	50	10
13	482	5.7	39.7	.915	23.1	57	1.50233	157.8	72	20
14	527	5.2	44.9	.925	21.5	59	1.51422	-	150	32
15	572	3.3	48.2	.941	18.9	-	1.52001	-	310	55
Residuum		51.6	99.8	1.017	7.6					

Carbon residue, Conradson Residuum 12.3 percent crude 6.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.5	0.747	57.9	
Total gasoline and naphtha	11.7	0.786	48.5	
Kerosene distillate	-	-	-	
Gas oil	19.3	.866	31.9	
Nonviscous lubricating distillate	7.8	.896-.918	26.4-22.6	50-100
Medium lubricating distillate	4.8	.918-.930	22.6-20.7	100-200
Viscous lubricating distillate	4.6	.930-.947	20.7-17.9	Above 200
Residuum	51.6	1.017	7.6	
Distillation loss	.2			

1/ Distillation discontinued at 518° F.

2/ Distillation discontinued at 540° F.

Bureau of Mines Item 45
 Bartlesville Laboratory
 Sample 56022

IDENTIFICATION

Kern Front field
 Chanac, Pliocene-Miocene
 1,865-1,940 feet

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.957 Gravity, ° API, 14.8 Pour point, ° F, 40
 Sulfur, percent, 0.85 Color, brownish black
 Viscosity, Saybolt Universal at 100° F., 5.100 sec.
 at 130° F., 1.400 sec. Nitrogen percent, 0.676

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
 First drop 374 ° F

Fraction No.	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	---	---	---	---	---	---	---	---	---
2	167	---	---	---	---	---	---	---	---	---
3	212	---	---	---	---	---	---	---	---	---
4	257	---	---	---	---	---	---	---	---	---
5	302	---	---	---	---	---	---	---	---	---
6	347	---	---	---	---	---	---	---	---	---
7	392	1.0	1.0	0.839	37.2	---	---	---	---	---
8	437	1.5	2.5	.842	36.6	44	---	---	---	---
9	483	2.8	5.3	.860	33.0	47	1.46238	126.9	---	---
10	527	5.6	10.9	.876	30.0	50	1.47757	140.1	---	---

Stage 2—Distillation continued at 40 mm Hg

11	392	2.5	13.4	0.898	26.1	56	1.49018	151.0	46	Below 5
12	437	6.2	19.6	.910	24.0	58	1.49712	157.6	58	do
13	482	7.3	26.9	.928	21.0	64	1.50875	168.6	94	do
14	527	6.8	33.7	.946	18.1	69	1.51903	---	240	do
15	572	9.1	42.8	.960	15.9	73	1.52728	---	Over 400	do
Residuum		55.8	98.6	1.008	8.9					

Carbon residue, Conradson Residuum 10.0 percent, crude 5.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosine distillate				
Gas oil	13.7	0.871	31.0	
Nonviscous lubricating distillate	9.9	.902-.929	25.4-20.8	50-100
Medium lubricating distillate	4.8	.929-.941	20.8-18.9	100-200
Viscous lubricating distillate	14.4	.941-.966	18.9-15.0	Above 200
Residuum	55.8	1.008	8.9	
Distillation loss	1.4			

Bureau of Mines Item 46
 Bartlesville Laboratory
 Sample 55121

IDENTIFICATION

Kern River field
 Kern River, Pleistocene-Pliocene
 1,099-1,183 feet

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.982 Gravity, ° API, 12.6 Pour point, ° F, 45
 Sulfur, percent, 1.19 Color, brownish black
 Viscosity, Saybolt Universal at 100° F., over 6000 sec.
 at 130° F., 5000 sec. Nitrogen percent, 0.604

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
 First drop 392 ° F

Fraction No.	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	---	---	---	---	---	---	---	---	---
2	167	---	---	---	---	---	---	---	---	---
3	212	---	---	---	---	---	---	---	---	---
4	257	---	---	---	---	---	---	---	---	---
5	302	---	---	---	---	---	---	---	---	---
6	347	---	---	---	---	---	---	---	---	---
7	392	---	---	---	---	---	---	---	---	---
8	437	1.0	1.0	---	---	---	---	---	---	---
9	483	1.6	2.6	0.849	35.2	---	1.46101	118.5	---	---
10	527	4.8	7.4	.880	29.3	52	1.47824	131.3	---	---

Stage 2—Distillation continued at 40 mm Hg

11	392	2.2	9.6	0.904	25.0	59	1.49090	144.2	46	Below 5
12	437	5.0	14.6	.913	23.5	60	1.49922	155.1	60	do
13	482	6.5	21.1	.935	19.8	67	1.51020	151.2	105	do
14	527	6.5	27.6	.946	18.1	69	1.52138	---	250	do
1/15	572	5.3	32.9	.959	16.0	---	---	---	Over 400	do
Residuum		65.7	98.6	1.013	8.2					

Carbon residue, Conradson Residuum 10.0 percent, crude 6.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosine distillate				
Gas oil	9.6	0.877	29.9	
Nonviscous lubricating distillate	7.6	.907-.932	24.5-20.3	50-100
Medium lubricating distillate	5.0	.932-.942	20.3-18.7	100-200
Viscous lubricating distillate	10.7	.942-.965	18.7-15.1	Above 200
Residuum	65.7	1.013	8.2	
Distillation loss	1.4			

1/ Distillation discontinued at 554° F.

Item 47
Bureau of Mines Bartlesville Laboratory
Sample 55138

IDENTIFICATION

Kettleman, North Dome field
Temblor, Miocene
8,015-8,060 feet

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API, 34.0 Pour point, ° F, 15
Sulfur, percent, 0.40 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 47 sec.; 100° F, 44 sec. Nitrogen, percent, 0.212

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 72 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.1	1.1	0.650	86.2					
2	167	1.6	2.7	.681	76.3	13				
3	212	4.5	7.2	.727	69.2	25	1.39589	124.9		
4	257	6.9	14.1	.751	56.9	27	1.41715	119.9		
5	302	7.6	21.7	.770	52.3	28	1.42779	123.2		
6	347	6.2	27.9	.790	47.6	31	1.43743	128.8		
7	392	5.6	33.5	.806	44.1	32	1.44764	137.2		
8	437	6.1	39.6	.822	40.6	34	1.45609	144.0		
9	482	5.8	45.4	.835	38.0	35	1.46457	151.9		
10	527	7.2	52.6	.847	35.6	36	1.47212	160.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	2.7	55.3	0.864	32.3	40	1.47819	183.1	41	15
12	437	9.0	64.3	.873	30.6	41	1.48347	160.0	49	35
13	482	5.7	70.0	.890	27.5	46	1.49280	-	73	60
14	527	6.0	86.0	.900	25.7	47		-	145	75
15	572	4.7	90.7	.914	23.3	51		-	320	95
Residuum		19.1	99.8	.988	11.7					

Carbon residue, Conradson Residuum 12.4 percent, crude 2.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.2	0.705	69.2	
Total gasoline and naphtha	33.5	0.762	54.2	
Kerosene distillate	6.1	.822	40.6	
Gas oil	20.6	.851	34.8	
Nonviscous lubricating distillate	9.2	.873-.894	30-26.8	50-100
Medium lubricating distillate	5.3	.894-.908	26.8-24.3	100-200
Viscous lubricating distillate	6.0	.908-.936	24.3-19.7	Above 200
Residuum	19.1	.988	11.7	
Distillation loss	2			

Item 48
Bureau of Mines Bartlesville Laboratory
Sample 64061

IDENTIFICATION

Las Cienegas field
Upper Miocene
2,300 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.877 Gravity, ° API, 29.8 Pour point, ° F, below 5
Sulfur, percent, 0.56 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen, percent, 0.287

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.3	1.3	0.642	88.9					
2	167	1.9	3.2	.665	75.1	15	1.38310	127.1		
3	212	3.6	6.8	.729	62.6	26	1.40550	131.7		
4	257	5.8	12.6	.759	54.9	31	1.41925	137.0		
5	302	5.9	18.5	.780	49.9	33	1.43190	140.6		
6	347	5.1	23.6	.799	45.6	35	1.44338	145.0		
7	392	5.3	28.9	.823	40.4	40	1.45514	147.7		
8	437	4.9	33.8	.840	37.0	43	1.46491	154.3		
9	482	6.5	40.3	.856	33.8	45	1.47457	165.6		
10	527	7.0	47.3	.869	31.3	47	1.48269	173.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	4.8	52.1	0.884	28.6	50	1.48948	172.6	44	15
12	437	6.9	59.0	.901	25.5	54	1.49668	-	56	30
13	482	5.2	64.2	.912	23.7	56	1.50679	-	87	50
14	527	4.6	68.8	.924	21.6	58	1.51218	-	160	65
15	572	2.9	71.7	.932	20.3	59		-	265	95
Residuum		27.4	99.1	.966	12.0					

Carbon residue, Conradson Residuum 10.0 percent, crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.8	0.700	70.6	
Total gasoline and naphtha	28.2	0.768	52.7	
Kerosene distillate	-	-	-	
Gas oil	23.7	.863	32.5	
Nonviscous lubricating distillate	9.8	.893-.914	27.0-23.3	50-100
Medium lubricating distillate	5.5	.914-.927	23.3-21.1	100-200
Viscous lubricating distillate	3.8	.927-.935	21.1-19.8	Above 200
Residuum	27.4	.966	12.0	
Distillation loss	.2			

1/ Distillation discontinued at 534° F.

Item 49
Bureau of Mines Bartlesville Laboratory
Sample 43170

IDENTIFICATION

Lompoc field
Avenaceous shale, Miocene
2,500-2,850 feet

California
Santa Barbara County

GENERAL CHARACTERISTICS

Gravity, specific 0.933 Gravity, ° API, 20.2 Pour point, ° F, -
Sulfur, percent, 3.66 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 500 sec. Nitrogen, percent, -
at 130° F., 260 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 154° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.5	0.5							
3	212	2.4	2.9	0.719	65.3	-				
4	257	3.6	6.5	.744	58.7	24				
5	302	4.2	10.7	.769	52.5	26				
6	347	3.9	14.6	.794	46.7	33				
7	392	4.3	18.9	.817	41.7	38				
8	437	3.5	22.4	.842	36.6	44				
9	482	4.8	27.2	.864	32.3	49				
10	527	8.3	35.5	.882	28.9	51				

STAGE 2—Distillation continued at 40 mm Hg

11	392	0.5	36.0							
12	437	3.4	39.4	0.914	23.3	---			52	Below 5
13	482	4.4	43.8	.925	21.5	62			80	do
14	527	4.0	47.8	.944	18.4	-			155	do
1/15	572	5.5	53.3	.952	17.1	-			Over 400	do
Residuum		46.3	99.6	1.027	6.3					

Carbon residue, Conradson Residuum 16.5 percent, crude 7.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.719	65.3	
Total gasoline and naphtha	18.9	0.773	51.6	
Kerosine distillate	-	-	-	
Gas oil	18.3	.872	30.8	
Nonviscous lubricating distillate	5.6	.913-.930	23.5-20.7	50-100
Medium lubricating distillate	5.5	.930-.948	20.7-17.8	100-200
Viscous lubricating distillate	5.0	.948-.956	17.8-16.5	Above 200
Residuum	46.3	1.027	6.3	
Distillation loss	.4			

1/ Distillation discontinued at 568° F

Item 50
Bureau of Mines Bartlesville Laboratory
Sample 61029

IDENTIFICATION

Long Beach field
Alamitos, Pliocene
2,620 - 2,808 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.918 Gravity, ° API, 22.6 Pour point, ° F, below 5
Sulfur, percent, 1.29 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 208 sec. Nitrogen, percent, 0.55
at 130° F., 103 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 140° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	3.7	3.7	0.735	61.0	-	1.40665	124.8		
5	302	3.6	7.3	.769	52.5	28	1.42366	128.8		
6	347	3.5	10.8	.791	47.4	31	1.43519	128.5		
7	392	2.9	13.7	.808	43.6	33	1.44504	134.0		
8	437	4.6	18.3	.825	40.0	36	1.45410	135.7		
9	482	5.2	23.5	.838	37.4	37	1.46278	142.4		
10	527	8.1	31.6	.852	34.6	39	1.47213	154.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.1	33.7	0.872	30.8	44	1.48187	150.0	43	10
12	437	5.9	39.6	.882	28.9	45	1.48712	153.3	51	20
13	482	6.8	46.4	.901	25.6	51	1.49781	159.0	76	45
14	527	5.7	52.1	.919	22.5	56	1.50674	156.2	160	65
1/15	572	8.2	60.3	.937	19.5	62	1.51477	-	295	75
Residuum		38.7	99.0	1.009	8.7					

Carbon residue, Conradson Residuum 6.3 percent, crude 2.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	13.7	0.774	51.3	
Kerosine distillate	4.6	.825	40.0	
Gas oil	17.9	.854	34.2	
Nonviscous lubricating distillate	8.7	.881-.906	29.1-24.7	50-100
Medium lubricating distillate	6.5	.906-.925	24.7-21.5	100-200
Viscous lubricating distillate	8.9	.925-.948	21.5-17.8	Above 200
Residuum	38.7	1.009	8.7	
Distillation loss	1.0			

1/ Distillation discontinued at 545° F.

Bureau of Mines
Sample

Item 51
Bartlesville
55159

Laboratory

IDENTIFICATION

Lost Hills field
Etchegoin, Pliocene
1,810-2,368 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.859 -- Gravity, ° API, 33.2 -- -- Pour point, ° F, below 5
Sulfur, percent, 0.33 -- Color, brownish green
Viscosity, Saybolt Universal at 77° F 75 sec. 100° F 52 sec. Nitrogen, percent, 0.024

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 144 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	6.5	6.5	0.729	62.6	-	1.40393	127.0		
4	257	9.0	15.5	.753	56.4	28	1.41625	127.9		
5	302	7.5	23.0	.773	51.6	30	1.42756	133.3		
6	347	6.6	29.6	.792	47.2	32	1.43798	132.7		
7	392	5.4	35.0	.809	43.4	34	1.44801	132.0		
8	437	6.0	41.0	.827	39.6	37	1.45769	140.3		
9	482	5.8	46.8	.842	36.6	39	1.46698	149.6		
10	527	6.3	53.1	.858	33.4	41	1.47643	160.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.9	56.0	0.879	29.5	47	1.48357	160.1	42	Below 5
12	437	5.3	61.3	.882	28.9	45	1.48673	170.3	48	do
13	482	5.1	66.4	.898	26.1	49	1.49529	-	67	do
14	527	4.6	71.0	.906	24.7	50	1.50629	-	120	do
15	572	4.7	75.7	.927	21.1	57		-	280	do
Residuum		24.1	99.8	.963	15.4					

Carbon residue, Conradson Residuum 6.8 percent crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.5	0.729	62.6	
Total gasoline and naphtha	35.0	0.769	52.5	
Kerosene distillate	-	-	-	
Gas oil	24.3	.852	34.6	
Nonviscous lubricating distillate	7.6	.884-.903	28.6-25.2	50-100
Medium lubricating distillate	3.8	.903-.917	25.2-22.8	100-200
Viscous lubricating distillate	5.0	.917-.945	22.8-18.2	Above 200
Residuum	24.1	.963	15.4	
Distillation loss	.2			

Bureau of Mines
Sample

Item 52
Bartlesville
61072

Laboratory

IDENTIFICATION

McKittrick field
Tulare, Pleistocene-Pliocene
1,000-1,050 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.962 -- Gravity, ° API, 15.6 -- -- Pour point, ° F, - 25
Sulfur, percent 0.96 -- Color, brownish black --
Viscosity, Saybolt Universal at 130° F 478 sec. -- Nitrogen, percent, 0.67 --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 316 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392	2.8	2.8	0.807	43.8	-	1.44347	126.7		
8	437	3.3	6.1	.838	37.4	42	1.45687	126.3		
9	482	5.1	11.2	.859	33.2	47	1.46854	133.0		
10	527	8.4	19.6	.880	29.3	52	1.48328	147.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.1	22.7	0.913	23.5	64	1.49973	160.4	49	Below 5
12	437	8.2	30.9	.933	20.2	67	1.51006	173.8	64	do
13	482	6.7	37.6	.944	18.4	71	1.52330	196.2	125	30
14	527	9.8	47.4	.974	13.8	78	1.53355	206.1	405	35
15	572	7.2	54.6	.978	13.2	81		Over 400	50	
Residuum		43.7	98.3	1.018	7.5					

Carbon residue, Conradson Residuum 4.7 percent crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	2.8	0.807	43.8	
Kerosene distillate	-	-	-	
Gas oil	18.8	.870	31.1	
Nonviscous lubricating distillate	9.6	.914-.928	23.3-21.0	50-100
Medium lubricating distillate	5.4	.928-.950	21.0-17.5	100-200
Viscous lubricating distillate	18.0	.950-.983	17.5-12.5	Above 200
Residuum	43.7	1.018	7.5	
Distillation loss	1.7			

Item 53
Bureau of Mines Bartlesville Laboratory
Sample 53021

IDENTIFICATION

Midway-Sunset field

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.918 Gravity, ° API 22.6 Pour point, ° F, below 3.
Sulfur, percent, 0.94 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 160 sec. at 130° F, 90 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 95 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167	1.7	1.7							
3	212	2.0	3.7	0.725	63.7	--	1.40230	121.9		
4	257	4.2	7.9	.762	54.2	32	1.41836	123.6		
5	302	4.5	12.4	.782	49.5	34	1.42910	126.2		
6	347	3.0	15.4	.805	44.3	38	1.44096	130.2		
7	392	3.7	19.1	.827	39.6	42	1.45403	138.0		
8	437	4.6	23.7	.846	35.8	46	1.46545	146.1		
9	482	4.8	28.5	.863	32.5	49	1.47598	154.7		
10	527	6.2	34.7	.880	29.3	52	1.48677	167.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.6	37.3	0.893	27.0	54	--		44	Below 5
12	437	5.6	42.9	.903	25.2	55	--		53	do
13	482	6.1	49.0	.919	22.5	59	--		86	do
14	527	4.0	53.0	.933	20.2	63	--		190	do
15	572	6.7	59.7	.946	18.1	66	--		Over 400	do
Residuum		39.8	99.5	1.003	9.6					

Carbon residue, Conradson Residuum 9.9 percent, crude 4.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.7	0.725	63.7	
Total gasoline and naphtha	15.4	0.767	53.0	
Kerosene distillate	--	--	--	
Gas oil	23.5	.864	32.3	
Nonviscous lubricating distillate	7.8	.899-.921	25.9-22.1	50-100
Medium lubricating distillate	4.6	.921-.934	22.1-20.0	100-200
Viscous lubricating distillate	8.4	.934-.954	20.0-16.8	Above 200
Residuum	39.8	1.003	9.6	
Distillation loss	.5			

Item 54
Bureau of Mines Bartlesville Laboratory
Sample 61024

IDENTIFICATION

Montalvo, West field
Colonia, Sespe, Oligocene
11,094 - 12,429 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity, specific 0.951 Gravity, ° API 17.3 Pour point, ° F, 55
Sulfur, percent 4.10 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 7.648 sec. at 130° F, 2.772 sec. Nitrogen, percent, 0.74

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 127 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.5	3.5	0.705	69.2	-	1.39366	122.8		
4	257	3.1	6.6	.741	59.5	22	1.41020	131.5		
5	302	2.5	9.1	.764	53.7	26	1.42166	131.2		
6	347	2.7	11.8	.785	48.8	29	1.43304	136.6		
7	392	2.8	14.6	.804	44.5	32	1.44318	137.0		
8	437	2.7	17.3	.822	40.6	34	1.45236	149.3		
1/9	482	10.7	28.0	.845	36.0	40	1.46611	157.4		
10	527									

Stage 2—Distillation continued at 40 mm Hg

11	392	1.8	29.8	0.882	28.9	49	1.48931	173.8	41	40
12	437	4.0	33.8	.892	27.1	50	1.49878	-	68	65
13	482	4.6	38.4	.902	25.4	51	1.50503	176.1	91	70
14	527	6.5	44.9	.922	22.0	58	1.51003	-	120	75
2/15	572	4.2	49.1	.934	20.0	60		-	145	80
Residuum		50.0	99.1	1.054	2.8					

Carbon residue, Conradson Residuum 7.9 percent, crude 4.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.5	0.705	69.2	
Total gasoline and naphtha	14.6	0.756	55.7	
Kerosene distillate	2.7	.822	40.6	
Gas oil	12.6	.851	34.8	
Nonviscous lubricating distillate	8.0	.886-.908	28.2-24.3	50-100
Medium lubricating distillate	11.2	.908-.938	24.3-19.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	50.0	1.054	2.8	
Distillation loss	.9			

1/ Distillation discontinued at 482° F

2/ Distillation discontinued at 536° F.

Item 55
Bureau of Mines Bartlesville Laboratory
Sample 55165

IDENTIFICATION

Montebello field
Middle Repetto, Pliocene
3,346-3,626 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.897 Gravity, ° API, 26.3 Pour point, ° F, 40
Sulfur percent, 0.68 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 115 sec.; 100° F, 76 sec. Nitrogen, percent, 0.216

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 124 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.7	0.7	0.727	63.1	-				
4	257	2.1	2.8	.747	57.9	25	1.40994	124.3		
5	302	3.1	5.9	.777	50.6	32	1.42739	128.1		
6	347	4.2	10.1	.803	44.7	37	1.44198	135.5		
7	392	4.5	14.6	.826	39.8	42	1.45562	146.0		
8	437	5.1	19.7	.844	36.2	45	1.46624	152.3		
9	482	6.4	26.1	.856	33.8	45	1.47425	161.2		
10	527	8.0	34.1	.864	32.3	44	1.48047	165.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.1	39.2	0.871	31.0	44	1.48398	166.4	41	Below 5
12	437	7.7	46.9	.878	29.7	43	1.48698	159.2	48	15
13	482	6.7	53.6	.892	27.1	46	1.49573	168.2	64	40
14	527	6.3	59.9	.903	25.2	49	1.50293	-	105	55
15	572	8.1	68.0	.919	22.5	53	1.50820	-	230	70
Residuum		31.8	99.8	.980	12.9					

Carbon residue, Conradson Residuum 10.1 percent crude 3.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.7	0.727	63.1	
Total gasoline and naphtha	10.1	0.778	50.4	
Kerosene distillate	-	-	-	
Gas oil	34.0	.858	33.4	
Nonviscous lubricating distillate	11.9	.880-.902	29.3-25.4	50-100
Medium lubricating distillate	6.3	.902-.915	25.4-23.1	100-200
Viscous lubricating distillate	5.2	.915-.928	23.1-21.0	Above 200
Residuum	31.8	.980	12.9	
Distillation loss	.2			

Item 56
Bureau of Mines Bartlesville Laboratory
Sample 55150

IDENTIFICATION

Mount Poso field
Vedder, Lower Miocene
1,600-1,800 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.959 Gravity, ° API, 16.0 Pour point, ° F, 15
Sulfur percent, 0.68 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 1,900 sec.; at 130° F, 600 sec. Nitrogen, percent, 0.475

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 756 mm Hg
First drop 203 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	0.4	0.4							
5	302	.1	.5							
6	347	.2	.7							
7	392	.3	1.0	0.831	38.8	-				
8	437	.9	1.9	.845	36.0	45				
9	482	2.9	4.8	.862	32.7	48	1.46377	122.7		
10	527	4.6	9.4	.876	30.0	-	1.47524	131.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.5	13.9	0.892	27.1	-	1.48723	139.6	46	Below 5
12	437	6.9	20.8	.904	25.0	55	1.49556	144.2	59	do.
13	482	7.8	28.6	.923	21.8	61	1.50622	169.2	94	do.
14	527	9.3	37.9	.936	19.7	64	1.51766	176.2	210	do.
15	572	9.5	47.4	.955	16.7	70	1.52712	-	Over 400	do.
Residuum		52.0	99.4	.998	10.3					

Carbon residue, Conradson Residuum 10.9 percent, crude 5.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	-			
Total gasoline and naphtha				
Kerosene distillate				
Gas oil	13.6	0.873	30.6	
Nonviscous lubricating distillate	11.6	.896-.924	26.4-21.6	50-100
Medium lubricating distillate	7.4	.924-.935	21.6-19.8	100-200
Viscous lubricating distillate	14.8	.935-.964	19.8-15.3	Above 200
Residuum	52.0	.998	10.3	
Distillation loss	.6			

1/ Distillation discontinued at 518° F.

Item 57
Bureau of Mines Bartlesville Laboratory
Sample 55130

IDENTIFICATION

Mountain View field
Upper Miocene and
Lower Pliocene
5,015-5,346 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.850 Gravity, ° API, 35.0 Pour point, ° F, below 5
Sulfur, percent, 0.36 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 100 sec., 130° F., 41 sec. Nitrogen, percent, 0.002

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.7	3.7	0.654	84.9					
2	167	2.7	6.4	.675	78.1	9.8	1.38347	126.1		
3	212	6.0	12.4	.726	63.4	24	1.40276	126.6		
4	257	7.1	19.5	.753	56.4	28	1.41675	129.2		
5	302	6.1	25.6	.776	50.9	31	1.42945	134.7		
6	347	5.1	30.7	.796	46.3	34	1.44104	141.8		
7	392	4.3	35.0	.815	42.1	37	1.45124	143.0		
8	437	4.9	39.9	.832	38.6	39	1.46030	147.7		
9	482	5.5	45.4	.845	36.0	40	1.46854	152.7		
10	527	6.5	51.9	.856	33.8	41	1.47579	159.4		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.4	54.3	0.871	31.0	44	1.48294	156.6	41	10
12	437	5.0	59.3	.876	30.0	42	1.48657	-	47	30
13	482	5.4	64.7	.890	27.5	46	1.49482	-	62	55
14	527	4.5	69.2	.898	26.1	46			97	70
15	572	4.8	74.0	.919	22.5	53			190	85
Residuum		23.5	97.5	.985	12.2					

Carbon residue, Conradson Residuum 10.8 percent, crude 2.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.4	0.693	72.7	
Total gasoline and naphtha	35.0	0.750	57.2	
Kerosene distillate	-	-	-	
Gas oil	23.0	.853	34.4	
Nonviscous lubricating distillate	9.2	.879-.899	29.5-25.9	50-100
Medium lubricating distillate	4.9	.899-.921	25.9-22.1	100-200
Viscous lubricating distillate	1.9	.921-.930	22.1-20.7	Above 200
Residuum	23.5	.985	12.2	
Distillation loss	2.5			

Item 58
Bureau of Mines Bartlesville Laboratory
Sample 55154

IDENTIFICATION

Newhall-Potrero field
5th zone, Upper Miocene
8,800-9,500 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.862 Gravity, ° API, 32.7 Pour point, ° F, below 5
Sulfur, percent, 0.56 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen, percent, 0.346

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 752 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.2	2.2	0.658	83.6					
2	167	3.9	6.1	.688	74.2	16	1.39166	123.0		
3	212	5.1	11.2	.730	62.3	26	1.40428	126.3		
4	257	7.5	18.7	.750	57.2	27	1.41461	128.8		
5	302	6.1	24.8	.769	52.5	28	1.42570	131.2		
6	347	4.7	29.5	.791	47.4	31	1.43649	133.9		
7	392	4.4	33.9	.807	43.8	33	1.44610	138.2		
8	437	4.5	38.4	.823	40.4	35	1.45511	143.0		
9	482	4.6	43.0	.836	37.8	36	1.46358	150.5		
10	527	5.4	48.4	.850	35.0	38	1.47176	158.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.3	51.7	0.862	32.7	39	1.47782	161.7	41	15
12	437	4.2	55.9	.869	31.3	39	1.48253	154.0	46	30
13	482	4.4	60.3	.885	28.4	43	1.49046	171.1	59	55
14	527	5.1	65.4	.895	26.6	45	1.50018	172.3	93	70
15	572	4.7	70.1	.913	23.5	50	-	-	195	85
Residuum		28.4	98.5	.999	10.1					

Carbon residue, Conradson Residuum 11.4 percent, crude 3.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.2	0.701	70.4	
Total gasoline and naphtha	33.9	0.750	57.2	
Kerosene distillate	4.5	.823	40.4	
Gas oil	16.8	.853	34.4	
Nonviscous lubricating distillate	8.0	.874-.896	30.4-26.4	50-100
Medium lubricating distillate	4.9	.896-.914	26.4-23.3	100-200
Viscous lubricating distillate	2.0	.914-.921	23.3-22.1	Above 200
Residuum	28.4	.999	10.1	
Distillation loss	1.5			

Item 59
Bureau of Mines Bartlesville Laboratory
Sample 55145

IDENTIFICATION

Newport, West field
Newport, Miocene
3,608-3,844 feet

California
Orange County

GENERAL CHARACTERISTICS

Gravity specific 0.933 Gravity, ° API 20.2 Pour point, ° F, 25
Sulfur percent 3.27 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 540 sec; at 130° F, 230 sec Nitrogen, percent, 0.703

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 755 mm. Hg
First drop 113 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	1.3	1.3	0.679	76.9	-				
3	212	2.7	4.0	.716	66.1	19	1.39839	124.6		
4	257	3.2	7.2	.748	57.7	26	1.41364	126.6		
5	302	3.2	10.4	.771	52.0	29	1.42561	129.9		
6	347	3.1	13.5	.795	46.5	33	1.43778	133.0		
7	392	2.5	16.0	.816	41.9	37	1.44971	142.7		
8	437	2.9	18.9	.835	38.0	41	1.45908	142.0		
9	482	3.8	22.7	.849	35.2	42	1.46792	147.1		
1/10	527	6.1	28.8	.864	32.3	-	1.47695	154.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	1.6	30.4	0.877	29.9	-	1.48207	-	42	Below 5
12	437	4.4	34.8	.885	28.4	46	1.48883	-	49	15
13	482	4.0	38.8	.906	24.7	53	1.49922	-	68	35
14	527	4.4	43.2	.919	22.5	56	1.50886	-	120	55
2/15	572	4.6	47.8	.938	19.4	-		-	260	70
Residuum		51.2	99.0	1.020	7.2					

Carbon residue, Conradson Residuum 9.1 percent crude 5.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.0	0.704	69.5	
Total gasoline and naphtha	16.0	0.761	54.4	
Kerosene distillate	-	-	-	
Gas oil	16.8	.860	33.0	
Nonviscous lubricating distillate	5.9	.886-.911	28.2-23.8	50-100
Medium lubricating distillate	4.9	.911-.930	23.8-20.7	100-200
Viscous lubricating distillate	4.2	.930-.947	20.7-17.9	Above 200
Residuum	51.2	1.020	7.2	
Distillation loss	1.0			

1/ Distillation discontinued at 520° F.

2/ Distillation discontinued at 549° F.

Item 60
Bureau of Mines Bartlesville Laboratory
Sample 55134

IDENTIFICATION

Orcutt field
Point Sal, Pliocene-Miocene
3,046-3,650 feet

California
Santa Barbara County

GENERAL CHARACTERISTICS

Gravity, specific 0.915 Gravity, ° API, 23.1 Pour point, ° F, below 5
Sulfur percent 2.48 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 580 sec; at 130° F, 120 sec Nitrogen, percent, 0.525

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 138 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	1.2	1.2							
3	212	1.7	2.9	0.713	67.0	-	1.39622	120.7		
4	257	3.4	6.3	.746	58.2	25	1.41373	128.2		
5	302	4.6	10.9	.765	53.5	26	1.42434	131.7		
6	347	5.0	15.9	.787	48.3	30	1.43561	131.5		
7	392	4.2	20.1	.805	44.3	32	1.44599	138.8		
8	437	4.6	24.7	.822	40.6	34	1.45484	142.1		
9	482	4.8	29.5	.837	37.6	36	1.46302	149.6		
10	527	6.6	36.1	.855	34.0	40	1.47247	160.5		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	1.6	37.7	0.870	31.1	43	1.48223	138.2	43	Below 5
12	437	4.6	42.3	.881	29.1	45	1.48582	141.3	48	5
13	482	5.3	47.6	.892	27.1	46	1.49360	-	64	25
14	527	4.9	52.5	.906	24.7	50	1.50365	-	115	45
1/15	572	3.7	56.2	.922	22.0	-	1.51034	-	190	65
Residuum		43.7	99.9	1.011	8.5					

Carbon residue, Conradson Residuum 8.3 percent, crude 4.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.9	0.713	67.0	
Total gasoline and naphtha	20.1	0.768	52.7	
Kerosene distillate	4.6	.822	40.6	
Gas oil	16.0	.855	34.0	
Nonviscous lubricating distillate	7.9	.883-.902	28.8-25.4	50-100
Medium lubricating distillate	6.4	.902-.924	23.4-21.6	100-200
Viscous lubricating distillate	1.2	.924-.927	21.6-21.1	Above 200
Residuum	43.7	1.011	8.5	
Distillation loss	.1			

1/ Distillation discontinued at 547° F.

Item 61
Bureau of Mines Bartlesville Laboratory
Sample 61022

IDENTIFICATION

Oxnard field
McInnes, Sespe, Oligocene
6,273-6,363 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity, specific, 0.900 Gravity, ° API, 25.7 Pour point, ° F, 20
Sulfur, percent, 1.72 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 25 sec. at 130°F, 66 sec. Nitrogen, percent, 0.50

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167	2.4	2.4	0.681	76.3	-	1.38692	131.7		
3	212	3.2	5.6	.720	65.0	21	1.39947	127.5		
4	257	3.9	9.5	.744	58.7	24	1.41218	131.8		
5	302	3.6	13.1	.765	53.5	26	1.42285	132.8		
6	347	3.9	17.0	.786	48.5	29	1.43468	137.0		
7	392	3.3	20.3	.804	44.5	32	1.44666	141.1		
8	437	3.8	24.1	.820	41.1	33	1.45296	147.1		
9	482	4.6	28.7	.833	38.4	34	1.46134	151.4		
10	527	9.1	37.8	.849	35.2	37	1.47163	162.1		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
11	392	2.1	39.9	0.870	31.1	43	1.48441	161.2	44	25
12	437	6.2	46.1	.887	28.0	47	1.49111	166.1	54	40
13	482	3.8	49.9	.904	25.0	52	1.50191	159.1	79	60
14	527	4.4	54.3	.919	22.5	56	1.50834	-	130	70
15	572	6.7	61.0	.932	20.3	59			225	95
Residuum		36.0	97.0	1.021	7.1					

Carbon residue, Conradson Residuum 7.6 percent crude 3.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.6	0.703	69.8	
Total gasoline and naphtha	20.3	0.754	56.2	
Kerosene distillate	3.8	.820	41.1	
Gas oil	17.3	.850	35.0	
Nonviscous lubricating distillate	8.7	.880-.914	29.3-23.3	50-100
Medium lubricating distillate	6.2	.914-.929	23.3-20.8	100-200
Viscous lubricating distillate	4.7	.929-.940	20.8-19.0	Above 200
Residuum	36.0	1.021	7.1	
Distillation loss	3.0			

Item 62
Bureau of Mines Bartlesville Laboratory
Sample 61052

IDENTIFICATION

Premier (Main Area) field
Chanac, Pliocene-Miocene
2,400-2,800 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.967 Gravity, ° API, 14.8 Pour point, ° F, 45
Sulfur, percent, 0.98 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 1.1 over 6000 sec. at 130°F, 3,697 sec. Nitrogen, percent, 0.73

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 172 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392									
8	437	4.4	4.4	0.831	38.8	-	1.45410	132.0		
1/9	482	13.8	18.2	.859	33.2	42	1.47148	142.1		
10	527									

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
11	392	5.8	24.0	0.917	22.8	65	1.50322	162.0	67	Below 5
12	437	2.5	26.5	.930	20.7	68	1.50966	149.4	95	10
13	482	4.7	31.2	.937	19.5	68	1.51517	174.7	140	15
2/14	527	11.4	42.6	.953	17.0	72	1.52192	167.9	415	25
15	572									
Residuum		55.3	97.9	1.018	7.5					

Carbon residue, Conradson Residuum 9.6 percent crude 5.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosene distillate				
Gas oil	18.2	0.852	34.6	
Nonviscous lubricating distillate	7.5	.908-.930	24.3-20.7	50-100
Medium lubricating distillate	16.9	.930-.964	20.7-15.3	100-200
Viscous lubricating distillate				Above 200
Residuum	55.3	1.018	7.5	
Distillation loss	2.1			

1/ Distillation discontinued at 477° F

2/ Distillation discontinued at 520° F.

Item 63
Bureau of Mines Bartlesville Laboratory
Sample 55183

IDENTIFICATION

Raisin City field
Miocene

California
Fresno County

GENERAL CHARACTERISTICS

Gravity, specific 0.911 Gravity, ° API, 23.8 Pour point, ° F, below 5
Sulfur percent 0.45 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 145 sec., 130° F, 85 sec. Nitrogen, percent, 0.449

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 154 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.1	2.1	0.733	61.5	-				
4	257	3.3	5.4	.759	54.9	31	1.41218	125.6		
5	302	3.5	8.9	.780	49.9	33	1.43013	128.7		
6	347	4.0	12.9	.802	44.9	37	1.44315	133.8		
7	392	4.1	17.0	.825	40.0	41	1.45470	141.9		
8	437	3.3	20.3	.842	36.6	44	1.46406	147.2		
9	482	4.7	25.0	.855	34.0	45	1.47231	151.2		
10	527	5.7	30.7	.866	31.9	45	1.48029	160.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.1	34.8	0.880	29.3	48	1.48597	164.9	42	Below 5
12	437	6.5	41.3	.893	27.0	50	1.48983	164.7	50	30
13	482	4.8	46.1	.901	25.6	51	1.49800	173.0	71	45
14	527	6.1	52.2	.916	23.0	55	1.50245	192.0	120	60
15	572	7.8	60.0	.925	21.5	56		270		70
Residuum		39.4	99.4	.995	10.7					

Carbon residue, Conradson Residuum 2.8 percent, crude 5.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.1	0.733	61.5	
Total gasoline and naphtha	17.0	0.786	48.5	
Kerosene distillate	-	-	-	
Gas oil	21.1	.866	31.9	
Nonviscous lubricating distillate	8.9	.893-.910	27.0-24.0	50-100
Medium lubricating distillate	5.9	.910-.921	24.0-22.1	100-200
Viscous lubricating distillate	7.1	.921-.930	22.1-20.7	Above 200
Residuum	39.4	.995	10.7	
Distillation loss	.6			

Item 64
Bureau of Mines Bartlesville Laboratory
Sample 55163

IDENTIFICATION

Richfield field
Kraemer, Miocene
4,100-4,700 feet

California
Orange County

GENERAL CHARACTERISTICS

Gravity, specific 0.918 Gravity, ° API, 22.6 Pour point, ° F, below 5
Sulfur percent 1.86 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 230 sec., 130° F, 160 sec. Nitrogen, percent, 0.575

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 755 mm. Hg
First drop 136 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.1	3.1	0.717	65.9	-	1.40138	125.9		
4	257	3.9	7.0	.752	56.7	27	1.41476	130.1		
5	302	4.3	11.3	.773	51.6	30	1.42628	132.1		
6	347	4.1	15.4	.794	46.7	33	1.43793	139.1		
7	392	3.5	18.9	.812	42.8	35	1.44793	142.9		
8	437	4.1	23.0	.829	39.2	38	1.45687	144.5		
9	482	4.7	27.7	.844	36.2	40	1.46745	148.8		
10	527	5.9	33.6	.861	32.8	43	1.47566	159.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	36.6	0.871	31.0	44	1.48314	154.6	41	Below 5
12	437	4.7	41.3	.881	29.1	45	1.48871	160.2	48	20
13	482	5.0	46.3	.901	25.6	51	1.49876	161.0	66	40
14	527	4.9	51.2	.918	22.6	56	1.50733	-	115	52
15	572	5.7	56.9	.933	20.2	-	1.51633	-	260	75
Residuum		42.9	99.8	1.016	7.8					

Carbon residue, Conradson Residuum 11.5 percent, crude 5.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.1	0.717	65.9	
Total gasoline and naphtha	18.9	0.771	52.0	
Kerosene distillate	-	-	-	
Gas oil	20.7	.858	33.4	
Nonviscous lubricating distillate	7.7	.883-.913	28.8-23.5	50-100
Medium lubricating distillate	4.6	.913-.927	23.5-21.1	100-200
Viscous lubricating distillate	5.0	.927-.941	21.1-18.9	Above 200
Residuum	42.9	1.016	7.8	
Distillation loss	.2			

1/ Distillation discontinued at 558° F

Bureau of Mines Item 65
Bartlesville Laboratory
Sample 55131

IDENTIFICATION

Rincon field
Pliocene
2,000-3,500 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity specific 0.886 Gravity ° API 28.2 Pour point, ° F, below 5
Sulfur percent 1.40 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 120 sec., 100°F., 80 sec. Nitrogen percent, 0.480

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refract ve index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2	0.662	82.2					
2	167	1.9	3.1	.673	78.8	8.9	1.37582	127.4		
3	212	4.4	7.5	.721	64.8	22	1.39965	118.8		
4	257	5.7	13.2	.747	57.9	25	1.41350	129.1		
5	302	5.3	18.5	.768	52.7	27	1.42455	127.0		
6	347	3.6	22.1	.787	48.3	30	1.43505	135.6		
7	392	4.2	26.3	.805	44.3	32	1.44496	135.8		
8	437	3.8	30.1	.820	41.1	33	1.45356	139.5		
9	482	4.1	34.2	.834	38.2	35	1.46123	144.3		
10	527	5.5	39.7	.847	35.6	36	1.46898	151.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.7	43.4	0.863	32.5	40	1.47780	124.8	42	15
12	437	4.8	48.2	.871	31.0	40	1.48210	130.9	48	40
13	482	4.5	52.7	.885	28.4	43	1.48998	-	62	55
14	527	4.8	57.5	.896	26.4	45	-	-	100	70
15	572	7.4	64.9	.919	22.5	53	-	-	230	90
Residuum		34.1	99.0	1.011	8.5					

Carbon residue, Conradson Residuum 11.0 percent crude 4.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.5	0.699	70.9	
Total gasoline and naphtha	26.3	0.752	56.7	
Kerosene distillate	3.8	.820	41.1	
Gas oil	16.4	.852	34.8	
Nonviscous lubricating distillate	8.6	.873-.896	30.6-26.4	50-100
Medium lubricating distillate	4.8	.896-.914	26.4-23.3	100-200
Viscous lubricating distillate	5.0	.914-.932	23.3-20.3	Above 200
Residuum	34.1	1.011	8.5	
Distillation loss	1.0			

Bureau of Mines Item 66
Bartlesville Laboratory
Sample 57104

IDENTIFICATION

Rio Bravo field
Rio Bravo, Vedder, Lower Miocene
11,444-11,500 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity specific 0.832 Gravity ° API 38.6 Pour point ° F below 5
Sulfur percent 0.35 Color, brownish green
Viscosity, Saybolt Universal at 100° F 38 sec Nitrogen percent, 0.158

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 85 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.4	3.4	0.646	87.5					
2	167	3.3	6.7	.679	76.9	12	1.37996	120.8		
3	212	7.2	13.9	.728	62.9	25	1.40318	122.7		
4	257	8.7	22.6	.753	56.4	28	1.41622	128.7		
5	302	6.4	29.0	.774	51.3	30	1.42805	140.9		
6	347	6.0	35.0	.794	46.7	33	1.43941	142.5		
7	392	5.3	40.3	.811	43.0	35	1.44894	142.8		
8	437	4.6	44.9	.824	40.2	35	1.45649	152.3		
9	482	4.8	49.7	.836	37.8	36	1.46422	152.6		
10	527	6.2	55.9	.846	35.8	36	1.46872	178.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	59.5	0.852	34.6	35	1.47762	160.4	40	10
12	437	4.4	63.9	.863	32.5	36	1.48009	-	45	30
13	482	4.7	68.6	.874	30.4	38	1.48657	-	55	44
14	527	4.9	73.5	.897	26.3	46	1.49512	-	79	64
15	572	5.5	79.0	.905	24.9	46	-	155	64	84
Residuum		18.6	97.6	.966	15.0					

Carbon residue, Conradson Residuum 7.1 percent crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.9	0.696	71.8	
Total gasoline and naphtha	40.3	0.751	56.9	
Kerosene distillate	4.6	.824	40.2	
Gas oil	19.2	.849	35.2	
Nonviscous lubricating distillate	8.4	.869-.899	31.3-25.9	50-100
Medium lubricating distillate	6.5	.899-.909	25.9-24.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.6	.966	15.0	
Distillation loss	2.4			

Item 67
Bureau of Mines Bartlesville Laboratory
Sample 55180

IDENTIFICATION

Rosecrans field
Zins, Pliocene
5,720-6,095 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.851 Gravity, ° API, 34.8 Pour point, ° F, 10
Sulfur, percent, 0.52 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, 0.254

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 755 mm. Hg
First drop 126 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	1.9	1.9	0.690	72.6	-				
3	212	3.8	5.7	.735	61.0	28	1.41058	135.0		
4	257	9.1	14.8	.736	55.7	29	1.41911	134.7		
5	302	8.0	22.8	.773	51.6	30	1.42933	137.2		
6	347	7.1	29.9	.790	47.6	31	1.43726	149.1		
7	392	5.9	35.8	.804	44.5	32	1.44554	140.1		
8	437	6.6	42.4	.817	41.7	32	1.45258	139.6		
9	482	5.8	48.2	.831	38.8	33	1.45957	138.2		
10	527	7.1	55.3	.844	36.2	35	1.46690	143.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.5	59.8	0.855	34.0	36	1.47408	150.5	40	15
12	437	5.9	65.7	.864	32.3	37	1.47834	147.9	47	35
13	482	3.9	69.6	.880	29.3	41	1.48678	136.3	63	45
14	527	3.9	73.5	.896	26.4	45	1.49379		96	55
15	573	5.5	79.0	.908	24.3	48			220	70
Residuum		20.5	99.5	.994	10.9					

Carbon residue, Conradson Residuum 11.7 percent, crude 2.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.7	0.720	65.0	
Total gasoline and naphtha	35.8	0.769	52.5	
Kerosine distillate	6.6	.817	41.7	
Gas oil	21.4	.846	35.8	
Nonviscous lubricating distillate	8.0	.867-.897	31.7-26.3	50-100
Medium lubricating distillate	3.7	.897-.906	26.3-24.7	100-200
Viscous lubricating distillate	3.5	.906-.915	24.7-23.1	Above 200
Residuum	20.5	.994	10.9	
Distillation loss	.5			

Item 68
Bureau of Mines Bartlesville Laboratory
Sample 49036

IDENTIFICATION

Russell Ranch-Cuyama field
Dibblee, Vaqueros, Lower Miocene
2,700-3,050 feet

California
San Luis Obispo County

GENERAL CHARACTERISTICS

Gravity, specific, 0.849 Gravity, ° API, 35.2 Pour point, ° F, 25
Sulfur, percent, 0.35 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	3.6	3.6	0.641	89.3					
2	167	2.7	6.3	.672	79.1	8.4	1.37879	125.9		
3	212	5.4	11.7	.722	64.5	22	1.40098	127.6		
4	257	6.3	18.0	.750	57.2	27	1.41529	131.0		
5	302	5.7	23.7	.772	51.8	29	1.42725	136.7		
6	347	5.2	28.9	.794	46.7	33	1.44038	143.0		
7	392	4.0	32.9	.811	43.0	35	1.45155	147.8		
8	437	4.9	37.8	.829	39.2	38	1.46044	153.6		
9	482	5.1	42.9	.839	37.2	37	1.46854	161.1		
10	527	6.7	49.6	.854	34.2	40	1.47639	167.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	52.9	0.861	32.8	39			40	15
12	437	6.1	59.0	.872	30.8	40			46	35
13	482	5.0	64.0	.888	27.9	45			60	55
14	527	4.8	68.8	.902	25.4	48			94	70
15	573	6.2	75.0	.912	23.7	50			200	85
Residuum		23.0	98.0	.990	11.4					

Carbon residue, Conradson Residuum 13.1 percent, crude 3.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.7	0.686	74.8	
Total gasoline and naphtha	32.9	0.745	58.4	
Kerosine distillate	-	-	-	
Gas oil	24.7	.852	34.6	
Nonviscous lubricating distillate	9.2	.887-.903	28.0-25.2	50-100
Medium lubricating distillate	5.1	.903-.912	25.2-23.7	100-200
Viscous lubricating distillate	3.1	.912-.917	23.7-22.8	Above 200
Residuum	23.0	.990	11.4	
Distillation loss	2.0			

Item 69
Bureau of Mines Bartlesville Laboratory
Sample 58028

IDENTIFICATION

San Ardo field
Lombardi, Miocene
2,100-2,250 feet

California
Monterey County

GENERAL CHARACTERISTICS

Gravity, specific, 0.992 Gravity, ° API, 11.1 Pour point, ° F, 80
Sulfur, percent, 2.25 Color, brownish black
Viscosity, Saybolt Universal at 100°F., over 6,000 sec. Nitrogen, percent, 0.913

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg

First drop 352 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	--	--	--	--	--	--	--	--	--
3	212	--	--	--	--	--	--	--	--	--
4	257	--	--	--	--	--	--	--	--	--
5	302	--	--	--	--	--	--	--	--	--
6	347	--	--	--	--	--	--	--	--	--
7	392	1.0	1.0	0.832	38.6	--	--	--	--	--
8	437	1.4	2.4	.861	32.8	53	--	--	--	--
1/ 9	482	4.1	6.5	.867	31.7	--	1.45473	125.6	--	--
10	527	--	--	--	--	--	--	--	--	--

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	4.9	11.4	0.892	27.1	--	1.48846	141.1	43	Below 5
12	437	5.5	16.9	.909	24.2	58	1.49896	155.4	57	do
13	482	6.3	23.2	.930	20.7	64	1.51060	161.6	99	do
2/ 14	527	3.2	26.4	.946	18.1	--	1.51865	--	200	do
15	572	--	--	--	--	--	--	--	--	--
Residuum		72.0	98.4	1.025	6.6	--	--	--	--	--

Carbon residue, Conradson Residuum 4.6 percent, crude 3.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	--	--	--	--
Total gasoline and naphtha	--	--	--	--
Kerosene distillate	--	--	--	--
Gas oil	11.7	0.875	30.2	--
Nonviscous lubricating distillate	8.5	.901-.931	25.6-20.5	50-100
Medium lubricating distillate	4.8	.931-.946	20.5-18.1	100-200
Viscous lubricating distillate	1.6	.946-.951	18.1-17.3	Above 200
Residuum	72.0	1.025	6.6	--
Distillation loss	1.6	--	--	--

1/ Distillation discontinued at 482° F.

2/ Distillation discontinued at 509° F.

Item 70
Bureau of Mines Bartlesville Laboratory
Sample 61018

IDENTIFICATION

San Emidio, Nose field
Reef Ridge, Miocene
11,460-11,560 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.878 Gravity, ° API, 29.7 Pour point, ° F, 20
Sulfur, percent, 0.83 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 81 sec., 100°F., 59 sec Nitrogen, percent, 0.39

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg

First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	2.3	2.3	0.674	78.4	--	1.38286	126.2	--	--
3	212	4.6	6.9	.718	65.6	20	1.39938	126.6	--	--
4	257	6.5	13.4	.746	58.2	25	1.41230	127.0	--	--
5	302	5.3	18.7	.765	53.5	26	1.42198	125.6	--	--
6	347	4.6	23.3	.784	49.0	28	1.43235	130.1	--	--
7	392	4.0	27.3	.803	44.7	31	1.44299	132.9	--	--
8	437	4.4	31.7	.819	41.3	33	1.45198	136.7	--	--
9	482	5.2	36.9	.833	38.4	34	1.46030	144.9	--	--
10	527	6.0	42.9	.846	35.8	36	1.46832	151.2	--	--

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.7	46.6	0.860	33.0	38	1.47726	151.3	41	15
12	437	6.1	52.7	.877	29.9	43	1.48264	--	49	40
13	482	5.7	58.4	.892	27.1	46	1.49394	--	71	60
14	527	4.8	63.2	.911	23.8	52	--	--	135	75
15	572	5.8	69.0	.924	21.6	55	--	--	315	90
Residuum		30.3	99.3	.996	10.6	--	--	--	--	--

Carbon residue, Conradson Residuum 6.8 percent, crude 2.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.9	0.703	69.8	--
Total gasoline and naphtha	27.3	0.754	36.2	--
Kerosene distillate	4.4	.819	41.3	--
Gas oil	18.2	.850	35.0	--
Nonviscous lubricating distillate	8.1	.877-.901	29.9-25.6	50-100
Medium lubricating distillate	4.8	.901-.916	25.6-23.0	100-200
Viscous lubricating distillate	6.2	.916-.931	23.0-20.5	Above 200
Residuum	30.3	.996	10.6	--
Distillation loss	.7	--	--	--

Item 71
Bureau of Mines Bartlesville Laboratory
Sample 55160

IDENTIFICATION

San Miguelito field
Repetto, Pliocene
6,022-7,011 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity, specific 0.865 Gravity, ° API 32.1 Pour point, ° F, below 5
Sulfur, percent, 0.87 Color, brownish black
Viscosity, Saybolt Universal at 100°F 2.65 sec 130°F 54 sec Nitrogen, percent, 0.413

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 252 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	2.7	2.7	0.661	82.6					
2	167	6.1	8.8	.690	73.6	17	1.38689	116.1		
3	212	4.0	12.8	.734	61.3	28	1.40784	114.8		
4	257	5.9	18.7	.751	56.9	27	1.41487	125.6		
5	302	6.2	24.9	.770	52.3	28	1.42573	128.5		
6	347	3.8	28.7	.791	47.4	32	1.43666	135.1		
7	392	4.1	32.8	.807	43.8	33	1.44582	134.2		
8	437	3.8	36.6	.822	40.6	34	1.45429	142.1		
9	482	4.6	41.2	.839	37.2	37	1.46284	145.4		
10	527	5.7	46.9	.851	34.8	38	1.47119	154.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	2.7	49.6	0.866	31.9	41	1.47806	155.1	41	15
12	437	4.3	53.9	.873	30.6	41	1.48172	161.0	46	35
13	482	4.7	58.6	.883	28.8	42	1.48968	167.6	59	55
14	527	4.3	62.9	.895	26.6	45	1.49810	145.0	94	70
15	572	5.4	68.3	.913	23.5	50			185	80
Residuum		30.1	98.4	1.003	9.6					

Carbon residue, Conradson Residuum 9.1 percent crude 3.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.8	0.698	71.2	
Total gasoline and naphtha	32.8	0.745	58.4	
Kerosine distillate	3.8	.822	40.6	
Gas oil	16.7	.855	34.0	
Nonviscous lubricating distillate	7.8	.876-.896	30.0-26.4	50-100
Medium lubricating distillate	5.4	.896-.916	26.4-23.0	100-200
Viscous lubricating distillate	1.8	.916-.923	23.0-21.8	Above 200
Residuum	30.1	1.003	9.6	
Distillation loss	1.6			

Item 72
Bureau of Mines Bartlesville Laboratory
Sample 53056

IDENTIFICATION

Sansinena field
Miocene
3,000-4,375 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.884 Gravity, ° API 28.6 Pour point, ° F, 45
Sulfur, percent, 0.87 Color, greenish black
Viscosity, Saybolt Universal at 77°F 83 sec 100°F 63 sec Nitrogen, percent, 0.413

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 729 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.5	1.5							
2	167	1.4	2.9	0.678	77.2					
3	212	5.4	8.3	.742	59.2	32	1.38196	111.0		
4	257	6.4	14.7	.764	53.7	33	1.40977	128.6		
5	302	4.9	19.6	.784	49.0	35	1.42169	132.0		
6	347	4.8	24.4	.804	44.5	38	1.43322	139.2		
7	392	3.7	28.1	.823	40.4	41	1.44431	141.1		
8	437	4.5	32.6	.835	38.0	41	1.45493	146.5		
9	482	5.2	37.8	.847	35.6	41	1.46304	149.9		
10	527	6.1	43.9	.858	33.4	41	1.46794	152.4		
							1.47796	164.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.0	46.9	0.866	31.9	41			41	10
12	437	6.1	53.0	.877	29.9	43			48	30
13	482	4.9	57.9	.895	26.6	48			68	50
14	527	4.9	62.8	.911	23.8	52			120	70
15	572	6.1	68.9	.926	21.3	56			350	90
Residuum		30.9	99.8	1.000	10.0					

Carbon residue, Conradson Residuum 12.2 percent, crude 4.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.3	0.720	65.0	
Total gasoline and naphtha	28.1	0.769	52.5	
Kerosine distillate	1.5			
Gas oil	22.5	.855	34.0	
Nonviscous lubricating distillate	7.9	.879-.905	29.5-24.9	50-100
Medium lubricating distillate	5.5	.905-.921	24.9-22.1	100-200
Viscous lubricating distillate	4.9	.921-.934	22.1-20.0	Above 200
Residuum	30.9	1.000	10.0	
Distillation loss	2			

Item 73
Bureau of Mines Bartlesville Laboratory
Sample 55178

IDENTIFICATION

Santa Fe Springs field
Buckbee, Pliocene
5,534-5,944 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.861 Gravity, ° API, 32.8 Pour point, ° F, 25
Sulfur, percent, 0.33 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 47 sec Nitrogen, percent, 0.271

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 117 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	1.2	1.2	0.688	74.2	--	--	--	--	--
3	212	3.5	4.7	.731	62.1	27	1.40189	131.8	--	--
4	257	6.2	10.9	.757	55.4	30	1.41966	137.5	--	--
5	302	6.3	17.2	.776	50.9	31	1.43028	140.7	--	--
6	347	6.3	23.5	.792	47.2	32	1.43908	141.6	--	--
7	392	5.0	28.5	.806	44.1	32	1.44703	143.2	--	--
8	437	5.3	33.8	.822	40.6	34	1.45598	145.7	--	--
9	482	5.6	39.4	.836	37.8	36	1.46484	154.9	--	--
10	527	7.0	46.4	.849	35.2	37	1.47273	160.5	--	--

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.9	52.3	0.861	32.8	39	1.47926	162.7	40	15
12	437	6.6	58.9	.870	31.1	39	1.48223	159.8	46	35
13	482	5.1	64.0	.884	28.6	43	1.49023	165.0	59	50
14	527	5.9	69.9	.896	26.4	45	1.49798	--	92	65
15	572	5.1	75.0	.909	24.2	48	--	--	190	75
Residuum		23.2	98.2	.986	12.0	--	--	--	--	--

Carbon residue, Conradson Residuum 10.1 percent, crude 2.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.7	0.720	65.0	
Total gasoline and naphtha	28.5	0.771	52.0	
Kerosine distillate	6.3	.822	40.6	
Gas oil	22.7	.852	34.6	
Nonviscous lubricating distillate	10.0	.874-.897	30.4-26.3	50-100
Medium lubricating distillate	5.6	.897-.910	26.3-24.0	100-200
Viscous lubricating distillate	1.9	.910-.915	24.0-23.1	Above 200
Residuum	23.2	.986	12.0	
Distillation loss	1.8			

Item 74
Bureau of Mines Bartlesville Laboratory
Sample 49008

IDENTIFICATION

Santa Maria Valley field
Pliocene-Miocene

California
Santa Barbara County

GENERAL CHARACTERISTICS

Gravity, specific, 0.968 Gravity, ° API, 14.7 Pour point, ° F, 45
Sulfur, percent, 4.99 Color, brownish black
Viscosity, Saybolt Universal at 100°F, over 6,000 sec Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 172 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	--	--	--	--	--	--	--	--	--
3	212	2.0	2.0	0.706	68.9	--	1.39359	127.0	--	--
4	257	2.1	4.1	.744	58.7	24	1.41210	131.2	--	--
5	302	2.3	6.4	.768	52.7	27	1.44878	135.1	--	--
6	347	2.6	9.0	.791	47.4	32	1.43748	139.8	--	--
7	392	2.3	11.3	.813	42.6	36	1.44878	144.0	--	--
8	437	2.6	13.9	.832	38.6	39	1.45862	148.6	--	--
9	482	4.3	18.2	.852	34.6	43	1.47009	157.5	--	--
10	527	4.1	22.3	.868	31.5	--	1.47865	167.8	--	--

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.0	24.3	0.883	28.8	--	--	--	40	Below 5
12	437	3.4	27.7	.900	25.7	54	--	--	48	do.
13	482	3.9	31.6	.915	23.1	57	--	--	66	do.
14	527	6.3	37.9	.934	20.0	--	--	--	130	do.
15	572	--	--	--	--	--	--	--	--	--
Residuum		61.3	99.2	1.038	4.8	--	--	--	--	--

Carbon residue, Conradson Residuum 14.8 percent, crude 9.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.0	0.706	68.9	
Total gasoline and naphtha	11.3	0.767	53.0	
Kerosine distillate	--	--	--	
Gas oil	15.3	.863	32.5	
Nonviscous lubricating distillate	5.8	.902-.925	25.4-21.5	50-100
Medium lubricating distillate	5.3	.925-.945	21.5-18.2	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	61.3	1.038	4.8	
Distillation loss	.8			

1/ Distillation discontinued at 498°F.

2/ Distillation discontinued at 516°F.

Bureau of Mines
Sample
Iter 75
Bartlesville
64070
Laboratory

IDENTIFICATION

Saticoy field
Pico, Pliocene
6,454 - 7,141 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity, specific 0.862 Gravity ° API, 32.7 -- Pour point, ° F, below 5
Sulfur, percent 0.4 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 45 sec. -- Nitrogen, percent, 0.245

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	1.5	1.5	0.647	87.2					
2	167	2.5	4.0	.685	75.1	15	1.36276	129.3		
3	212	3.7	7.7	.726	62.9	25	1.40461	133.7		
4	257	6.1	13.8	.749	57.4	26	1.41628	138.1		
5	302	6.2	20.0	.769	52.5	26	1.42766	142.5		
6	347	5.3	25.3	.789	47.6	31	1.43767	144.1		
7	392	4.6	30.1	.804	44.5	31	1.44615	144.6		
8	437	5.4	35.5	.815	42.1	31	1.45345	147.4		
9	482	5.4	40.9	.826	39.4	32	1.46112	155.0		
10	527	6.0	47.5	.844	36.2	35	1.46924	160.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	50.6	0.568	31.5	42	1.47643	-	41	25
12	437	6.1	56.9	.674	30.4	41	1.48105	-	50	45
13	482	4.7	61.6	.685	28.7	42	1.48958	-	66	65
14	527	6.0	67.6	.696	26.1	40			110	85
15	572									
Residuum		31.9	99.5	.973	13.9					

Carbon residue, Conradson Residuum 6.5 percent crude 3.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.7	0.696	72.1	
Total gasoline and naphtha	30.1	0.756	55.7	
Kerosene distillate	5.4	.815	42.1	
Gas oil	16.4	.848	35.3	
Nonviscous lubricating distillate	9.5	.874-.895	30.4-26.7	50-100
Medium lubricating distillate	4.2	.895-.906	26.7-24.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	31.9	.973	13.9	
Distillation loss	.5			

1/ Distillation discontinued at 523°F

Bureau of Mines
Sample
Item 76
Bartlesville
55142
Laboratory

IDENTIFICATION

Seal Beach field
McGrath, Upper Miocene
8,500 feet

California
Orange County

GENERAL CHARACTERISTICS

Gravity, specific, 0.867 Gravity, ° API, 31.2 Pour point, ° F, below 5
Sulfur, percent, 0.55 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 83 sec. 100°F, 52 sec. Nitrogen, percent, 0.394

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	1.0	1.0	0.654	84.9					
2	167	1.4	2.4	.674	78.4	9.4				
3	212	4.2	6.6	.718	65.6	20	1.39075	118.2		
4	257	6.6	13.2	.746	58.2	25	1.41300	128.7		
5	302	5.7	18.9	.765	53.5	26	1.42385	135.1		
6	347	5.6	24.5	.785	48.8	29	1.43460	136.2		
7	392	4.5	29.0	.802	44.9	31	1.44432	139.0		
8	437	4.9	33.9	.818	41.5	33	1.45296	140.3		
9	482	5.5	39.4	.831	38.8	33	1.46148	135.6		
10	527	5.7	45.1	.846	35.8	36	1.46869	163.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	48.9	0.863	32.5	40	1.47690	155.3	40	15
12	437	5.9	54.8	.869	31.3	39	1.48103	158.8	46	40
13	482	5.1	59.9	.884	28.6	43	1.48978	-	61	55
14	527	4.4	64.3	.893	27.0	44	-	-	95	70
15	572	7.2	71.5	.918	22.6	53	-	-	200	85
Residuum		28.1	99.6	.991	11.3					

Carbon residue, Conradson Residuum 10.8 percent, crude 3.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.6	0.699	70.9	
Total gasoline and naphtha	29.0	0.755	55.9	
Kerosene distillate	4.9	.818	41.5	
Gas oil	19.5	.851	34.8	
Nonviscous lubricating distillate	9.0	.873-.894	30.6-26.8	50-100
Medium lubricating distillate	5.5	.894-.918	26.8-22.6	100-200
Viscous lubricating distillate	3.6	.918-.930	22.6-20.7	Above 200
Residuum	28.1	.991	11.3	
Distillation loss	.4			

Item 77
Bureau of Mines Bartlesville Laboratory
Sample 53049

IDENTIFICATION

South Mountain field
Sespe, Oligocene
4,609-6,010 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity, specific, 0.914 Gravity, ° API, 23.3 Pour point, ° F, below 5
Sulfur, percent, 2.79 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 220 sec. 130°F., 160 sec. Nitrogen, percent, 0.248

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167	3.1	3.1	0.653	85.2	-	1.37027	119.0		
3	212	3.1	6.2	.715	66.4	19	1.39909	127.4		
4	257	4.0	10.2	.744	58.7	24	1.41242	129.6		
5	302	3.9	14.1	.767	53.0	27	1.42452	132.4		
6	347	3.2	17.3	.789	47.8	31	1.43551	137.0		
7	392	3.1	20.4	.803	44.7	31	1.44514	142.4		
8	437	3.4	23.8	.820	41.1	33	1.45452	143.1		
9	482	4.3	28.1	.836	37.8	36	1.46323	151.3		
10	527	4.5	32.6	.853	34.4	-	1.47155	157.5		

Stage 2—Distillation continued at 40 mm. Hg

11	392	3.2	35.8	0.867	31.7	-	-	-	40	15
12	437	4.5	40.3	.879	29.5	44	-	-	46	35
13	482	4.7	45.0	.895	26.6	48	-	-	61	50
14	527	3.8	48.8	.913	23.5	53	-	-	99	65
245	572	4.6	53.4	.926	21.2	-	-	-	190	80
Residuum		46.0	99.4	1.018	7.5	-	-	-		

Carbon residue, Conradson Residuum 16.0 percent, crude 8.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.2	0.684	75.4	
Total gasoline and naphtha	20.4	0.746	58.2	
Kerosine distillate	3.4	.820	41.1	
Gas oil	15.5	.857	33.6	
Nonviscous lubricating distillate	7.7	.883-.913	28.8-23.5	50-100
Medium lubricating distillate	4.6	.913-.927	23.5-21.1	100-200
Viscous lubricating distillate	1.8	.927-.933	21.1-20.2	Above 200
Residuum	46.0	1.018	7.5	
Distillation loss	.6			

1/ Distillation discontinued at 518°F.

2/ Distillation discontinued at 559°F.

Item 76
Bureau of Mines Bartlesville Laboratory
Sample 64075

IDENTIFICATION

Summerland field
Vaqueros, Lower Miocene
8,285 feet

California
Santa Barbara County
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.845 Gravity, ° API, 36.0 Pour point, ° F, 15
Sulfur, percent, 0.23 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 41 sec. Nitrogen, percent, 0.248

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.9	1.9	0.645	87.9					
2	167	2.7	4.6	.679	76.9	12	1.38048	126.4		
3	212	5.7	10.3	.727	63.1	25	1.40342	131.1		
4	257	8.4	18.7	.754	56.2	28	1.41779	136.5		
5	302	5.8	24.5	.774	51.3	30	1.42990	146.0		
6	347	5.9	30.4	.790	47.6	31	1.43863	147.0		
7	392	4.6	35.0	.803	44.7	31	1.44554	144.6		
8	437	5.2	40.2	.818	41.5	32	1.45356	149.6		
9	482	5.9	46.1	.831	38.8	33	1.46280	157.3		
10	527	5.9	52.0	.844	36.2	35	1.46890	173.1		

Stage 2—Distillation continued at 40 mm. Hg

11	392	3.6	55.6	0.857	33.6	37	1.47607	163.3	41	20
12	437	5.4	61.0	.869	31.3	39	1.48141	-	48	40
13	482	4.6	65.6	.886	28.2	44	1.49181	-	65	70
14	527	5.0	70.6	.895	26.6	45	-	-	99	85
15	572	4.9	75.5	.904	25.0	46	-	-	200	110
Residuum		21.7	97.2	.962	12.6	-	-	-		

Carbon residue, Conradson Residuum 10.7 percent, crude 2.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.3	0.699	70.8	
Total gasoline and naphtha	35.0	0.754	56.2	
Kerosine distillate	5.2	.818	41.5	
Gas oil	18.7	.846	35.7	
Nonviscous lubricating distillate	9.3	.871-.895	31.0-26.6	50-100
Medium lubricating distillate	4.9	.895-.904	26.6-25.0	100-200
Viscous lubricating distillate	2.4	.904-.908	25.0-24.3	Above 200
Residuum	21.7	.962	12.6	
Distillation loss	2.8			

Bureau of Mines Item 79
Bartlesville Laboratory
 Sample 61019

IDENTIFICATION

Tejon, North field
 Z-1R, and Z-1, Miocene
 8,710 - 9,043 feet

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.825 Gravity, ° API, 40.0 Pour point, ° F, below 5
 Sulfur, percent 0.15 Color, dark green
 Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm. Hg
 First drop 72 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc 100° F	Cloud test ° F
1	122									
2	167	4.4	4.4	0.684	75.4		1.38920	135.4		
3	212	10.8	15.2	.736	60.8	29	1.40953	134.6		
4	257	12.2	27.4	.761	54.4	32	1.42236	147.8		
5	302	8.3	35.7	.780	49.9	33	1.43330	140.9		
6	347	6.6	42.3	.796	46.3	34	1.44212	149.6		
7	392	5.2	47.5	.809	43.4	34	1.45000	142.5		
8	437	5.7	53.2	.827	39.6	37	1.45967	158.0		
9	482	6.1	59.3	.843	36.4	39	1.46972	162.6		
10	527	5.7	65.0	.854	34.2	40	1.47703	171.8		

Stage 2—Distillation continued at 40 mm. Hg

11	392	4.6	69.9	0.869	31.3	43	1.48479	170.6	41	20
12	437	5.2	75.1	.882	28.9	45	1.49066	165.1	49	40
13	482	4.9	80.0	.894	26.8	47	1.49920	171.5	68	65
14	527	3.5	83.5	.905	24.9	49			115	80
15	572	4.9	88.4	.917	22.8	52			310	95
Residuum		8.9	97.3	.986	12.0					

Carbon residue, Conradson Residuum 9.8 percent, crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.2	0.721	64.8	
Total gasoline and naphtha	47.8	0.762	54.2	
Kerosine distillate	5.7	.827	39.6	
Gas oil	19.4	.858	33.4	
Nonviscous lubricating distillate	7.6	.882-.901	28.9-25.6	50-100
Medium lubricating distillate	3.2	.901-.910	25.6-24.0	100-200
Viscous lubricating distillate	4.7	.910-.923	24.0-21.6	Above 200
Residuum	8.2	.986	12.0	
Distillation loss	2.7			

Bureau of Mines Item 80
Bartlesville Laboratory
 Sample 56011

IDENTIFICATION

Tejon-Grapevine field
 Olcese, Middle Miocene
 5,636-6,770 feet

California
 Kern County

GENERAL CHARACTERISTICS

Gravity, specific 0.877 Gravity, ° API, 29.9 Pour point, ° F, below 5
 Sulfur, percent, 0.33 Color, dark green
 Viscosity, Saybolt Universal at 100°F., 46 sec. Nitrogen, percent, 0.152

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
 First drop 153 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	5.5	5.5	0.745	56.4		1.41350	123.8		
4	257	3.0	8.5	.766	53.2	34	1.42024	122.3		
5	302	3.0	11.5	.785	48.8	36	1.43067	124.6		
6	347	3.9	15.4	.813	42.6	42	1.44806	140.8		
7	392	5.2	21.6	.838	37.4	48	1.46284	155.4		
8	437	5.5	27.1	.854	34.2	50	1.47340	162.4		
9	482	7.3	34.4	.864	32.3	49	1.48047	168.7		
10	527	9.2	43.6	.868	31.5	46	1.48464	176.7		

Stage 2—Distillation continued at 40 mm. Hg

11	392	6.9	50.5	0.875	30.2	46	1.48701	177.0	39	10
12	437	8.1	58.6	.879	29.5	44	1.48861		46	30
13	482	7.1	65.7	.892	27.1	46	1.49639		59	50
14	527	7.1	72.8	.906	24.7	50			89	65
15	572	6.7	79.5	.918	22.6	53			180	80
Residuum		20.0	99.5	.973	13.9					

Carbon residue, Conradson Residuum 6.5 percent, crude 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.5	0.745	56.4	
Total gasoline and naphtha	15.4	0.774	51.3	
Kerosine distillate				
Gas oil	41.6	.864	32.3	
Nonviscous lubricating distillate	13.2	.883-.907	28.8-24.5	50-100
Medium lubricating distillate	7.5	.907-.921	24.5-22.1	100-200
Viscous lubricating distillate	1.8	.921-.924	22.1-21.6	Above 200
Residuum	20.0	.973	13.9	
Distillation loss	.5			

Item 81
Bureau of Mines Bartlesville Laboratory
Sample 55151

IDENTIFICATION

Ten Section field
Stevens, Upper Miocene
7,800-8,400 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity, specific, 0.854 Gravity, ° API, 34.2 Pour point, ° F, below 5
Sulfur, percent, 0.45 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.289

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 756 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vac. 100° F	Cloud test ° F
1	122	2.6	2.6	0.644	88.2					
2	167	2.3	4.9	0.683	75.7	14.	1.38469	122.3		
3	212	5.0	9.9	0.725	63.7	24	1.40300	124.0		
4	257	7.9	17.8	0.751	56.9	27	1.41569	128.6		
5	302	6.2	24.0	0.772	51.8	29	1.42785	133.6		
6	347	4.9	28.9	0.791	47.4	32	1.43863	135.5		
7	392	4.6	33.5	0.808	43.6	33	1.44778	140.5		
8	437	5.2	38.7	0.825	40.0	36	1.45638	144.7		
9	482	4.9	43.6	0.837	37.6	36	1.46441	152.5		
10	527	6.2	49.8	0.852	34.6	39	1.47262	151.8		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	4.3	54.1	0.867	31.7	42	1.47941	156.0	41	10
12	437	5.2	59.3	0.872	30.8	40	1.48461	163.8	49	30
13	482	5.3	64.6	0.890	27.5	46	1.49418	170.9	66	55
14	527	3.2	67.8	0.897	26.3	46			105	70
15	572	5.4	73.2	0.915	23.1	51			200	80
Residuum		25.0	98.2	0.984	12.3					

Carbon residue, Conradson Residuum 10.5 percent crude 3.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.9	0.694	72.4	
Total gasoline and naphtha	33.5	0.752	56.7	
Kerosene distillate	5.2	0.825	40.0	
Gas oil	18.5	0.855	34.0	
Nonviscous lubricating distillate	8.5	0.873-0.896	30.6-26.4	50-100
Medium lubricating distillate	4.8	0.896-0.915	26.4-23.1	100-200
Viscous lubricating distillate	2.7	0.915-0.926	23.1-21.3	Above 200
Residuum	25.0	0.984	12.3	
Distillation loss	1.8			

Item 82
Bureau of Mines Bartlesville Laboratory
Sample 55126

IDENTIFICATION

Torrance field
Del Amo, Miocene
3,100-5,000 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.911 Gravity, ° API, 23.8 Pour point, ° F, below 5
Sulfur, percent, 1.84 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 160 sec. 130°F, 96 sec. Nitrogen, percent, 0.555

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vac. 100° F	Cloud test ° F
1	122	0.3	0.3	0.675	78.1					
2	167	1.1	1.4	0.683	75.7	14				
3	212	2.2	3.6	0.725	63.7	24	1.39514	126.2		
4	257	3.7	7.3	0.755	55.9	29	1.41771	130.2		
5	302	3.8	11.1	0.777	50.6	32	1.42942	134.5		
6	347	3.3	14.4	0.796	46.3	34	1.43986	138.3		
7	392	3.5	17.9	0.813	42.6	36	1.44908	141.7		
8	437	4.3	22.2	0.830	39.0	38	1.45776	142.1		
9	482	4.6	26.8	0.843	36.4	39	1.46618	148.3		
10	527	7.4	34.2	0.861	32.8	43	1.47548	151.0		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	1.6	35.8	0.872	30.8	44	1.48248	-	43	10
12	437	5.4	41.2	0.884	28.6	46	1.48731	150.6	49	30
13	482	6.0	47.2	0.901	25.6	51	1.49769	-	70	45
14	527	5.5	52.7	0.910	24.0	52	1.50544	-	125	65
15	572	4.6	57.3	0.927	21.1	52		-	250	80
Residuum		41.9	99.2	1.004	9.4					

Carbon residue, Conradson Residuum 13.2 percent, crude 6.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.6	0.708	68.4	
Total gasoline and naphtha	17.9	0.762	52.5	
Kerosene distillate	-	-	-	
Gas oil	21.0	0.855	34.0	
Nonviscous lubricating distillate	8.5	0.885-0.906	28.4-24.7	50-100
Medium lubricating distillate	5.7	0.906-0.921	24.7-22.1	100-200
Viscous lubricating distillate	4.2	0.921-0.934	22.1-20.0	Above 200
Residuum	41.9	1.004	9.4	
Distillation loss	.8			

1/ Distillation discontinued at 545°F.

Item 83
Bureau of Mines Bartlesville Laboratory
Sample 58023

IDENTIFICATION

Ventura field
Pico and Repetto, Pliocene
2,500-12,000 feet

California
Ventura County

GENERAL CHARACTERISTICS

Gravity specific 0.869 Gravity ° API 31.2 Pour point, ° F, 15
Sulfur percent 0.94 Color brownish black
Viscosity, Saybolt Universal at 77°F, 69 sec, 100°F, 56 sec, Nitrogen percent, 0.413

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distill on at atmospheric pressure 753 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.651	85.9					
2	167	2.5	4.3	0.672	77.5	11	1.37737	124.1		
3	212	5.6	9.9	0.723	64.2	23	1.40031	126.1		
4	257	6.6	16.5	0.750	57.2	27	1.41353	126.5		
5	302	5.3	21.8	0.767	53.0	27	1.42455	126.0		
6	347	4.3	26.1	0.788	48.1	30	1.43517	136.6		
7	392	3.2	30.0	0.806	44.1	32	1.44552	140.6		
8	437	4.1	34.1	0.823	40.4	35	1.45481	142.2		
9	482	4.4	38.5	0.835	38.0	35	1.46287	142.5		
10	527	5.4	43.9	0.850	35.0	38	1.47171	153.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	47.5	0.861	32.8	39	1.47952	165.2	42	14
12	437	3.9	51.4	0.867	31.7	38	1.48282	165.0	47	34
13	482	4.9	56.3	0.884	28.6	43	1.49085	157.3	62	50
14	527	5.1	61.4	0.905	24.9	49			100	70
15	572	5.3	66.7	0.920	22.3	-			230	86
Residuum		31.5	98.2	0.994	10.9					

Carbon residue, Conradson Residuum 13.5 percent crude 4.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.698	71.2	
Total gasoline and naphtha	30.0	0.749	57.4	
Kerosine distillate	4.1	0.823	40.4	
Gas oil	16.3	0.852	34.6	
Nonviscous lubricating distillate	8.5	0.870-0.903	31.1-24.9	50-100
Medium lubricating distillate	4.1	0.905-0.919	24.9-22.5	100-200
Viscous lubricating distillate	3.7	0.919-0.930	22.5-20.7	Above 200
Residuum	31.5	0.994	10.9	
Distillation loss	1.8			

1/ Distillation discontinued 545°F.

Item 84
Bureau of Mines Bartlesville Laboratory
Sample 53051

IDENTIFICATION

Wheeler Ridge field
Eocene
9,910-10,100 feet

California
Kern County

GENERAL CHARACTERISTICS

Gravity specific 0.840 Gravity ° API 37.0 Pour point, ° F, 15
Sulfur percent 0.29 Color brownish green
Viscosity, Saybolt Universal at 100°F, 38 sec, Nitrogen percent, 0.413

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.3	3.3	0.651	85.9					
2	167	2.3	5.6	0.688	74.2	16	1.39069	129.6		
3	212	5.5	11.1	0.732	61.8	27	1.40703	133.8		
4	257	7.8	18.9	0.759	54.9	31	1.42294	140.4		
5	302	6.4	25.3	0.781	49.7	34	1.43385	144.5		
6	347	4.9	30.2	0.798	45.8	35	1.44384	146.2		
7	392	4.7	34.9	0.813	42.6	36	1.45232	149.6		
8	437	5.6	40.5	0.828	39.4	37	1.46203	152.4		
9	482	6.2	46.7	0.845	36.0	41	1.47145	167.4		
10	527	6.9	53.6	0.856	33.8	41	1.47837	170.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.6	58.2	0.868	31.5	42			40	20
12	437	5.4	63.6	0.872	30.8	40			45	40
13	482	6.5	70.1	0.885	28.4	43			60	60
14	527	5.0	75.1	0.897	26.3	46			90	75
15	572	5.1	80.2	0.908	24.3	48			170	90
Residuum		17.3	97.5	0.966	15.0					

Carbon residue, Conradson Residuum 7.8 percent crude 1.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.699	79.9	
Total gasoline and naphtha	34.9	0.757	55.4	
Kerosine distillate	-	-	-	
Gas oil	28.1	0.853	34.4	
Nonviscous lubricating distillate	10.3	0.877-0.898	29.9-26.1	50-100
Medium lubricating distillate	5.3	0.898-0.910	26.1-24.0	100-200
Viscous lubricating distillate	1.6	0.910-0.913	24.0-23.5	Above 200
Residuum	17.3	0.966	15.0	
Distillation loss	2.5			

Item 85
Bureau of Mines Bartlesville Laboratory
Sample 64060

IDENTIFICATION

Whittier field
1st and 2d Whittier, Repetto, Pliocene
2,500 feet

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific, 0.921 Gravity, ° API, 22.1 Pour point, ° F, below 5
Sulfur, percent, 0.53 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 124 sec., 130°F., 83 sec. Nitrogen, percent, 0.490

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 167 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	3.7	3.7	0.759	54.9	-	1.41794	127.7		
5	302	3.1	6.8	.786	48.5	36	1.43178	132.2		
6	347	3.8	10.6	.808	43.6	40	1.44360	135.0		
7	392	4.2	14.8	.832	38.6	45	1.45766	141.1		
8	437	4.7	19.5	.853	34.4	49	1.46872	164.9		
9	482	5.9	25.4	.867	31.7	50	1.47983	165.4		
10	527	6.8	32.2	.880	29.3	52	1.48813	175.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.3	36.5	0.895	26.6	55	1.49251	-	45	Below 5
12	437	6.9	43.4	.905	24.9	56	1.49818	-	55	do
13	482	7.5	50.9	.916	23.0	58	1.51008	-	99	do
14	527	9.4	60.3	.938	19.4	65	-	-	345	do
15	572									
Residuum		32.1	92.4	.995	10.7	-				

Carbon residue, Conradson Residuum 8.4 percent crude 3.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	14.8	0.780	45.8	
Kerosine distillate	-	-	-	
Gas oil	22.4	.874	30.3	
Nonviscous lubricating distillate	10.0	.900-.916	25.7-23.0	50-100
Medium lubricating distillate	3.4	.916-.925	23.0-21.5	100-200
Viscous lubricating distillate	9.7	.925-.950	21.5-17.4	Above 200
Residuum	39.1	.995	10.7	
Distillation loss	.6			

1/ Distillation discontinued at 527°F.

Item 86
Bureau of Mines Bartlesville Laboratory
Sample 53020

IDENTIFICATION

Wilmington field
Repetto, Pliocene and Puente, Miocene

California
Los Angeles County

GENERAL CHARACTERISTICS

Gravity, specific 0.921 Gravity, ° API 22.1 Pour point, ° F, below 5
Sulfur percent 1.44 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 190 sec., 130°F., 110 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	0.9	0.9							
2	167	1.3	2.2							
3	212	1.9	4.1	0.702	70.1	-	1.40310	124.5		
4	257	3.4	7.5	.753	56.4	28	1.41617	127.8		
5	302	3.3	10.8	.773	51.6	30	1.42688	131.1		
6	347	3.1	13.9	.796	46.3	34	1.43870	135.1		
7	392	3.1	17.0	.817	41.7	38	1.45021	138.5		
8	437	3.7	20.7	.835	38.0	41	1.45986	143.4		
9	482	4.8	25.5	.851	34.8	43	1.46902	147.0		
10	527	6.2	31.7	.867	31.7	46	1.47932	160.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	1.8	33.5	0.877	29.2	46			41	Below 5
12	437	6.3	39.8	.891	27.3	49			49	10
13	482	6.0	45.8	.909	24.2	55			72	30
14	527	5.8	51.6	.925	21.5	59			150	50
14s	572	4.9	56.5	.932	19.2	-			350	65
Residuum		43.5	100.0	1.007	9.0					

Carbon residue, Conradson Residuum 11.4 percent crude 5.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	17.0	0.764	53.7	
Kerosine distillate	-	-	-	
Gas oil	20.0	.861	32.8	
Nonviscous lubricating distillate	8.0	.892-.914	27.1-23.3	50-100
Medium lubricating distillate	5.0	.914-.928	23.3-21.0	100-200
Viscous lubricating distillate	6.5	.928-.945	21.0-18.2	Above 200
Residuum	43.5	1.007	9.0	
Distillation loss	0			

1/ Distillation discontinued at 558°F.

Item 87
Bureau of Mines Bartlesville -- Laboratory
Sample 61052

IDENTIFICATION

Yorba Linda field
Pleistocene
260-720 feet

California
Orange County

GENERAL CHARACTERISTICS

Gravity specific 0.875 -- Gravity, ° API, 13.6 -- Pour point, ° F, -- 50
Sulfur percent, 1.86 -- Color, brownish black
Viscosity, Saybolt Universal at 100°F., over 6,000 sec. -- Nitrogen, percent, 0.74

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 320 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392									
8	437	3.0	3.0	0.807	43.8	-				
9	482	4.6	7.6	0.838	37.4	37				
10	527	8.5	16.1	0.867	31.7	46				

Stage 2—Distillation continued at 40 mm Hg

11	392	1.6	17.7	0.806	24.7	60	1.50013	155.6	52	Below 5
12	437	5.7	23.4	0.825	21.5	65	1.51000	163.0	82	do.
13	482	9.6	33.0	0.842	18.7	70	1.52078	166.8	200	do.
14	527	2.8	35.8	0.853	17.0	72	1.52132	178.5	395	do.
15	572	2.3	38.1	0.854	16.8	70	1.52226	165.3	over 400	do.
Residuum		61.0	99.1	1.015	7.9					

Carbon residue, Conradson Residuum 10.0 percent crude 6.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosene distillate	3.0	0.807	43.8	
Gas oil	13.1	0.857	33.6	
Nonviscous lubricating distillate	5.7	0.902-0.928	25.4-21.0	50-100
Medium lubricating distillate	6.4	0.928-0.942	21.0-18.7	100-200
Viscous lubricating distillate	9.9	0.942-0.954	18.7-16.8	Above 200
Residuum	61.0	1.015	7.9	
Distillation loss	0.9			

1/ Distillation discontinued at 529°F.

Item 88
Bureau of Mines Laramie -- Laboratory
Sample PC-56-229

IDENTIFICATION

Adena field
Muddy D, Upper Cretaceous
5,659 - 5,665 feet

Colorado
Morgan County

GENERAL CHARACTERISTICS

Gravity specific 0.834 -- Gravity, ° API, -- 38.2 -- Pour point, ° F, -- 10 --
Sulfur percent, 0.07 -- Color, brownish green --
Viscosity, Saybolt Universal at 100°F., 40 sec. -- Nitrogen, percent, 0.066 --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.4	1.4	0.651	85.9					
2	167	2.2	3.6	0.684	75.4	14	1.38325	136.3		
3	212	6.6	10.2	0.724	63.9	23	1.40224	130.8		
4	257	6.7	16.9	0.748	57.7	26	1.41588	139.4		
5	302	6.0	22.9	0.769	52.5	28	1.42784	141.4		
6	347	4.5	27.4	0.784	49.0	28	1.43647	143.7		
7	392	4.6	32.0	0.796	46.3	28	1.44336	148.1		
8	437	4.6	36.6	0.810	43.2	29	1.45092	145.8		
9	482	5.0	41.6	0.818	41.5	27	1.45900	155.3		
10	527	6.8	48.4	0.832	38.6	29	1.46503	156.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	0.7	49.1	0.847	35.6	32	--		39	20
12	437	4.4	53.5	0.844	36.2	27	--		42	30
13	482	6.6	60.1	0.851	34.8	27	--		51	55
14	527	3.9	64.0	0.870	31.1	33	--		66	75
15	572	5.9	69.9	0.882	28.9	36	--		94	85
Residuum		27.9	97.8	0.930	20.7					

Carbon residue, Conradson Residuum 4.2 percent, crude 1.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.2	0.705	69.2	
Total gasoline and naphtha	32.0	0.750	57.2	
Kerosene distillate	9.6	0.814	42.3	
Gas oil	14.9	0.841	36.8	
Nonviscous lubricating distillate	11.5	0.850-0.884	35.0-28.6	50-100
Medium lubricating distillate	1.9	0.884-0.889	28.6-27.7	100-200
Viscous lubricating distillate				Above 200
Residuum	27.9	0.930	20.7	
Distillation loss	2.2			

Bureau of Mines
Sample
Item 89
Laramie
PC-56-213
Laboratory

IDENTIFICATION

Graylin, Northwest field
Dakota D, Cretaceous
4,879-4, feet

Colorado
Logan County

GENERAL CHARACTERISTICS

Gravity, specific, 0.831 Gravity, ° API, 38.8 Pour point, ° F, 30
Sulfur, percent, 0.08 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 37 sec. Nitrogen, percent, 0.022

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 160 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.7	1.7	0.662	82.2					
2	167	2.6	4.3	.687	74.5	16	1.38709	127.0		
3	212	5.9	10.2	.724	63.9	23	1.40349	133.1		
4	257	8.0	18.2	.750	57.2	27	1.41676	141.7		
5	302	8.8	27.0	.771	52.0	29	1.42938	151.4		
6	347	6.8	33.8	.786	48.5	29	1.43777	147.4		
7	392	5.3	39.1	.799	45.6	29	1.44481	146.3		
8	437	6.4	45.5	.815	42.1	31	1.45370	149.9		
9	482	4.4	49.9	.828	39.4	32	1.46194	156.4		
10	527	7.0	56.9	.837	37.6	32	1.46736	157.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	1.4	58.3	0.849	35.2	33			41	25
12	437	6.4	64.7	.854	34.2	32			46	40
13	482	4.2	68.9	.870	31.1	36			58	60
14	527	4.7	73.6	.884	28.6	40			78	80
15	572	4.4	78.0	.889	27.7	39			120	95
Residuum		22.4	100.4	.941	18.9					

Carbon residue, Conradson Residuum 5.7 percent crude 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.2	0.704	69.5	
Total gasoline and naphtha	39.1	0.756	55.7	
Kerosine distillate	6.4	.815	42.1	
Gas oil	17.8	.841	36.8	
Nonviscous lubricating distillate	10.3	.860-.887	33.0-28.0	50-100
Medium lubricating distillate	4.4	.887-.892	28.0-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.4	.941	18.9	
Distillation loss	0			

Bureau of Mines
Sample
Item 90
Laramie
PC-55-297
Laboratory

IDENTIFICATION

Plumbush Creek field
Dakota J, Cretaceous
4,972 - 4,981 feet

Colorado
Washington County

GENERAL CHARACTERISTICS

Gravity, specific, 0.827 Gravity, ° API, 39.6 Pour point, ° F, 50
Sulfur, percent, 0.20 Color, dark green
Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen, percent, 0.050

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	2.4	2.4	0.637	90.6					
2	167	2.0	4.4	.666	81.0	26	1.37562	123.0		
3	212	4.1	8.5	.708	68.4	16	1.39522	126.5		
4	257	5.8	14.3	.733	61.5	18	1.40670	123.9		
5	302	5.1	19.4	.750	57.2	19	1.41594	130.3		
6	347	4.3	23.7	.767	53.0	20	1.42561	129.0		
7	392	4.3	28.0	.782	49.5	21	1.43319	136.8		
8	437	4.4	32.4	.796	46.3	22	1.44169	134.1		
9	482	5.1	37.5	.810	43.2	23	1.44586	139.8		
10	527	6.8	44.3	.822	40.6	24	1.45576	143.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	6.5	50.8	0.840	37.0	29			41	30
12	437	5.4	56.2	.847	35.6	28			47	50
13	482	5.8	62.0	.861	32.8	32			58	70
14	527	6.2	68.2	.871	31.0	33			83	90
15	572	6.6	74.8	.900	25.7	44			140	105
Residuum		22.2	97.0	.942	18.7					

Carbon residue, Conradson Residuum 6.2 percent, crude 1.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.5	0.678	77.2	
Total gasoline and naphtha	28.0	0.732	61.8	
Kerosine distillate	16.3	.811	43.0	
Gas oil	10.6	.843	36.4	
Nonviscous lubricating distillate	12.1	.850-.880	35.0-29.3	50-100
Medium lubricating distillate	7.8	.880-.915	29.3-23.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.2	.942	18.7	
Distillation loss	3.0			

Bureau of Mines Item 91
Bartlesville Laboratory
Sample 58010

IDENTIFICATION

Rangely field
Weber, Pennsylvanian
5,960-6,459 feet

Colorado
Rio Blanco County

GENERAL CHARACTERISTICS

Gravity, specific 0.851 Gravity, ° API, 34.8 Pour point, ° F, 10
Sulfur, percent 0.56 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 48 sec., Nitrogen, percent, 0.073

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U Visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.647	87.2					
2	167	2.6	4.0	.670	79.7	7.5	1.37406	125.6		
3	212	2.9	6.9	.709	68.1	16	1.39574	128.0		
4	257	5.2	12.1	.731	62.1	18	1.40817	128.2		
5	302	3.9	16.0	.752	56.7	20	1.41885	131.4		
6	347	5.3	21.3	.772	51.8	23	1.42916	135.2		
7	392	4.8	26.1	.792	47.2	26	1.43936	137.1		
8	437	4.7	30.8	.810	43.2	29	1.44801	138.8		
9	482	5.6	36.4	.824	40.2	30	1.45630	140.5		
10	527	6.6	43.0	.843	36.4	34	1.46581	147.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	45.9	0.854	34.2	36	1.47399	150.5	40	10
12	437	7.6	53.5	.861	32.8	35	1.47765	162.0	46	24
13	482	6.9	60.4	.880	29.3	41	1.48676	156.8	61	50
14	527	5.8	66.2	.891	27.3	43	1.49293	-	86	60
15	572	5.8	72.0	.902	25.4	45			160	74
Residuum		26.5	98.5	.962	15.6					

Carbon residue, Conradson Residuum 7.6 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.9	0.682	76.0	
Total gasoline and naphtha	26.1	0.741	59.5	
Kerosene distillate	10.3	.818	41.5	
Gas oil	15.3	.852	34.6	
Nonviscous lubricating distillate	12.7	.865-.893	32.1-27.0	50-100
Medium lubricating distillate	7.6	.893-.907	27.0-24.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.5	.962	15.6	
Distillation loss	1.5			

Bureau of Mines Item 92
Laramie Laboratory
Sample PC-49-257

IDENTIFICATION

Wilson Creek field
Morrison, Jurassic
6,664-6 681 feet

Colorado
Rio Blanco County

GENERAL CHARACTERISTICS

Gravity specific 0.788 Gravity, ° API 48.1 Pour point, ° F, 25
Sulfur percent 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 33 sec., Nitrogen percent, 0.011

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U Visc 100° F	Cloud test ° F
1	122	7.5	7.5	0.636	91.0					
2	167	5.6	13.1	.665	81.3	5.1	1.37941	128.3		
3	212	8.1	21.2	.708	68.4	16	1.39516	123.9		
4	257	9.0	30.2	.734	61.3	19	1.40829	129.3		
5	302	8.0	38.2	.755	55.9	21	1.42152	137.3		
6	347	5.8	44.0	.773	51.6	23	1.43115	141.7		
7	392	5.9	49.9	.786	48.5	23	1.43788	140.0		
8	437	5.2	55.1	.801	45.2	24	1.44464	139.5		
9	482	5.8	60.9	.814	42.3	25	1.45201	143.3		
10	527	6.5	67.4	.828	39.4	27	1.45964	149.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	70.3	0.843	36.4	30			40	20
12	437	6.0	76.3	.847	35.6	28			45	40
13	482	4.1	80.4	.857	33.6	30			55	55
14	527	3.9	84.3	.871	31.0	33			74	75
15	572	3.9	88.2	.880	29.3	35			115	90
Residuum		10.8	99.0	.929	20.8					

Carbon residue, Conradson Residuum 4.8 percent, crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	21.2	0.671	79.4	
Total gasoline and naphtha	49.9	0.721	64.8	
Kerosene distillate	11.0	.808	43.6	
Gas oil	15.0	.838	37.4	
Nonviscous lubricating distillate	8.9	.852-.877	34.6-29.9	50-100
Medium lubricating distillate	3.4	.877-.885	29.9-28.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.8	.929	20.8	
Distillation loss	1.0			

Item 93
Bureau of Mines Bartlesville Laboratory
Sample 54035

IDENTIFICATION

Albion field
McClosky, Chester, Mississippian
3,101-3,197 feet

Illinois
Edwards County

GENERAL CHARACTERISTICS

Gravity, specific 0.849 Gravity, ° API 35.2 Pour point, ° F, below 5
Sulfur, percent, 0.18 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 58 sec., 100°F., 51 sec. Nitrogen, percent, 0.124

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	1.8	1.8	0.671	79.4	-				
3	212	4.0	5.8	.719	65.3	21	1.39386	132.3		
4	257	6.3	12.1	.743	58.9	23	1.41287	131.9		
5	302	6.0	18.1	.761	54.4	24	1.42320	135.4		
6	347	6.3	24.4	.777	50.6	25	1.43282	137.4		
7	392	5.2	29.6	.795	46.5	27	1.44152	140.3		
8	437	5.3	34.9	.808	43.6	28	1.44947	140.2		
9	482	5.3	40.2	.824	40.2	30	1.45754	146.1		
10	527	6.2	46.4	.835	38.0	31	1.46548	148.6		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	3.7	50.1	0.851	34.8	34			39	10
12	437	5.2	55.3	.858	33.4	34			44	25
13	482	5.1	60.4	.868	31.5	35			56	40
14	527	4.8	65.2	.879	29.5	37			81	60
15	572	5.4	70.6	.891	27.3	40			145	75
Residuum		29.2	99.8	.940	19.0					

Carbon residue, Conradson Residuum 4.9 percent crude 1.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.8	0.704	69.5	
Total gasoline and naphtha	29.6	0.755	55.9	
Kerosene distillate	10.6	.816	41.9	
Gas oil	15.2	.847	35.6	
Nonviscous lubricating distillate	9.0	.863-.883	32.5-28.8	50-100
Medium lubricating distillate	6.2	.883-.897	28.8-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.2	.940	19.0	
Distillation loss	.2			

Item 94
Bureau of Mines Bartlesville Laboratory
Sample 57069

IDENTIFICATION

Bridgeport field
Bridgeport, Pennsylvanian
906-938 feet

Illinois
Lawrence County

GENERAL CHARACTERISTICS

Gravity, specific 0.847 Gravity, ° API 35.6 Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 46 sec. Nitrogen, percent, 0.138

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	2.3	2.3	0.638	90.3					
2	167	2.2	4.5	.671	79.4	8.0	1.37182	121.0		
3	212	4.6	9.1	.712	67.2	18	1.39622	116.9		
4	257	5.7	14.8	.738	60.2	21	1.40852	123.8		
5	302	5.3	20.1	.756	55.7	22	1.41885	128.7		
6	347	5.3	25.4	.776	50.9	24	1.42922	129.4		
7	392	4.4	29.8	.792	47.2	26	1.43930	135.2		
8	437	4.7	34.5	.809	43.4	28	1.44784	133.7		
9	482	4.8	39.3	.823	40.4	30	1.45582	134.3		
10	527	5.9	45.2	.837	37.6	32	1.46433	142.6		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	3.7	48.9	0.852	34.6	35	1.47330	150.0	40	10
12	437	5.7	54.6	.858	33.4	34	1.47744	-	47	25
13	482	4.5	59.1	.873	30.6	37	1.48469	-	61	50
14	527	4.7	63.8	.885	28.4	40	1.49563	-	89	65
15	572	5.5	69.3	.901	25.6	45			170	75
Residuum		28.3	97.6	.960	15.9					

Carbon residue, Conradson Residuum .84 percent crude 2.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.1	0.683	75.7	
Total gasoline and naphtha	29.8	0.739	60.0	
Kerosene distillate	9.5	.816	41.9	
Gas oil	13.7	.847	35.6	
Nonviscous lubricating distillate	9.2	.861-.887	32.8-27.7	50-100
Medium lubricating distillate	6.4	.887-.907	27.7-24.5	100-200
Viscous lubricating distillate	.7	.907-.909	24.5-24.2	Above 200
Residuum	28.3	.960	15.9	
Distillation loss	2.4			

Item 95
Bureau of Mines Bartlesville Laboratory
Sample 45018

IDENTIFICATION

Centralia field
Chester, Mississippian

Illinois
Clinton County

GENERAL CHARACTERISTICS

Gravity, specific 0.839 Gravity, ° API, 37.2 Pour point, ° F, -
Sulfur, percent, 0.19 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 44 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 752 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	3.3	3.3	0.634	91.7					
2	167	2.7	6.0	.670	79.7	1.5	1.37666	122.1		
3	212	5.1	11.1	.712	67.2	18	1.39537	122.6		
4	257	6.5	17.6	.736	60.8	20	1.40764	126.4		
5	302	5.8	23.4	.756	55.7	22	1.41862	128.2		
6	347	4.8	28.2	.773	51.6	23				
7	392	4.7	32.9	.790	47.6	25				
8	437	5.1	38.0	.805	44.3	26				
9	482	5.1	43.1	.819	41.3	28				
10	527	6.4	49.5	.832	38.6	29				

Stage 2—Distillation continued at 40 mm Hg

11	392	3.3	52.8	0.846	35.8	32			41	10
12	437	5.4	58.2	.853	34.4	31			45	25
13	482	4.7	62.9	.869	31.3	36			58	50
14	527	5.9	68.8	.880	29.3	38			80	70
15	572	5.1	73.9	.889	27.7	39			155	80
Residuum		25.1	99.0	0.965	15.1					

Carbon residue, Conradson Residuum 12.5 percent, crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.679	76.9	
Total gasoline and naphtha	32.9	0.733	61.5	
Kerosene distillate	10.2	.812	42.8	
Gas oil	14.4	.843	36.4	
Nonviscous lubricating distillate	9.9	.859-.882	33.2-28.9	50-100
Medium lubricating distillate	6.5	.882-.893	28.9-27.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.1	.965	15.1	
Distillation loss	1.0			

Item 96
Bureau of Mines Bartlesville Laboratory
Sample 58022

IDENTIFICATION

Clay City, Consolidated, field
Mississippian
2,174-3,534 feet

Illinois
Clay, Richland, Jasper, and
Wayne Counties

GENERAL CHARACTERISTICS

Gravity, specific 0.832 Gravity, ° API, 38.6 Pour point, ° F, 10
Sulfur, percent, 0.19 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.082

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.649	86.5					
2	167	2.8	4.8	.672	79.1	8.4	1.37821	122.0		
3	212	5.5	10.3	.715	66.4	19	1.39818	125.5		
4	257	6.3	16.6	.739	60.0	21	1.41088	129.9		
5	302	5.9	22.5	.760	54.7	24	1.42175	132.7		
6	347	5.5	28.0	.777	50.6	25	1.43201	131.6		
7	392	4.8	32.8	.793	46.9	26	1.44031	139.3		
8	437	4.9	37.7	.807	43.8	27	1.44798	139.7		
9	482	5.2	42.9	.820	41.1	28	1.45600	144.5		
10	527	5.6	48.5	.835	38.0	31	1.46401	146.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.3	52.8	0.861	32.8	39	1.47194	149.5	41	14
12	437	4.7	57.5	.871	31.0	40	1.47561	144.5	46	30
13	482	5.0	62.5	.884	28.6	43	1.48195	151.0	59	44
14	527	4.5	67.0	.903	25.2	49	1.48738	151.9	86	54
15	572	7.7	74.7	.916	23.0	-			190	80
Residuum		21.6	96.3	.941	18.9					

Carbon residue, Conradson Residuum 8.2 percent, crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.3	0.690	73.6	
Total gasoline and naphtha	32.8	0.742	59.2	
Kerosene distillate	10.1	.814	42.3	
Gas oil	14.0	.854	34.2	
Nonviscous lubricating distillate	8.8	.875-.905	30.2-24.9	50-100
Medium lubricating distillate	5.9	.905-.917	24.9-22.8	100-200
Viscous lubricating distillate	3.1	.917-.925	22.8-21.5	Above 200
Residuum	21.6	.941	18.9	
Distillation loss	3.7			

1/ Distillation discontinued at 554°F.

Item 97
Bureau of Mines Bartlesville Laboratory
Sample 57063

IDENTIFICATION

Dale field
Aux Vases, Chester, Mississippian
3,013-3,035 feet

Illinois
Hamilton County

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 Gravity, ° API, 36.4 Pour point, ° F, below 5
Sulfur, percent, 0.15 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.654	84.9					
2	167	1.8	2.9	.668	80.3	6.5				
3	212	4.8	7.7	.716	66.1	19	1.38972	122.4		
4	257	5.3	13.0	.739	60.0	21	1.41058	127.9		
5	302	5.7	18.7	.758	55.2	23	1.42096	133.3		
6	347	5.3	24.0	.775	51.1	24	1.43104	135.5		
7	392	5.1	29.1	.788	48.1	24	1.43927	136.2		
8	437	5.9	34.1	.805	44.3	26	1.44692	135.7		
9	482	5.5	39.6	.818	41.5	27	1.45454	139.7		
10	527	5.6	45.2	.832	38.6	29	1.46238	146.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	48.1	0.847	35.6	32	1.47003	146.0	40	10
12	437	5.1	53.2	.855	34.0	32	1.47238	-	45	25
13	482	5.1	58.3	.862	32.7	32	1.47760	-	55	40
14	527	5.1	63.4	.875	30.2	35	1.48359	-	77	60
15	572	5.8	69.2	.891	27.3	40			140	75
Residuum		30.0	99.2	.932	20.3					

Carbon residue, Conradson Residuum 4.3 percent, crude 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.7	0.696	71.8	
Total gasoline and naphtha	29.1	0.746	58.2	
Kerosene distillate	10.5	.812	42.8	
Gas oil	13.7	.844	36.2	
Nonviscous lubricating distillate	9.6	.859-.881	33.2-29.1	50-100
Medium lubricating distillate	6.3	.881-.899	29.1-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	30.0	.932	20.3	
Distillation loss	.8			

Item 98
Bureau of Mines Bartlesville Laboratory
Sample 57066

IDENTIFICATION

Johnsonville field
McClosky, Chester, Mississippian
3,134-3,189 feet

Illinois
Wayne County

GENERAL CHARACTERISTICS

Gravity, specific, 0.831 Gravity, ° API, 38.8 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 42 sec. Nitrogen, percent, 0.098

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.5	3.5	0.643	88.6					
2	167	3.7	7.2	.685	75.1	15	1.38171	117.8		
3	212	5.3	12.5	.723	64.2	23	1.40258	128.8		
4	257	6.1	18.6	.743	58.9	23	1.41409	131.9		
5	302	5.3	23.9	.762	54.2	25	1.42385	134.8		
6	347	5.4	29.3	.781	49.7	27	1.43347	134.3		
7	392	4.7	34.0	.794	46.7	27	1.44206	138.6		
8	437	4.8	38.8	.802	43.4	28	1.44962	143.4		
9	482	5.0	43.8	.822	40.6	29	1.45692	150.4		
10	527	5.6	49.4	.836	37.8	31	1.46581	151.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.1	52.5	0.849	35.2	33	1.47345	154.3	40	10
12	437	5.2	57.7	.860	33.0	35	1.47679	-	46	30
13	482	4.6	62.3	.868	31.5	35	1.48274	-	57	45
14	527	5.2	67.5	.882	28.9	39	1.48856	-	84	65
15	572	4.7	72.2	.890	27.5	39			150	80
Residuum		24.6	96.8	.949	17.6					

Carbon residue, Conradson Residuum 7.1 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.5	0.691	73.3	
Total gasoline and naphtha	34.0	0.740	59.7	
Kerosene distillate	9.8	.816	41.9	
Gas oil	13.2	.846	35.8	
Nonviscous lubricating distillate	9.1	.863-.883	32.5-28.8	50-100
Medium lubricating distillate	6.1	.883-.893	28.8-27.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.6	.949	17.6	
Distillation loss	3.2			

Item 99
Bureau of Mines Bartlesville -- Laboratory
Sample 53015

IDENTIFICATION

Loudon field

Illinois
Fayette County

GENERAL CHARACTERISTICS

Gravity, specific 0.826 Gravity, ° API, 39.8 Pour point, ° F, below 5
Sulfur, percent, 0.27 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.158

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	7.1	7.1	0.642	88.9	-	1.36723	122.4		
3	212	4.3	11.4	.715	66.4	19	1.39792	124.9		
4	257	6.0	17.4	.733	60.2	21	1.41030	126.6		
5	302	5.1	22.5	.758	55.2	23	-	-		
6	347	5.3	27.8	.777	50.6	25	1.43172	131.4		
7	392	4.7	32.5	.793	46.9	26	1.44085	137.6		
8	437	4.9	37.4	.808	43.6	28	1.44861	140.0		
9	482	5.1	42.5	.821	40.9	29	1.45628	145.3		
10	527	5.9	48.4	.834	38.2	30	1.46410	150.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.2	52.6	0.847	35.6	32			40	15
12	437	4.9	57.5	.856	33.8	33			46	35
13	482	5.3	62.8	.866	31.9	34			58	50
14	527	4.7	67.5	.879	29.5	37			81	65
15	572	5.4	72.9	.891	27.3	40			150	80
Residuum		22.5	95.4	.959	16.0					

Carbon residue, Conradson Residuum 8.2 percent, crude 2.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.4	0.670	79.7	
Total gasoline and naphtha	32.5	0.731	62.1	
Kerosene distillate	10.0	.815	42.1	
Gas oil	14.3	.843	36.4	
Nonviscous lubricating distillate	9.8	.859-.882	33.2-28.9	50-100
Medium lubricating distillate	6.3	.882-.897	28.9-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.5	.959	16.0	
Distillation loss	4.6			

Item 100
Bureau of Mines Bartlesville -- Laboratory
Sample 57070

IDENTIFICATION

New Harmony field
McClosky, Chester, Mississippian
2,880-2,887 feet

Illinois
White County

GENERAL CHARACTERISTICS

Gravity, specific, 0.845 Gravity, ° API, 36.0 Pour point, ° F, below 5
Sulfur, percent, 0.23 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 45 sec. Nitrogen, percent, 0.158

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.676	77.8					
2	167	5.7	7.0	.692	73.0	18	1.38619	124.1		
3	212	3.1	10.1	.729	62.6	26	1.40520	124.6		
4	257	6.5	16.6	.741	59.5	22	1.41324	126.7		
5	302	4.9	21.5	.763	54.0	25	1.42282	125.4		
6	347	5.4	26.9	.777	50.6	25	1.43193	125.5		
7	392	4.3	31.2	.795	46.5	27	1.44092	134.4		
8	437	5.6	36.8	.810	43.2	29	1.44927	138.5		
9	482	4.7	41.5	.824	40.2	30	1.45670	143.9		
10	527	6.3	47.8	.836	37.8	31	1.46465	148.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.0	51.8	0.850	35.0	34	1.47368	-	42	15
12	437	6.1	57.9	.864	32.3	37	1.47888	-	50	30
13	482	3.1	61.0	.873	30.6	37	1.48525	-	64	45
14	527	4.5	65.5	.885	28.4	40	1.49031	-	82	65
15	572	6.1	71.6	.899	25.9	44			180	80
Residuum		25.4	97.0	.967	14.8					

Carbon residue, Conradson Residuum 7.7 percent, crude 2.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.701	70.4	
Total gasoline and naphtha	31.2	0.745	58.4	
Kerosene distillate	10.3	.816	41.9	
Gas oil	13.4	.846	35.8	
Nonviscous lubricating distillate	9.0	.864-.887	32.3-28.0	50-100
Medium lubricating distillate	25.7	.887-.902	28.0-25.4	100-200
Viscous lubricating distillate	2.0	.902-.907	25.4-24.5	Above 200
Residuum	25.4	.967	14.8	
Distillation loss	3.0			

Item 101
Bureau of Mines Bartlesville Laboratory
Sample 57072

IDENTIFICATION

Robinson-Stoy field
Robinson, Pennsylvania
912-932 feet

Illinois
Crawford County

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API 32.4 Pour point, ° F, below 5.
Sulfur percent 0.20 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, 0.115

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg

First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.638	90.3					
2	167	2.7	5.9	.672	79.1	8.4	1.36968	131.0		
3	212	5.4	11.3	.715	66.4	19	1.39872	122.6		
4	257	6.3	17.6	.741	59.5	22	1.41053	123.7		
5	302	5.5	23.1	.760	54.7	24	1.42120	123.5		
6	347	4.9	28.0	.778	50.4	25	1.43119	131.5		
7	392	4.6	32.6	.795	46.5	27	1.43955	133.7		
8	437	5.0	37.6	.808	43.6	28	1.44820	133.7		
9	482	5.3	42.9	.823	40.4	30	1.45616	142.0		
10	527	6.4	49.3	.837	37.6	32	1.46454	146.2		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.5	51.8	0.850	35.0	34	1.47257	140.4	41	10
12	437	5.4	57.2	.859	33.2	34	1.47618	145.9	46	25
13	482	4.4	61.6	.867	31.7	35	1.48180	-	58	45
14	527	5.2	66.8	.882	28.2	39	1.51187	-	85	65
15	572	5.7	72.5	.895	26.6	42	-	-	160	80
Residuum		25.4	97.9	.954	16.8					

Carbon residue, Conradson Residuum 9.0 percent crude 2.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.3	0.683	75.7	
Total gasoline and naphtha	32.6	0.737	60.5	
Kerosine distillate	10.3	.816	41.9	
Gas oil	13.3	.846	35.8	
Nonviscous lubricating distillate	9.1	.861-.884	32.8-28.6	50-100
Medium lubricating distillate	7.2	.884-.901	28.6-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.4	.954	16.8	
Distillation loss	2.1			

Item 102
Bureau of Mines Bartlesville Laboratory
Sample 57073

IDENTIFICATION

Roland field
Aux Vases, Chester, Mississippian
2,896-2,919 feet

Illinois
White County

GENERAL CHARACTERISTICS

Gravity, specific 0.846 Gravity, ° API 35.8 Pour point, ° F, below 5.
Sulfur percent 0.19 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 220 sec., 100°F., 66 sec. Nitrogen, percent, 0.100

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 738 mm. Hg

First drop 95 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.8	0.8	0.640	89.6					
2	167	4.2	5.0	.681	76.3	13	1.38260	120.8		
3	212	3.4	8.4	.720	65.0	21	1.40258	115.4		
4	257	5.6	14.0	.739	60.0	21	1.41088	122.6		
5	302	4.9	18.9	.759	56.9	23	1.42151	132.8		
6	347	4.8	23.7	.778	50.4	25	1.43230	134.6		
7	392	4.4	28.1	.796	46.3	28	1.44179	137.0		
8	437	4.2	32.3	.809	43.4	28	1.44916	138.6		
9	482	4.6	36.9	.822	40.6	29	1.45609	141.7		
10	527	5.7	42.6	.833	38.4	30	1.46294	145.2		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.1	45.7	0.845	36.0	31	1.47114	-	41	15
12	437	5.4	51.1	.855	34.0	32	1.47368	-	46	30
13	482	4.2	55.3	.864	32.3	33	1.47962	-	58	50
14	527	5.9	61.2	.880	29.3	38	-	-	87	80
15	572	6.3	67.5	.891	27.3	40	-	-	-	115M.P.
Residuum		30.6	98.1	.941	18.9					

Carbon residue, Conradson Residuum 5.8 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.4	0.693	72.7	
Total gasoline and naphtha	28.1	0.744	58.7	
Kerosine distillate	8.8	.816	41.9	
Gas oil	13.2	.845	36.0	
Nonviscous lubricating distillate	10.4	.858-.884	33.4-28.6	50-100
Medium lubricating distillate	7.0	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	30.6	.941	18.9	
Distillation loss	1.9			

Item 103
Bureau of Mines Bartlesville Laboratory
Sample 55148

IDENTIFICATION

Sailor Springs field
Cypress, Chester, Mississippian
2,600-2,619 feet

Illinois
Clay County

GENERAL CHARACTERISTICS

Gravity, specific, 0.842 Gravity, ° API, 36.6 Pour point, ° F, 26
Sulfur percent, 0.25 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 47 sec Nitrogen, percent, 0.103

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	1.0	1.0	0.652	85.5					
2	167	2.2	3.2	.671	79.4	8.0	1.37459	138.3		
3	212	5.2	8.4	.713	67.0	18	1.39267	108.0		
4	257	5.5	13.9	.736	60.8	20	1.40852	122.5		
5	302	7.2	21.1	.758	55.2	23	1.42122	130.6		
6	347	4.7	25.8	.779	50.1	26	1.43298	135.1		
7	392	3.9	29.7	.793	46.9	26	1.44048	135.0		
8	437	5.1	34.8	.807	43.8	27	1.44812	135.9		
9	482	5.0	39.8	.820	41.1	28	1.45560	138.8		
10	527	5.7	45.5	.834	38.2	30	1.46350	145.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
11	392	3.3	48.8	0.847	35.6	32	1.47034	154.2	40	20
12	437	5.4	54.2	.857	33.6	33	1.47514	151.3	46	35
13	482	5.0	59.2	.868	31.5	35	1.48114	157.5	57	55
14	527	4.9	64.1	.874	30.4	35	1.48728	163.4	81	65
15	572	5.9	70.0	.889	27.7	39			150	80
Residuum		28.4	98.4	.947	17.9					

Carbon residue, Conradson Residuum 6.6 percent crude 2.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.4	0.695	72.1	
Total gasoline and naphtha	29.7	0.744	58.7	
Kerosene distillate	10.1	.813	42.6	
Gas oil	13.8	.845	36.0	
Nonviscous lubricating distillate	9.8	.861-.878	32.8-29.7	50-100
Medium lubricating distillate	6.6	.878-.893	29.7-27.0	100-200
Viscous lubricating distillate				Above 200
Residuum	28.4	.947	17.9	
Distillation loss	1.6			

Item 104
Bureau of Mines Bartlesville Laboratory
Sample 57074

IDENTIFICATION

Salem field
Aux Vases, Chester, Mississippian
1,786 feet

Illinois
Marion County

GENERAL CHARACTERISTICS

Gravity, specific, 0.839 Gravity, ° API, 37.2 Pour point, ° F, below 5
Sulfur percent, 0.17 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 43 sec Nitrogen, percent, 0.102

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	2.5	2.5	0.644	88.2					
2	167	3.1	5.6	.672	79.1	8.4	1.38444	125.2		
3	212	5.8	11.4	.719	65.3	21	1.40031	127.3		
4	257	6.5	17.9	.744	58.7	24	1.41324	121.1		
5	302	4.7	22.6	.762	54.2	25	1.42264	131.4		
6	347	6.1	28.7	.778	50.4	25	1.43233	132.2		
7	392	3.8	32.5	.795	46.5	27	1.44087	136.1		
8	437	4.7	37.2	.808	43.6	28	1.44764	137.4		
9	482	5.0	42.2	.821	40.9	29	1.45565	141.5		
10	527	5.8	48.0	.835	38.0	31	1.46318	150.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
11	392	3.8	51.8	0.846	35.8	32	1.47212		40	15
12	437	5.3	57.1	.853	34.4	31	1.47553		45	30
13	482	5.1	62.2	.868	31.5	35	1.48175		57	45
14	527	4.5	66.7	.880	29.3	38	1.51087		81	65
15	572	5.9	72.6	.896	26.4	42			145	80
Residuum		25.3	97.9	.959	16.0					

Carbon residue, Conradson Residuum 11.4 percent, crude 3.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.4	0.690	73.6	
Total gasoline and naphtha	32.5	0.740	59.7	
Kerosene distillate	9.7	.815	42.1	
Gas oil	14.5	.848	35.4	
Nonviscous lubricating distillate	9.4	.859-.885	33.2-28.4	50-100
Medium lubricating distillate	6.5	.885-.905	28.4-24.9	100-200
Viscous lubricating distillate				Above 200
Residuum	25.3	.959	16.0	
Distillation loss	2.1			

Item 105
Bureau of Mines Bartlesville Laboratory
Sample 57103

IDENTIFICATION

Griffin field
Cypress, Chester, Mississippian
2,473-2,487 feet

Indiana
Posey County

GENERAL CHARACTERISTICS

Gravity, specific, 0.849 Gravity, ° API, 35.2 Pour point, ° F, 10
Sulfur, percent, 0.20 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 53 sec. Nitrogen, percent, 0.105

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 751 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.647	87.2					
2	167	4.1	6.1	0.684	75.4	14	1.37740	130.2		
3	212	2.6	8.7	0.718	65.6	20	1.39941	122.7		
4	257	6.3	15.0	0.736	60.8	20	1.40772	123.2		
5	302	5.3	20.3	0.753	56.4	20	1.41762	122.7		
6	347	5.2	25.5	0.771	52.0	22	1.42724	133.0		
7	392	5.4	30.9	0.789	47.8	24	1.43714	132.9		
8	437	4.7	35.6	0.805	44.3	26	1.44552	134.1		
9	482	5.8	41.4	0.820	41.1	28	1.45324	145.0		
10	527	5.7	47.1	0.831	38.8	29	1.46032	142.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.0	50.1	0.841	36.8	29	1.46835	-	40	20
12	437	5.7	55.8	0.852	34.6	31	1.47179	-	45	30
13	482	5.1	60.9	0.863	32.5	33	1.47824	-	56	44
14	527	5.3	66.2	0.880	29.3	38	1.48496	-	80	60
15	572	6.0	72.2	0.890	27.5	39			145	80
Residuum		27.5	99.7	0.967	14.8					

Carbon residue, Conradson Residuum 11.2 percent, crude 3.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.7	0.686	74.8	
Total gasoline and naphtha	30.9	0.740	59.7	
Kerosene distillate	10.5	0.813	42.6	
Gas oil	14.1	0.814	42.3	
Nonviscous lubricating distillate	9.8	0.857-0.882	33.6-28.9	50-100
Medium lubricating distillate	6.9	0.882-0.905	28.9-24.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.5	0.967	14.8	
Distillation loss	0.3			

Item 106
Bureau of Mines Bartlesville Laboratory
Sample 61088

IDENTIFICATION

Springfield field
Pennsylvanian
1,150-1,160 feet

Indiana
Posey County

GENERAL CHARACTERISTICS

Gravity, specific, 0.863 Gravity, ° API, 31.9 Pour point, ° F, below 5
Sulfur, percent, 0.30 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 80 sec. Nitrogen, percent, 0.17

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.8	1.8	0.669	80.0	-	1.39033	128.2		
3	212	4.1	5.9	0.699	70.9	11	1.39834	123.6		
4	257	6.3	12.2	0.736	60.8	20	1.40865	123.6		
5	302	4.8	17.0	0.752	56.7	20	1.41786	124.9		
6	347	4.9	21.9	0.773	51.6	23	1.42756	128.3		
7	392	4.6	26.5	0.790	47.6	25	1.43703	131.0		
8	437	5.3	31.8	0.806	44.1	27	1.44636	135.5		
9	482	5.3	37.1	0.811	43.0	24	1.45457	138.9		
10	527	7.1	44.2	0.834	38.2	30	1.46307	147.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.1	46.3	0.856	33.8	37	1.47239	149.9	40	15
12	437	6.1	52.4	0.865	32.1	37	1.47654	153.7	46	30
13	482	6.1	58.5	0.876	30.0	39	1.48476	161.4	60	50
14	527	4.6	63.1	0.890	27.5	42	1.49254	163.8	90	60
15	572	9.1	72.2	0.905	24.9	46			195	70
Residuum		27.7	99.9	0.982	12.6					

Carbon residue, Conradson Residuum 9.1 percent crude 2.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.9	0.690	73.6	
Total gasoline and naphtha	26.5	0.745	58.4	
Kerosene distillate	10.6	0.809	43.4	
Gas oil	14.1	0.847	35.6	
Nonviscous lubricating distillate	10.3	0.868-0.891	31.5-27.3	50-100
Medium lubricating distillate	10.7	0.891-0.915	27.3-23.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.7	0.982	12.6	
Distillation loss	0.1			

Item 107
Bureau of Mines Bartlesville Laboratory
Sample 58157

IDENTIFICATION

Bemis-Shutts field
Upper Arbuckle, Cambro-Ordovician
3,592-3,598 feet

Kansas
Ellis County

GENERAL CHARACTERISTICS

Gravity, specific 0.852 Gravity, ° API 34.6 Pour point, ° F, below 5
Sulfur percent 0.57 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 68 sec., 100°F., 52 sec. Nitrogen, percent, 0.162

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 84 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.650	86.2					
2	167	2.7	4.3	.669	80.0	7.0	1.37650	123.8		
3	212	4.0	8.3	.706	68.9	15	1.39426	122.1		
4	257	6.2	14.5	.734	61.3	19	1.40674	123.7		
5	302	4.8	19.3	.753	56.4	20	1.42230	125.4		
6	347	5.0	24.3	.770	52.3	22	1.42971	128.3		
7	392	4.0	28.3	.790	47.6	25	1.43705	129.9		
8	437	4.5	32.8	.809	43.4	28	1.44580	131.4		
9	482	5.1	37.9	.818	41.5	27	1.45345	133.9		
10	527	6.0	43.9	.832	38.6	29	1.46158	139.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.4	47.3	0.842	36.6	30	1.47022	148.2	41	Below 5
12	437	5.8	53.1	.856	33.8	33	1.47460	146.6	46	20
13	482	5.3	58.4	.870	31.1	36	1.48136	146.5	58	34
14	527	4.8	63.2	.882	28.9	39	1.48818	153.2	84	56
15	572	5.4	68.6	.894	26.8	41			145	80
Residuum		29.5	98.1	.972	14.1					

Carbon residue, Conradson Residuum 11.9 percent crude 4.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.3	0.683	75.7	
Total gasoline and naphtha	28.3	0.737	60.5	
Kerosine distillate	9.6	.814	42.3	
Gas oil	14.2	.842	36.6	
Nonviscous lubricating distillate	10.1	.861-.885	32.8-28.4	50-100
Medium lubricating distillate	6.4	.885-.901	28.4-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.5	.972	14.1	
Distillation loss	1.9			

Item 108
Bureau of Mines Bartlesville Laboratory
Sample 60012

IDENTIFICATION

Chase-Silica field
Kansas City, Pennsylvanian
3,071-3,077 feet

Kansas
Barton County

GENERAL CHARACTERISTICS

Gravity, specific 0.831 Gravity, ° API 38.8 Pour point, ° F, below 5
Sulfur, percent, 0.44 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 42 sec. Nitrogen, percent, 0.13

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 90 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.654	84.9					
2	167	2.5	3.9	.668	80.3	6.5	1.37526	126.2		
3	212	5.9	9.8	.705	69.2	14	1.39405	125.3		
4	257	8.4	18.2	.729	62.6	17	1.40541	126.3		
5	302	7.6	25.8	.749	57.4	18	1.41598	127.8		
6	347	6.9	32.7	.770	52.3	22	1.42704	130.8		
7	392	6.0	38.7	.787	48.3	23	1.43609	131.9		
8	437	5.4	44.1	.801	45.2	24	1.44413	133.4		
9	482	6.3	50.4	.815	42.1	26	1.45179	139.0		
10	527	6.5	56.9	.830	39.0	28	1.46032	144.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	60.0	0.846	35.8	32	1.46993	148.3	41	15
12	437	4.5	64.5	.854	34.2	32	1.47885	154.1	46	30
13	482	4.2	68.7	.866	31.9	34	1.48111	-	59	55
14	527	4.1	72.8	.882	28.9	39	1.48662	-	86	65
15	572	4.8	77.6	.895	26.6	42	-	-	160	95
Residuum		21.3	98.9	.972	14.1					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.8	0.688	74.2	
Total gasoline and naphtha	39.7	0.739	60.0	
Kerosine distillate	11.7	.809	43.4	
Gas oil	13.5	.841	36.8	
Nonviscous lubricating distillate	7.8	.858-.884	33.4-28.6	50-100
Medium lubricating distillate	5.9	.884-.902	28.6-25.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.3	.972	14.1	
Distillation loss	1.1			

Bureau of Mines Item 109
Bartlesville Laboratory
 Sample 56004

IDENTIFICATION

El Dorado field
 Admire, Pennsylvanian
 650-668 feet

Kansas
 Butler County

GENERAL CHARACTERISTICS

Gravity, specific 0.841 Gravity, ° API, 36.8 Pour point, ° F, below 5
 Sulfur, percent, 0.18 Color, brownish black
 Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, 0.085

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
 First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.1	1.1	0.638	90.3					
2	167	2.0	3.1	.666	81.0	5.6	1.37272	120.7		
3	212	3.1	6.2	.704	69.5	14.	1.39360	122.7		
4	257	6.4	12.6	.726	63.4	15	1.40458	121.2		
5	302	6.5	19.1	.746	58.2	17	1.41499	122.5		
6	347	7.2	26.3	.766	53.2	20	1.42492	124.3		
7	392	5.8	32.1	.785	48.8	23.	1.43528	127.9		
8	437	6.7	38.8	.802	44.9	25	1.44474	124.6		
9	482	6.6	45.4	.817	41.7	27	1.45332	134.3		
10	527	7.7	53.1	.833	38.4	30	1.46230	142.2		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.6	56.7	0.851	34.8	34	1.47221	145.8	41	20
12	437	6.4	63.1	.859	33.2	34	1.47672	148.0	46	35
13	482	5.4	68.5	.871	31.0	37	1.48527		58	50
14	527	5.1	73.6	.886	28.2	40	1.49305		85	65
15	572	6.2	79.8	.899	25.9	44			160	85
Residuum		19.5	99.3	.980	12.9					

Carbon residue, Conradson Residuum 8.3 percent, crude 2.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.2	0.680	76.6	
Total gasoline and naphtha	32.1	0.741	59.5	
Kerosine distillate	13.3	.809	43.4	
Gas oil	16.6	.845	36.0	
Nonviscous lubricating distillate	10.2	.863-.889	32.5-27.7	50-100
Medium lubricating distillate	7.6	.889-.905	27.7-24.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.5	.980	12.9	
Distillation loss	.7			

Bureau of Mines Item 110
Bartlesville Laboratory
 Sample 61082

IDENTIFICATION

Fairport field
 Lansing-Kansas City, Pennsylvanian
 3,194-3,224 feet

Kansas
 Russell County

GENERAL CHARACTERISTICS

Gravity, specific 0.826 Gravity, ° API, 39.8 Pour point, ° F, below 5
 Sulfur, percent 0.37 Color, brownish black
 Viscosity, Saybolt Universal at 100°F., 132 sec., 130°F., 76 sec. Nitrogen, percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
 First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	3.8	3.8	0.668	80.3					
2	167	4.1	7.9	.670	79.7	7.5	1.37907	124.1		
3	212	6.8	14.7	.707	68.6	15	1.39564	123.4		
4	257	7.1	21.8	.729	62.6	17	1.40658	124.4		
5	302	5.7	27.5	.747	57.9	18	1.41623	126.8		
6	347	5.4	32.9	.765	53.5	19	1.42608	129.2		
7	392	4.9	37.8	.781	49.7	20	1.43478	132.6		
8	437	5.1	42.9	.798	45.8	24	1.44242	133.8		
9	482	5.5	48.4	.810	43.2	23	1.44993	137.2		
10	527	7.1	55.5	.823	40.4	25	1.45272	146.0		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	0.9	56.4	0.843	36.4	30	1.46841	146.0	40	25
12	437	5.0	61.4	.852	34.6	31	1.47166	147.3	45	30
13	482	4.9	66.3	.863	32.5	33	1.47855	151.9	57	50
14	527	4.5	70.8	.879	29.5	37	1.48557	162.7	83	65
15	572	6.3	77.1	.892	27.1	40			150	75
Residuum		21.6	98.7	.965	15.1					

Carbon residue, Conradson Residuum 8.5 percent, crude 2.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	14.7	0.687	74.5	
Total gasoline and naphtha	37.8	0.727	62.1	
Kerosine distillate	17.7	.812	42.8	
Gas oil	5.5	.849	35.2	
Nonviscous lubricating distillate	9.0	.857-.883	32.5-28.8	50-100
Medium lubricating distillate	7.1	.883-.900	28.8-25.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.6	.965	15.1	
Distillation loss	1.3			

Item 111
Bureau of Mines Bartlesville Laboratory
Sample 61028

IDENTIFICATION

Genesee-Edwards field
Lansing-Kansas City, Pennsylvanian
2,830-2,834 feet

Kansas
Rice County

GENERAL CHARACTERISTICS

Gravity, specific 0.863 Gravity, ° API 32.5 Pour point, ° F 10
Sulfur, percent 0.76 Color, brownish black
Viscosity, Saybolt Universal at 77°F 91 sec 100°F 74 sec Nitrogen, percent, 0.20

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.5	1.5	0.656	84.2					
2	167	2.2	3.7	.663	81.9	4.2	1.37453	123.8		
3	212	4.6	8.3	.701	70.4	12	1.39236	123.2		
4	257	5.5	13.8	.727	63.1	16	1.40511	125.3		
5	302	4.0	17.8	.746	58.2	17	1.41514	126.8		
6	347	4.5	22.3	.764	53.7	19	1.42467	127.1		
7	392	4.0	26.3	.781	49.7	21	1.43480	131.1		
8	437	4.6	30.9	.801	45.2	24	1.44346	129.4		
9	482	5.2	36.1	.816	41.9	26	1.45228	138.3		
1/10	527	4.9	41.0	.828	39.4	27	1.45962	143.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.3	47.3	0.856	33.8	37	1.47247	162.6	43	25
12	437	4.5	51.8	.875	30.2	42	1.48170	155.2	55	45
13	482	6.6	58.4	.893	27.0	47	1.49072	-	83	65
14	527	5.7	64.1	.902	25.4	48	-	-	165	85
2/15	572	6.3	70.4	.915	23.1	51	-	-	245	95
Residuum		27.2	97.6	1.001	9.9					

Carbon residue, Conradson Residuum 5.6 percent crude 1.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.3	0.683	75.7	
Total gasoline and naphtha	26.3	0.730	62.3	
Kerosene distillate	9.8	.809	43.4	
Gas oil	11.3	.844	36.2	
Nonviscous lubricating distillate	9.0	.870-.895	31.1-26.6	50-100
Medium lubricating distillate	7.6	.895-.908	26.6-24.3	100-200
Viscous lubricating distillate	6.4	.908-.922	24.3-22.0	Above 200
Residuum	27.2	1.001	9.9	
Distillation loss	2.4			

1/ Distillation discontinued at 509°F.
2/ Distillation discontinued at 547°F.

Item 112
Bureau of Mines Bartlesville Laboratory
Sample 61003

IDENTIFICATION

Gladys field
Mississippian
3,180 feet

Kansas
Sedgwick County

GENERAL CHARACTERISTICS

Gravity, specific 0.808 Gravity, ° API 43.6 Pour point, ° F below 5
Sulfur, percent 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100°F 32 sec Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 172 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.5	4.5	0.650	86.2					
2	167	3.2	7.7	.676	77.8	10	1.37935	122.1		
3	212	7.1	14.8	.709	68.1	16	1.39484	125.6		
4	257	8.6	23.4	.734	61.3	19	1.40737	125.1		
5	302	7.2	30.6	.753	56.4	20	1.41823	132.4		
6	347	7.1	37.7	.773	51.6	23	1.42902	134.9		
7	392	5.3	43.0	.789	47.8	24	-	-		
8	437	6.2	49.2	.807	43.8	27	1.44690	139.1		
9	482	6.0	55.2	.821	40.9	29	1.45638	147.1		
10	527	5.9	61.1	.834	38.4	30	1.46412	154.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	64.1	0.850	35.0	34	1.47275	154.7	39	10
12	437	5.8	69.9	.856	33.8	33	1.47736	157.6	45	35
13	482	4.7	74.6	.870	31.1	36	1.48511	158.4	57	50
14	527	4.3	78.9	.886	28.2	40	1.49174	-	81	70
15	572	4.8	83.7	.895	26.6	42	-	-	145	80
Residuum		13.7	97.4	.946	18.1					

Carbon residue, Conradson Residuum 6.1 percent, crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.8	0.684	75.4	
Total gasoline and naphtha	43.0	0.733	61.5	
Kerosene distillate	12.2	.814	42.3	
Gas oil	14.1	.846	35.8	
Nonviscous lubricating distillate	8.9	.862-.889	32.7-27.7	50-100
Medium lubricating distillate	5.3	.892-.899	27.7-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	13.7	.946	18.1	
Distillation loss	2.6			

Item 113
Bureau of Mines Bartlesville Laboratory
Sample 61080

IDENTIFICATION

Gorham field
Arbuckle, Cambro-Ordovician
3,299-3,308 feet

Kansas
Russell County

GENERAL CHARACTERISTICS

Gravity, specific, 0.871 Gravity, ° API, 31.0 Pour point, ° F, below 5
Sulfur, percent, 0.55 Color, brownish black
Viscosity, Saybolt Universal at 72°F, 28 sec. 100°F, 85 sec. Nitrogen, percent, 0.14

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	—	—	—	—	—	—	—	—	—
2	167	1.8	1.8	0.696	71.8	—	1.39220	126.2	—	—
3	212	3.3	5.1	.708	68.4	16	1.39564	121.5	—	—
4	257	4.7	9.8	.733	61.5	18	1.40818	124.0	—	—
5	302	4.0	13.8	.750	57.2	19	1.41925	125.6	—	—
6	347	4.2	18.0	.775	51.1	24	1.42893	126.1	—	—
7	392	4.1	22.1	.794	46.7	27	1.43839	127.7	—	—
8	437	4.5	26.6	.812	42.8	30	1.44801	131.6	—	—
9	482	5.1	31.7	.826	39.8	31	1.45538	134.1	—	—
10	527	6.0	37.7	.836	37.8	31	1.46270	143.0	—	—

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.7	41.4	0.857	33.6	37	1.47150	145.8	41	10
12	437	8.0	49.4	.864	32.3	37	1.47582	150.5	45	25
13	482	5.5	54.9	.873	30.6	37	1.48279	158.3	61	45
14	527	6.8	61.7	.885	28.4	40	1.49032	158.8	93	65
14s	572	7.2	68.9	.898	26.1	43	—	—	170	75
Residuum		30.7	99.6	.970	14.4	—	—	—	—	—

Carbon residue, Conradson Residuum 5.3 percent, crude 1.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.1	0.704	69.5	
Total gasoline and naphtha	22.1	0.749	57.4	
Kerosene distillate	4.5	.812	42.8	
Gas oil	20.9	.845	36.0	
Nonviscous lubricating distillate	11.5	.867-.886	31.7-28.2	50-100
Medium lubricating distillate	9.9	.886-.905	28.2-24.9	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	30.7	—	14.4	
Distillation loss	.4	—	—	

1/ Distillation discontinued at 556°F.

Item 114
Bureau of Mines Bartlesville Laboratory
Sample 59185

IDENTIFICATION

Hall-Gurney field
Lansing-Kansas City, Pennsylvanian
2,956-2,965 feet

Kansas
Russell County

GENERAL CHARACTERISTICS

Gravity, specific 0.828 Gravity, ° API, 32.4 Pour point, ° F, below 5
Sulfur, percent 0.34 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.108

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.7	1.7	0.660	82.9	—	—	—	—	—
2	167	3.1	4.8	.671	79.4	8.0	1.37815	120.9	—	—
3	212	5.8	10.6	.710	67.8	17	1.39508	120.7	—	—
4	257	7.5	18.1	.733	61.5	18	1.40653	124.7	—	—
5	302	6.8	24.9	.751	56.9	19	1.41648	125.6	—	—
6	347	5.7	30.6	.772	51.8	23	1.42739	127.5	—	—
7	392	5.6	36.2	.789	47.8	24	1.43711	130.3	—	—
8	437	5.7	41.9	.804	44.5	26	1.44543	133.6	—	—
9	482	5.3	47.2	.816	41.9	26	1.45217	137.6	—	—
10	527	6.6	53.8	.830	39.0	28	1.45922	142.9	—	—

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.7	57.5	0.843	36.4	30	1.46782	145.2	40	20
12	437	5.9	63.4	.853	34.4	31	1.47207	148.1	46	36
13	482	4.7	68.1	.864	32.3	33	1.47816	153.0	57	50
14	527	4.6	72.7	.878	29.7	37	1.48600	—	72	64
14s	572	4.7	77.4	.891	27.3	—	—	—	165	76
Residuum		21.1	98.5	.961	15.7	—	—	—	—	—

Carbon residue, Conradson Residuum 8.6 percent, crude 2.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.6	0.691	73.3	
Total gasoline and naphtha	36.2	0.739	60.0	
Kerosene distillate	11.0	.810	43.2	
Gas oil	15.3	.840	37.0	
Nonviscous lubricating distillate	9.7	.857-.883	33.6-28.8	50-100
Medium lubricating distillate	4.5	.883-.895	28.8-26.6	100-200
Viscous lubricating distillate	—	.895-.897	26.6-26.3	Above 200
Residuum	21.1	.961	15.7	
Distillation loss	1.5	—	—	

1/ Distillation discontinued at 565°F.

Bureau of Mines
Sample
Item 115
Bartlesville
64049
Laboratory

IDENTIFICATION

Hanston-Oppy field
Mississippian
4,413 - 4,442 feet

Kansas
Hodgeman County

GENERAL CHARACTERISTICS

Gravity, specific 0.856 Gravity, ° API, 33.8 Pour point, ° F, 45
Sulfur percent 0.21 Color, greenish black
Viscosity, Saybolt Universal at 77°F, 66 sec., 100°F, 57 sec. Nitrogen percent, 0.104

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 109 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167	1.5	1.5	0.666	61.0	-	1.37360	119.4		
3	212	2.3	3.8	.712	67.2	17	1.39652	124.4		
4	257	3.0	6.8	.734	61.3	19	1.40746	125.9		
5	302	4.2	11.0	.750	57.2	19	1.41610	126.0		
6	347	4.6	15.6	.768	52.7	21	1.42590	129.6		
7	392	4.2	19.8	.786	48.5	23	1.43506	130.7		
8	437	5.6	25.4	.801	45.2	24	1.44366	134.0		
9	482	5.9	31.3	.814	42.3	25	1.45154	136.8		
10	527	6.1	37.4	.826	39.8	26	1.45881	144.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
11	392	5.9	43.3	0.847	35.6	32	1.46771	148.4	41	20
12	437	7.1	50.4	.854	34.2	32	1.47223	150.5	47	40
13	482	8.2	58.6	.863	32.5	33	1.47941	156.9	64	70
14	527	5.4	64.0	.874	30.4	35			93	105
15	572	7.8	71.8	.882	28.9	36			165	120
Residuum		27.7	99.5	.948	17.8					

Carbon residue, Conradson Residuum 5.7 percent crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.8	0.694	72.4	
Total gasoline and naphtha	19.8	0.749	57.5	
Kerosene distillate	11.5	.808	43.7	
Gas oil	16.9	.841	36.7	
Nonviscous lubricating distillate	13.7	.856-.875	33.9-30.3	50-100
Medium lubricating distillate	9.2	.875-.886	30.3-28.2	100-200
Viscous lubricating distillate	.7	.886-.887	28.2-28.1	Above 200
Residuum	27.7	.948	17.8	
Distillation loss	.5			

1/ Distillation discontinued at 518°F.

Bureau of Mines
Sample
Item 116
Bartlesville
60033
Laboratory

IDENTIFICATION

Interstate field
Purdy, Upper Morrow, Pennsylvanian
4,186-4,198 feet

Kansas
Morton County

GENERAL CHARACTERISTICS

Gravity, specific 0.831 Gravity, ° API, 38.8 Pour point, ° F, 60
Sulfur, percent, less than 0.10 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 46 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.6	1.6	0.669	80.0					
2	167	1.5	3.1	.671	79.4	8.0	1.37768	126.0		
3	212	3.9	7.0	.711	67.5	17	1.39637	128.6		
4	257	4.8	11.8	.735	61.0	19	1.40946	128.7		
5	302	3.3	15.1	.750	57.2	19	1.41820	122.8		
6	347	3.6	18.7	.763	54.0	18	1.42602	134.7		
7	392	3.9	22.6	.775	51.1	18	1.43247	134.1		
8	437	3.5	26.1	.789	47.8	19	1.43880	134.8		
9	482	4.0	30.1	.800	45.4	19	1.44565	137.6		
10	527	5.0	35.1	.812	42.8	20	1.45258	142.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
11	392	6.8	41.9	0.829	39.2	24	1.46126	143.2	41	35
12	437	3.8	45.7	.839	37.2	22	1.46507	-	48	60
13	482	4.3	50.0	.843	36.4	23			58	75
14	527	5.0	55.0	.853	34.4	25			76	95
15	572	7.1	62.1	.862	32.7	26			-	115
Residuum		33.5	95.6	.910	24.0					

Carbon residue, Conradson Residuum 2.8 percent, crude 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.693	72.7	
Total gasoline and naphtha	22.6	0.736	60.8	
Kerosene distillate	12.5	.802	44.9	
Gas oil	10.1	.835	38.0	
Nonviscous lubricating distillate	12.4	.840-.860	37.0-33.0	50-100
Medium lubricating distillate	4.5	.860-.867	33.0-31.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	33.5	.910	24.0	
Distillation loss	4.4			

Item 117
Bureau of Mines Bartlesville Laboratory
Sample 54101

IDENTIFICATION

Iuka-Carmi field
Lansing-Kansas City, Pennsylvanian
3,912-3,927 feet

Kansas
Pratt County

GENERAL CHARACTERISTICS

Gravity, specific 0.883 Gravity, ° API, 28.8 Pour point, ° F, below 5
Sulfur percent 0.59 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 94 sec.; 100°F., 69 sec. Nitrogen, percent, 0.173

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 141 mm. Hg

First drop 142 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167	0.6	0.6	0.733	61.5					
3	212	3.2	3.8	.739	60.0	30	1.41068	130.0		
4	257	1.5	5.3	.750	57.2	27				
5	302	3.7	9.0	.764	53.7	26	1.42369	132.9		
6	347	5.2	14.2	.779	50.1	26	1.43328	137.2		
7	392	5.1	19.3	.795	46.5	27	1.44155	138.4		
8	437	5.0	24.3	.810	43.2	29	1.44916	139.1		
9	482	6.1	30.4	.823	40.4	30	1.45744	142.5		
10	527	7.1	37.5	.837	37.6	32	1.46614	150.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.0	41.5	0.846	35.8	32	1.47442	154.9	41	10
12	437	6.3	47.8	.865	32.1	37	1.47791	151.8	46	35
13	482	6.3	54.1	.877	29.9	39	1.48667	139.3	60	50
14	527	6.1	60.2	.890	27.5	42			94	70
15	572	6.2	66.4	.902	25.4	45			180	90
Residium		32.0	98.4	.978	13.2					

Carbon residue, Conradson Residium, 13.1 percent, crude, 4.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.8	0.738	60.2	
Total gasoline and naphtha	19.3	0.770	52.3	
Kerosene distillate	11.1	.817	41.7	
Gas oil	16.2	.847	35.6	
Nonviscous lubricating distillate	11.0	.869-.891	31.3-27.3	50-100
Medium lubricating distillate	7.1	.891-.905	27.3-24.9	100-200
Viscous lubricating distillate	1.7	.905-.908	24.9-24.3	Above 200
Residium	32.0	.978	13.2	
Distillation loss	1.6			

Item 118
Bureau of Mines Bartlesville Laboratory
Sample 64041

IDENTIFICATION

Kismet, North field
Marmaton, Pennsylvanian
5,060 - 5,073 feet

Kansas
Seward County

GENERAL CHARACTERISTICS

Gravity, specific, 0.824 Gravity, ° API, 40.2 Pour point, ° F, 55
Sulfur, percent, 0.10 Color, dark green
Viscosity, Saybolt Universal at 77°F., 112 sec.; 100°F., 65 sec. Nitrogen, percent, 0.055

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg

First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	2.4	2.4	0.644	88.2					
2	167	3.7	6.1	.677	77.5	11	1.38008	127.2		
3	212	5.8	11.9	.721	64.6	22	1.40166	126.7		
4	257	6.7	18.6	.741	59.5	22	1.41123	131.3		
5	302	4.7	23.3	.758	55.2	23	1.42163	137.7		
6	347	4.4	27.7	.775	51.1	24	1.43087	139.2		
7	392	3.6	31.3	.789	47.8	24	1.43795	137.6		
8	437	3.7	35.0	.800	45.4	24	1.44454	139.1		
9	482	4.3	39.3	.814	42.3	25	1.45132	142.6		
10	527	4.3	43.6	.821	40.9	24	1.45708	147.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.8	46.4	0.840	37.0	29	1.46395	146.7	41	30
12	437	5.5	51.9	.844	36.2	27	1.46595	145.7	46	50
13	482	4.5	56.4	.849	35.2	26	1.47045	147.1	58	75
14	527	4.3	60.7	.855	34.0	26			77	105
15	572	7.2	67.9	.860	33.0	25				over 120
Residium		29.9	97.8	.913	23.5					

Carbon residue, Conradson Residium 3.4 percent, crude 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.9	0.692	73.0	
Total gasoline and naphtha	31.3	0.735	61.0	
Kerosene distillate	12.3	.812	42.8	
Gas oil	7.2	.843	36.4	
Nonviscous lubricating distillate	17.1	.846-.863	35.8-32.5	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residium	29.9	.913	23.5	
Distillation loss	2.2			

1/ Distillation discontinued at 522°F.

Item 119
Bureau of Mines Bartlesville Laboratory
Sample 46118

IDENTIFICATION

Kraft-Prusa field
Basal, Cambrian
3,341-3,359 feet

Kansas
Barton County

GENERAL CHARACTERISTICS

Gravity, specific, 0.811 Gravity, ° API, 43.0 Pour point, ° F, -
Sulfur, percent 0.27 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 38 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	3.8	3.8	0.630	93.1					
2	167	4.9	8.7	.661	82.6	3.2	1.38478	129.4		
3	212	6.8	15.5	.702	70.1	13	1.40053	127.0		
4	257	7.8	23.3	.729	62.6	17	1.40521	124.6		
5	302	6.5	29.8	.748	57.7	18	1.41512	124.7		
6	347	5.5	35.3	.765	53.5	19	1.42478	128.1		
7	392	5.6	40.9	.783	49.2	22	1.43410	132.2		
8	437	5.7	46.6	.798	45.8	23	1.44239	133.9		
9	482	6.1	52.7	.813	42.6	25	1.45015	138.4		
10	527	6.2	58.9	.826	39.8	26	1.45833	141.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
11	392	4.4	63.3	0.841	36.8	29			41	20
12	437	5.3	68.6	.852	34.6	31			46	35
13	482	5.2	73.8	.866	31.9	34			59	55
14	527	4.0	77.8	.878	29.7	37			91	70
15	572	3.5	81.3	.892	27.1	40			170	85
Residuum		17.6	98.9	.960	15.9					

Carbon residue, Conradson Residuum 12.7 percent, crude 2.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.5	0.671	79.4	
Total gasoline and naphtha	40.9	0.722	64.5	
Kerosene distillate	11.8	.806	44.1	
Gas oil	14.9	.838	37.4	
Nonviscous lubricating distillate	8.7	.856-.880	33.8-29.3	50-100
Medium lubricating distillate	4.7	.880-.897	29.3-26.3	100-200
Viscous lubricating distillate	.3	.897-.898	26.3-26.1	Above 200
Residuum	17.6	.960	15.9	
Distillation loss	1.1			

Item 120
Bureau of Mines Bartlesville Laboratory
Sample 61084

IDENTIFICATION

Marcotte field
Arbuckle, Cambro-Ordovician
3,757-3,761 feet

Kansas
Rooks County

GENERAL CHARACTERISTICS

Gravity, specific 0.897 Gravity, ° API, 26.3 Pour point, ° F, 15
Sulfur percent 0.77 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 242 sec. 130°F, 122 sec. Nitrogen, percent, 0.19

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 185 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	2.3	2.3	0.730	62.3	-	1.40764	126.2		
5	302	2.5	4.8	.749	57.4	18	1.41629	124.0		
6	347	3.4	8.2	.770	52.3	22	1.42613	126.1		
7	392	3.5	11.8	.790	47.6	25	1.43574	127.7		
8	437	4.6	16.4	.804	44.5	26	1.44520	129.3		
9	482	4.5	20.9	.821	40.9	29	1.45305	132.8		
10	527	6.1	27.0	.836	37.8	31	1.46130	139.3		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
11	392	2.7	29.7	0.848	35.4	33	1.46983	143.7	39	Below 5
12	437	6.4	36.1	.860	33.0	35	1.47567	148.0	46	15
13	482	8.2	44.3	.876	30.0	39	1.48456	155.4	61	30
14	527	4.6	48.9	.893	27.0	44	1.49161	161.2	98	60
15	572	6.7	55.6	.897	26.3	43	1.49562	168.5	155	75
Residuum		43.6	99.2	.974	13.8					

Carbon residue, Conradson Residuum 8.5 percent, crude 4.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	11.8	0.764	53.7	
Kerosene distillate	9.1	.812	42.8	
Gas oil	14.9	.847	35.6	
Nonviscous lubricating distillate	11.0	.866-.893	31.9-27.0	50-100
Medium lubricating distillate	8.8	.893-.899	27.0-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	43.6	.974	13.8	
Distillation loss	.8			

Item 121
Bureau of Mines Bartlesville Laboratory
Sample 46119

IDENTIFICATION

Morel field
Arbuckle, Cambro-Ordovician
3,711-3,720 feet

Kansas
Graham County

GENERAL CHARACTERISTICS

Gravity, specific 0.891 Gravity, ° API, -27.3 Pour point, ° F, -
Sulfur, percent, 0.67 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 130 sec., 130°F., 82 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 755 mm. Hg
First drop 165 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.9	0.9							
4	257	2.9	3.8	0.721	64.8	-	1.40278	126.4		
5	302	3.9	7.7	.756	55.7	22	1.41830	123.9		
6	347	4.1	11.8	.777	50.6	25	1.42813	125.6		
7	392	3.9	15.7	.797	46.0	28	1.43808	123.6		
8	437	5.0	20.7	.817	41.7	32	1.44815	127.6		
9	482	5.0	25.7	.831	38.8	33	1.45625	131.4		
10	527	6.4	32.1	.844	36.2	35	1.46466	137.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	35.0	0.861	32.8	39			43	Below 5
12	437	6.1	41.1	.872	30.8	40			50	5
13	482	6.1	47.2	.884	28.6	43			66	20
14	527	6.7	53.9	.894	26.8	44			105	45
15	572	5.5	59.4	.901	25.6	45			190	70
Residuum		39.8	99.2	.970	14.4					

Carbon residue, Conradson Residuum 14.8 percent, crude 6.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.9			
Total gasoline and naphtha	15.7	0.763	54.0	
Kerosine distillate	5.0	.817	41.7	
Gas oil	20.1	.851	34.8	
Nonviscous lubricating distillate	8.9	.877-.892	29.9-27.1	50-100
Medium lubricating distillate	7.7	.892-.902	27.1-25.4	100-200
Viscous lubricating distillate	2.0	.902-.904	25.4-25.0	Above 200
Residuum	39.8	.970	14.4	
Distillation loss	.8			

Item 122
Bureau of Mines Bartlesville Laboratory
Sample 58009

IDENTIFICATION

Pleasant Prairie field
Mississippian
5,054-5,122 feet

Kansas
Haskell County

GENERAL CHARACTERISTICS

Gravity, specific 0.846 Gravity, ° API, 35.8 Pour point, ° F, 25
Sulfur, percent 0.36 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 75 sec., 100°F., 53 sec. Nitrogen, percent, 0.107

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 753 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.7	1.7	0.653	85.2					
2	167	1.7	3.4	.673	78.8	8.9				
3	212	3.5	6.9	.710	67.8	17	1.38456	125.7		
4	257	5.0	11.9	.737	60.5	20	1.40914	124.1		
5	302	4.1	16.0	.756	55.7	22	1.41937	127.3		
6	347	4.4	20.4	.773	51.6	23	1.42905	129.1		
7	392	4.2	24.6	.790	47.6	25	1.43781	131.2		
8	437	4.3	28.9	.806	44.1	27	1.44621	137.3		
9	482	4.9	33.8	.819	41.3	28	1.45421	137.1		
10	527	5.8	39.6	.832	38.6	29	1.46185	146.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	43.1	0.849	35.2	33	1.47055	-	40	20
12	437	5.9	49.0	.854	34.2	32	1.47420	-	46	34
13	482	5.0	54.0	.867	31.7	35	1.47991	-	57	56
14	527	4.9	58.9	.877	29.9	36	1.48768	-	81	76
15	572	6.0	64.9	.889	27.7	39			135	96
Residuum		31.8	96.7	.946	18.1					

Carbon residue, Conradson Residuum 7.1 percent crude 2.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.9	0.687	74.5	
Total gasoline and naphtha	24.6	0.742	59.2	
Kerosine distillate	9.2	.813	42.6	
Gas oil	14.4	.845	36.0	
Nonviscous lubricating distillate	10.2	.858-.881	33.4-29.1	50-100
Medium lubricating distillate	6.5	.881-.895	29.1-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	31.8	.946	18.1	
Distillation loss	3.3			

Item 123
Bureau of Mines Bartlesville Laboratory
Sample 61009

IDENTIFICATION

Ray field
Reagan, Cambrian
3,602 feet

Kansas
Phillips County

GENERAL CHARACTERISTICS

Gravity specific 0.864 Gravity ° API, 32.3 Pour point, ° F, below 5
Sulfur percent 0.58 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 78 sec., 100°F, 66 sec. Nitrogen, percent, 0.15

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	4.2	4.2	0.677	77.5					
2	167	1.9	6.1	.687	74.5	16	1.38137	132.4		
3	212	4.0	10.1	.709	68.1	16	1.39622	130.8		
4	257	5.3	15.4	.734	61.3	19	1.40749	128.8		
5	302	3.8	19.2	.753	56.4	20	1.41678	126.0		
6	347	4.0	23.2	.771	52.0	22	1.42630	131.9		
7	392	3.8	27.0	.791	47.4	25	1.43575	134.6		
8	437	4.5	31.5	.805	44.3	26	1.44477	131.8		
9	482	4.6	36.1	.819	41.3	28	1.45225	133.7		
10	527	6.8	42.9	.833	38.4	30	1.46091	144.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.9	48.8	0.854	34.2	36	1.47228	146.7	43	20
12	437	5.1	53.9	.872	30.8	40	1.47947	146.2	54	40
13	482	4.1	58.0	.880	29.3	41	1.48577	141.3	74	60
14	527	4.3	62.3	.890	27.5	42	1.49112	-	105	70
145	572	7.4	69.7	.909	24.2	48			200	80
Residuum		29.8	99.5	.990	11.4					

Carbon residue, Conradson Residuum 7.1 percent crude 2.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.692	73.0	
Total gasoline and naphtha	27.0	0.734	61.3	
Kerosene distillate	9.1	.812	42.8	
Gas oil	13.4	.844	36.2	
Nonviscous lubricating distillate	10.0	.866-.888	31.9-27.9	50-100
Medium lubricating distillate	6.5	.888-.909	27.9-24.2	100-200
Viscous lubricating distillate	3.7	.909-.922	24.2-22.0	Above 200
Residuum	29.8	.990	11.4	
Distillation loss	.5			

1/ Distillation discontinued at 556°F.

Item 124
Bureau of Mines Bartlesville Laboratory
Sample 61007

IDENTIFICATION

Spivey-Grabs field
Mississippian
4,472-4,474 feet

Kansas
Harper County

GENERAL CHARACTERISTICS

Gravity specific 0.913 Gravity, ° API, 23.5 Pour point, ° F, below 5
Sulfur percent 0.93 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 343 sec., 100°F, 84 sec. Nitrogen, percent, 0.23

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 144 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167									
3	212	5.0	5.0	0.712	67.2		1.39893	123.6		
4	257	5.2	10.2	.740	59.7	22	1.41103	125.3		
5	302	4.2	14.4	.758	55.2	23	1.42122	133.7		
6	347	4.6	19.0	.776	50.9	24	1.43105	135.2		
7	392	3.8	22.8	.794	46.7	27	1.43941	137.5		
8	437	5.0	27.8	.810	43.2	29	1.44889	135.9		
9	482	4.1	31.9	.826	39.8	31	1.45697	140.8		
10	527	5.9	37.8	.841	36.8	33	1.46624	141.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.0	40.8	0.858	33.4	37	-	-	40	20
12	437	5.3	46.1	.869	31.3	39	1.47335	149.4	47	40
13	482	4.7	50.8	.885	28.4	43	1.47911	148.7	61	60
14	527	6.4	57.2	.905	24.9	49	1.48496	153.9	105	70
15	572	5.0	62.2	.912	23.7	50			200	80
Residuum		36.7	98.9	1.063	8.7					

Carbon residue, Conradson Residuum 14.3 percent crude 6.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.0	0.712	67.2	
Total gasoline and naphtha	22.8	0.753	56.4	
Kerosene distillate	9.1	.817	41.7	
Gas oil	11.8	.852	34.6	
Nonviscous lubricating distillate	9.7	.869-.902	31.3-25.4	50-100
Medium lubricating distillate	9.8	.902-.915	25.4-23.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	36.7	1.063	1.6	
Distillation loss	1.1			

Bureau of Mines
Sample
Item 125
Bartlesville Laboratory
41365

IDENTIFICATION

Trapp field
Arbuckle, Cambro-Ordovician
3,282-3,285 feet

Kansas
Russell County

GENERAL CHARACTERISTICS

Gravity, specific 0.829 Gravity, ° API 39.2 Pour point, ° F, ---
Sulfur, percent, 0.41 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 41 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 738 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U vac. 100° F	Cloud test ° F
1	122	3.3	3.3	0.634	91.7					
2	167	2.7	6.0	.661	82.6	3.2				
3	212	5.4	11.4	.700	70.6	12				
4	257	7.4	18.8	.729	62.6	17				
5	302	5.7	24.5	.750	57.2	19				
6	347	5.0	29.5	.771	52.0	22				
7	392	4.8	34.3	.791	47.4	25				
8	437	4.6	38.9	.807	43.8	27				
9	482	5.3	44.2	.816	41.9	26				
10	527	6.5	50.7	.827	39.6	27				

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.1	54.8	0.842	36.6	30			40	15
12	437	5.9	60.7	.852	34.6	31			46	30
13	482	4.9	65.6	.866	31.9	34			56	45
14	527	4.5	70.1	.876	30.0	36			81	65
15	572	5.1	75.2	.890	27.5	39			140	80
Residuum		23.4	98.6	.956	16.5					

Carbon residue, Conradson Residuum 11.2 percent, crude 2.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr.	° API	Viscosity
Light gasoline	11.4	0.672	79.1	
Total gasoline and naphtha	34.3	0.728	62.9	
Kerosene distillate	9.9	.812	42.8	
Gas oil	15.8	.839	37.2	
Nonviscous lubricating distillate	9.4	.857-.881	33.6-29.1	50-100
Medium lubricating distillate	5.8	.881-.897	29.1-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.4	.956	16.5	
Distillation loss	1.4			

Bureau of Mines
Sample
Item 126
Bartlesville Laboratory
54025

IDENTIFICATION

Welch-Bornholdt field
Mississippian
3,534-3,551 feet

Kansas
Rice County

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 Gravity, ° API, 36.4 Pour point, ° F, below 5
Sulfur, percent, 0.58 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 51 sec., 77°F., 79 sec. Nitrogen, percent, 0.149

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U vac. 100° F	Cloud test ° F
1	122	3.9	3.9	0.636	91.0					
2	167	2.9	6.8	.661	85.9	3.2	1.37318	125.2		
3	212	4.3	11.1	.703	69.8	13	1.39289	123.5		
4	257	5.6	16.7	.730	62.3	17	1.40658	124.2		
5	302	4.8	21.5	.749	57.4	18	1.41649	125.4		
6	347	4.7	26.2	.766	53.2	20	1.42588	129.4		
7	392	4.2	30.4	.784	49.0	22	1.43498	130.6		
8	437	4.5	34.9	.800	45.4	24	1.44325	133.4		
9	482	4.5	39.4	.814	42.3	25	1.45125	134.4		
10	527	5.8	45.2	.829	39.2	28	1.45978	140.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	47.8	0.849	35.2	33			41	10
12	437	4.6	52.4	.858	33.4	34			46	30
13	482	4.7	57.1	.867	31.7	35			56	45
14	527	4.3	61.4	.881	29.1	38			80	65
15	572	5.4	66.8	.893	27.0	41			150	80
Residuum		30.3	97.1	.972	14.1					

Carbon residue, Conradson Residuum 13.8 percent, crude 4.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr.	° API	Viscosity
Light gasoline	11.1	0.668	80.3	
Total gasoline and naphtha	30.4	0.724	63.9	
Kerosene distillate	9.0	.807	43.8	
Gas oil	12.7	.843	36.4	
Nonviscous lubricating distillate	8.6	.862-.884	32.7-28.6	50-100
Medium lubricating distillate	6.1	.884-.899	28.6-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	30.3	.972	14.1	
Distillation loss	2.9			

Item 127
Bureau of Mines Bartlesville Laboratory
Sample 63264

IDENTIFICATION

Dixie, West field
Tradewater A, Pennsylvanian
924 - 955 feet

Kentucky
Henderson County

GENERAL CHARACTERISTICS

Gravity, specific 0.843 Gravity, ° API 36.4 Pour point, ° F below 5
Sulfur, percent, 0.14 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 54 sec., 100°F, 52 sec. Nitrogen, percent, 0.164

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 75 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vis. 100° F	Cloud test ° F
1	122	2.1	2.1	0.636	91.0					
2	167	2.3	4.4	.662	82.2	3.7	1.37391	125.0		
3	212	4.5	8.9	.705	69.2	14	1.39493	125.4		
4	257	5.7	14.6	.733	61.5	18	1.40650	125.9		
5	302	5.0	19.6	.751	56.9	19	1.41715	130.1		
6	347	4.9	24.5	.770	52.3	22	1.42756	132.4		
7	392	4.5	29.0	.788	48.1	24	1.43739	136.1		
8	437	4.7	33.7	.803	44.7	25	1.44626	139.3		
9	482	4.7	38.4	.817	41.7	27	1.45416	141.3		
10	527	5.4	43.8	.831	38.8	29	1.46203	148.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Out temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vis. 100° F	Cloud test ° F
11	392	3.4	47.2	0.849	35.2	33	1.47040	152.8	40	20
12	437	5.5	52.7	.861	32.8	35	1.47569	154.7	48	45
13	482	5.0	57.7	.870	31.1	36	1.48390	161.0	62	60
14	527	5.2	62.9	.886	28.2	40	1.49043	-	96	70
15	572	5.4	68.3	.895	26.6	42			180	90
Residuum		28.7	97.0	.963	15.4					

Carbon residue, Conradson Residuum 8.4 percent, crude 2.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.9	0.678	77.3	
Total gasoline and naphtha	29.0	0.734	61.3	
Kerosene distillate	9.4	.810	43.2	
Gas oil	12.3	.844	36.2	
Nonviscous lubricating distillate	9.9	.862-.886	32.6-28.1	50-100
Medium lubricating distillate	6.3	.886-.897	28.1-26.2	100-200
Viscous lubricating distillate	1.4	.897-.900	26.2-25.8	Above 200
Residuum	28.7	.963	15.4	
Distillation loss	3.0			

Item 128
Bureau of Mines Bartlesville Laboratory
Sample 47901

IDENTIFICATION

Poole Consolidated field
Jett, Upper Tar Springs, Upper Mississippian
1,814 feet

Kentucky
Henderson County

GENERAL CHARACTERISTICS

Gravity, specific 0.842 Gravity, ° API 36.6 Pour point, ° F -
Sulfur, percent, 0.26 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 79 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vis. 100° F	Cloud test ° F
1	122	2.7	2.7	0.636	91.0					
2	167	2.5	5.2	.665	81.3	5.1				
3	212	5.1	10.3	.710	67.8	17	1.39920	126.0		
4	257	5.7	16.0	.736	60.8	20	1.40995	125.5		
5	302	5.1	21.1	.756	55.7	22	1.41949	133.1		
6	347	5.0	26.1	.774	51.3	23	1.42961	137.8		
7	392	4.2	30.3	.791	47.4	25	1.43867	138.5		
8	437	4.8	35.1	.806	44.1	27	1.44636	139.7		
9	482	4.6	39.7	.820	41.1	28	1.45474	145.0		
10	527	6.7	46.4	.835	38.0	31	1.46370	151.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Out temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vis. 100° F	Cloud test ° F
11	392	1.8	48.2	0.854	34.2	36			43	20
12	437	5.1	53.3	.862	32.7	36			46	35
13	482	5.3	58.6	.876	30.0	39			60	50
14	527	5.3	63.9	.887	28.0	41			91	70
15	572	5.3	69.2	.899	25.9	44			175	85
Residuum		28.4	97.6	.958	16.2					

Carbon residue, Conradson Residuum 10.8 percent, crude 3.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.3	0.680	76.6	
Total gasoline and naphtha	30.3	0.734	61.3	
Kerosene distillate	9.4	.813	42.6	
Gas oil	12.6	.846	35.8	
Nonviscous lubricating distillate	9.5	.866-.888	31.9-27.9	50-100
Medium lubricating distillate	6.3	.888-.902	27.9-25.4	100-200
Viscous lubricating distillate	1.1	.902-.905	25.4-24.9	Above 200
Residuum	28.4	.958	16.2	
Distillation loss	2.4			

Item 129
Bureau of Mines Bartlesville Laboratory
Sample 47006

IDENTIFICATION

Uniontown field
Cypress, Chester, Mississippian
2278-2285 feet

Kentucky
Union County

GENERAL CHARACTERISTICS

Gravity specific 0.838 Gravity, ° API, 37.4 Pour point, ° F, -
Sulfur percent 0.40 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	5.2	5.2	0.637	90.6					
2	167	2.1	7.3	.674	78.4	9.4	1.38550	121.8		
3	212	6.1	13.4	.720	65.0	21	1.40710	123.2		
4	257	5.1	18.5	.746	58.2	25	1.41980	123.1		
5	302	4.5	23.0	.770	52.3	28	1.43333	127.3		
6	347	4.4	27.4	.794	46.7	33	1.44613	131.5		
7	392	3.8	31.2	.812	42.8	35	1.45830	137.6		
8	437	4.1	35.3	.826	39.8	36	1.46751	141.6		
9	482	4.5	39.8	.839	37.2	37	1.47497	145.0		
10	527	5.5	45.3	.849	35.2	37	1.48172	149.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.5	46.8	0.856	33.8	37			43	5
12	437	5.6	52.4	.863	32.5	36			47	30
13	482	4.9	57.3	.872	30.8	37			60	50
14	527	5.4	62.7	.885	28.4	40			91	70
15	572	6.3	69.0	.889	27.7	39			160	80
Residuum		27.3	96.3	.946	18.1					

Carbon residue, Conradson Residuum 6.4 percent crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.4	0.681	76.3	
Total gasoline and naphtha	31.2	0.736	60.8	
Kerosene distillate	-	-	-	
Gas oil	19.6	.845	36.0	
Nonviscous lubricating distillate	10.0	.865-.886	32.1-28.2	50-100
Medium lubricating distillate	8.2	.866-.891	28.2-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.3	.946	18.1	
Distillation loss	3.7			

Item 130
Bureau of Mines Bartlesville Laboratory
Sample 57130

IDENTIFICATION

Anse La Butte field
Upper Martin, Miocene
5,250-5,260 feet

Louisiana
St. Martin Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.837 Gravity, ° API, 37.6 Pour point, ° F, below 5
Sulfur, percent, 0.13 Color, dark green
Viscosity, Saybolt Universal at 100°F., 39 sec. Nitrogen, percent, 0.013

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.644	88.2					
2	167	2.2	3.5	.663	81.9	4.2	1.37064	125.7		
3	212	4.8	8.3	.718	65.6	20	1.39962	123.7		
4	257	6.9	15.2	.748	57.7	26	1.41558	132.1		
5	302	5.9	21.1	.768	52.7	27	1.42687	138.0		
6	347	5.5	26.6	.783	49.2	28	1.43519	135.7		
7	392	4.7	31.3	.795	46.5	27	1.44104	139.4		
8	437	5.7	37.0	.813	43.0	30	1.45047	141.0		
9	482	7.1	44.1	.834	38.2	35	1.46166	150.7		
10	527	9.4	53.5	.854	34.2	40	1.47368	160.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.3	58.8	0.866	31.9	41	1.48192	-	41	Below 5
12	437	6.4	65.2	.878	29.7	43	1.48378	-	47	24
13	482	6.0	71.2	.882	28.9	42	1.48891	-	62	36
14	527	5.4	76.6	.896	26.4	45	1.49345	-	97	66
15	572	5.3	81.9	.904	25.0	46			185	80
Residuum		16.5	98.4	.938	19.4					

Carbon residue, Conradson Residuum 3.1 percent crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.3	0.692	73.0	
Total gasoline and naphtha	31.3	0.750	57.2	
Kerosene distillate	5.7	.813	42.6	
Gas oil	26.3	.855	34.0	
Nonviscous lubricating distillate	10.8	.879-.896	29.5-26.4	50-100
Medium lubricating distillate	6.1	.896-.905	26.4-24.9	100-200
Viscous lubricating distillate	1.7	.905-.908	24.9-24.3	Above 200
Residuum	16.5	.938	19.4	
Distillation loss	1.6			

Item 131
Bureau of Mines Bartlesville Laboratory
Sample 59009

IDENTIFICATION

Avery Island field
Upper Miocene
8,900-9,500 feet

Louisiana
Iberia Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.853 Gravity, ° API, 34.4 Pour point, ° F, below 5
Sulfur, percent, 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 46 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 21 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122	0.8	0.8							
2	167	.8	1.6	0.668	80.3					
3	212	2.0	3.6	.704	69.5	14	1.38767	132.7		
4	257	3.0	6.6	.743	58.9	23	1.41532	142.6		
5	302	3.5	10.1	.765	53.5	26	1.42784	142.4		
6	347	3.8	13.9	.782	42.5	27	1.43643	147.2		
7	392	4.3	18.2	.798	45.8	29	1.44353	143.5		
8	437	4.6	22.8	.814	42.3	31	1.45150	144.1		
9	482	6.2	29.0	.831	38.8	33	1.45980	146.4		
10	527	9.5	38.5	.847	35.6	36	1.46872	150.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
11	392	6.7	45.2	0.861	32.8	39			41	5
12	437	9.4	54.6	.868	31.5	38			47	25
13	482	8.4	63.4	.878	29.7	40			62	45
14	527	7.4	70.8	.885	28.4	40			94	65
15	572	6.9	77.7	.893	27.0	41			180	85
Residuum		20.3	98.0	.931	20.5					

Carbon residue, Conradson Residuum 3.1 percent, crude 0.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.6	0.688	75.2	
Total gasoline and naphtha	18.2	0.757	55.4	
Kerosine distillate	4.6	.814	42.3	
Gas oil	29.0	.851	34.8	
Nonviscous lubricating distillate	15.8	.870-.886	31.1-28.2	50-100
Medium lubricating distillate	8.3	.886-.895	28.2-26.6	100-200
Viscous lubricating distillate	1.8	.895-.897	26.6-26.3	Above 200
Residuum	20.3	.931	20.5	
Distillation loss	2.0			

Item 132
Bureau of Mines Bartlesville Laboratory
Sample 60036

IDENTIFICATION

Bastian Bay field
K, Miocene
10,990-11,000 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.845 Gravity, ° API, 36.0 Pour point, ° F, below 5
Sulfur, percent, 0.15 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 167 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.5	1.5	0.704	69.5	-	1.39875	131.8		
4	257	3.1	4.6	.731	62.1	18	1.40887	124.3		
5	302	4.7	9.3	.752	56.7	20	1.41925	133.6		
6	347	6.3	15.6	.769	52.5	21	1.42854	134.2		
7	392	6.2	21.8	.784	49.0	22	1.43586	135.8		
8	437	7.0	28.8	.797	46.0	23	1.44257	134.6		
9	482	6.6	35.4	.810	43.2	23	1.44989	137.0		
10	527	9.8	45.2	.824	40.2	25	1.45791	138.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
11	392	3.9	49.1	0.841	36.8	29	1.46621	132.5	41	20
12	437	7.2	56.8	.845	36.0	28	1.46924	137.2	46	40
13	482	6.9	63.7	.860	33.0	31	1.47532	-	58	55
14	527	6.0	69.7	.879	29.5	32	1.48162	-	82	70
15	572	7.1	76.8	.886	28.2	32			140	80
Residuum		22.5	99.3	.941	18.9					

Carbon residue, Conradson Residuum 5.3 percent, crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.5	0.704	69.5	
Total gasoline and naphtha	21.8	0.760	54.7	
Kerosine distillate	23.4	.812	42.8	
Gas oil	10.3	.845	36.0	
Nonviscous lubricating distillate	13.0	.850-.881	35.0-29.1	50-100
Medium lubricating distillate	8.3	.881-.889	29.1-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.5	.941	18.9	
Distillation loss	.7			

Item 133
Bureau of Mines Bartlesville Laboratory
Sample -- 54076

IDENTIFICATION

Bateman Lake field
9,900', Miocene
10,582-10,592 feet

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.834 Gravity, ° API, 38.2 Pour point, ° F, 30
Sulfur, percent, 0.15 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen, percent, 0.034

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 115 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	—	—	—	—	—	—	—	—	—
2	167	1.7	1.7	0.676	77.8	—	—	—	—	—
3	213	1.9	3.6	.723	64.2	23	1.39456	129.5	—	—
4	267	3.5	7.1	.751	56.9	27	1.42056	142.6	—	—
5	302	4.1	11.2	.771	52.0	29	1.43012	143.8	—	—
6	347	5.0	16.2	.782	49.5	27	1.43662	144.7	—	—
7	392	6.3	22.5	.794	46.7	27	1.44152	140.5	—	—
8	437	8.5	31.0	.803	44.7	25	1.44597	134.9	—	—
9	482	10.1	41.1	.814	42.3	25	1.45144	134.2	—	—
10	527	13.0	54.1	.824	40.2	25	1.45720	137.2	—	—

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
11	392	6.6	60.7	0.841	36.8	29	1.46392	137.6	40	10
12	437	8.8	69.5	.847	35.6	28	1.46707	137.2	45	25
13	482	5.3	74.8	.860	33.0	31	1.47357	135.0	57	40
14	527	4.6	79.4	.874	30.4	35	—	—	79	60
15	572	4.9	84.3	.889	27.7	39	—	—	140	80
Residuum		15.2	99.5	.930	20.7	—	—	—	—	—

Carbon residue, Conradson Residuum, 3.3 percent, crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.6	0.701	70.4	
Total gasoline and naphtha	22.5	0.766	53.2	
Kerosine distillate	31.6	.815	42.1	
Gas oil	14.0	.846	35.8	
Nonviscous lubricating distillate	10.7	.852-.879	34.6-29.5	50-100
Medium lubricating distillate	5.5	.879-.896	29.5-26.4	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	15.2	.930	20.7	
Distillation loss	.5			

Item 134
Bureau of Mines Bartlesville Laboratory
Sample 54070

IDENTIFICATION

Bay de Chene field
Miocene

Louisiana
Jefferson and Lafourche
Parishes

GENERAL CHARACTERISTICS

Gravity, specific, 0.857 Gravity, ° API, 33.6 Pour point, ° F, 10
Sulfur, percent, 0.27 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 71 sec., 100°F, 52 sec. Nitrogen, percent, 0.060

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	0.7	0.7	—	—	—	—	—	—	—
2	167	0.9	1.6	0.653	85.2	—	—	—	—	—
3	212	1.9	3.5	.705	69.2	14	—	—	—	—
4	267	3.5	7.0	.739	60.0	21	1.39846	129.9	—	—
5	302	3.6	10.6	.761	54.4	24	1.42405	136.1	—	—
6	347	4.3	14.9	.783	49.2	28	1.43436	137.0	—	—
7	392	4.4	19.3	.798	45.8	29	1.44234	135.9	—	—
8	437	5.1	24.4	.813	42.6	30	1.44927	136.6	—	—
9	482	6.4	30.8	.824	40.2	30	1.45628	137.7	—	—
10	527	8.5	39.3	.836	37.8	31	1.46333	140.6	—	—

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
11	392	6.4	45.7	0.854	34.2	36	1.47072	145.8	41	Below 5
12	437	8.3	54.0	.867	31.7	38	1.47432	145.0	47	20
13	482	6.6	60.6	.871	31.0	37	1.48083	146.4	60	40
14	527	6.1	66.7	.884	28.6	40	—	—	89	55
15	572	7.1	73.8	.899	25.9	44	—	—	165	70
Residuum		25.2	99.0	.946	18.1	—	—	—	—	—

Carbon residue, Conradson Residuum 5.0 percent, crude 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.5	0.681	76.3	
Total gasoline and naphtha	19.3	0.756	55.7	
Kerosine distillate	11.5	.819	41.3	
Gas oil	20.2	.849	35.4	
Nonviscous lubricating distillate	12.7	.868-.886	31.5-28.2	50-100
Medium lubricating distillate	9.0	.886-.905	28.2-24.9	100-200
Viscous lubricating distillate	4	.905-.907	24.9-24.5	Above 200
Residuum	25.2	.946	18.1	
Distillation loss	1.0			

Item 135
Bureau of Mines Bartlesville Laboratory
Sample 59092

IDENTIFICATION

Bay Marchand (Block 2) field
3,900', Miocene
3,894-3,907 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.933 Gravity, ° API, 20.2 Pour point, ° F, below 5
Sulfur, percent, 0.46 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 270 sec., 130°F, 125 sec. Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	--	--							
2	167									
3	212	1.2	1.2							
4	257	.0	1.2							
5	302	.0	1.2							
6	347	.0	1.2							
7	392	1.3	2.5	0.798	45.8	--	1.43591	148.2		
8	437	3.7	6.2	.846	35.8	46	1.45969	128.9		
9	482	6.2	12.4	.862	32.7	48	1.46877	131.5		
10	527	9.4	21.8	.880	29.3	52	1.47942	139.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
11	392	3.3	25.1	0.901	25.6	58			48	Below 5
12	437	10.2	35.3	.915	23.1	61			60	do.
13	482	9.6	44.9	.930	20.7	64			92	do.
14	527	8.5	53.4	.944	18.4	68			200	do.
15	572	10.1	63.5	.953	17.0	69			Over 400	do.
Residuum		34.8	98.3	.988	11.7					

Carbon residue, Conradson Residuum 7.5 percent, crude 2.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	--			
Total gasoline and naphtha	2.5	0.798	45.8	
Kerosine distillate	--			
Gas oil	22.2	.872	30.8	
Nonviscous lubricating distillate	16.1	.903-.931	25.2-20.5	50-100
Medium lubricating distillate	8.4	.931-.944	20.5-18.4	100-200
Viscous lubricating distillate	14.3	.944-.958	18.4-16.2	Above 200
Residuum	34.8	.988	11.7	
Distillation loss	1.7			

Item 136
Bureau of Mines Bartlesville Laboratory
Sample 57115

IDENTIFICATION

Bay St. Elaine field
Upper Miocene

Louisiana
Terrebonne Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.857 Gravity, ° API, 33.6 Pour point, ° F, below 5
Sulfur, percent, 0.32 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.040

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 135 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	--	--							
2	167									
3	212	2.2	2.2	0.707	68.6	--	1.39634	125.3		
4	257	3.0	5.2	.740	59.7	22	1.41074	135.5		
5	302	4.1	9.3	.755	55.9	21	1.42348	126.2		
6	347	6.0	15.3	.788	48.1	30	1.43522	124.6		
7	392	5.9	21.2	.805	44.3	32	1.44432	140.3		
8	437	6.2	27.9	.819	41.3	33	1.45214	137.4		
9	482	7.2	35.1	.833	38.4	34	1.46016	143.2		
10	527	8.4	43.5	.846	35.8	36	1.46740	144.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
11	392	4.2	47.7	0.854	34.2	36	1.47342	--	42	10
12	437	7.9	55.6	.863	32.1	37	1.47590	--	47	30
13	482	6.7	62.3	.873	30.6	37	1.48078	--	61	40
14	527	5.9	68.2	.886	28.2	40	1.48657	--	91	50
15	572	6.6	74.8	.896	26.4	42	1.49135	--	165	70
Residuum		24.5	99.3	.939	19.2					

Carbon residue, Conradson Residuum 4.3 percent, crude 1.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.2	0.707	68.6	
Total gasoline and naphtha	21.2	0.771	52.0	
Kerosine distillate	6.7	.819	41.3	
Gas oil	25.4	.847	35.6	
Nonviscous lubricating distillate	12.8	.867-.887	31.7-28.0	50-100
Medium lubricating distillate	8.4	.887-.901	28.0-25.6	100-200
Viscous lubricating distillate	3	.901-.901	25.6-25.6	Above 200
Residuum	24.5	.939	19.2	
Distillation loss	.7			

Item 137
Bureau of Mines Bartlesville Laboratory
Sample 50024

IDENTIFICATION

Bayou Choctaw field
Miocene

Louisiana
Iberville Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.876 Gravity, ° API, 30.0 Pour point, ° F, below 5
Sulfur, percent, 0.17 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 76 sec., 100°F, 61 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 140 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.5	2.5	0.719	65.3		1.39995	129.4		
4	267	2.0	4.5	.751	56.9	27	1.41540	128.9		
5	302	2.4	6.9	.767	53.0	27	1.42400	130.8		
6	347	2.6	9.5	.788	48.1	30	1.43437	132.8		
7	392	3.9	13.4	.808	43.6	33	1.44504	135.3		
8	437	4.9	18.3	.825	40.0	36	1.45514	139.6		
9	482	7.0	25.3	.842	36.6	39	1.46475	144.9		
10	527	8.3	33.6	.858	33.4	41	1.47332	150.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.9	39.5	0.872	30.8	44	1.48001	152.6	41	Below 5
12	437	8.6	48.1	.877	29.9	43	1.48197	152.6	50	do
13	482	7.8	55.9	.888	27.9	45	1.48647	155.2	67	30
14	527	6.9	62.8	.898	26.1	46	1.49122		110	45
15	572	7.5	70.3	.903	25.2	46	1.49487		215	80
Residuum		28.7	99.0	.935	19.8					

Carbon residue, Conradson Residuum 3.9 percent, crude 1.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.5	0.719	65.3	
Total gasoline and naphtha	13.4	0.772	51.8	
Kerosene distillate				
Gas oil	30.4	.854	34.2	
Nonviscous lubricating distillate	13.9	.877-.896	29.9-26.4	50-100
Medium lubricating distillate	7.8	.896-.902	26.4-25.4	100-200
Viscous lubricating distillate	4.8	.902-.906	25.4-24.7	Above 200
Residuum	28.7	.935	19.8	
Distillation loss	1.0			

Item 138
Bureau of Mines Bartlesville Laboratory
Sample 54060

IDENTIFICATION

Bayou des Allemands field
Miocene

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.845 Gravity, ° API, 36.0 Pour point, ° F, 35
Sulfur, percent, 0.20 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.040

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.5	0.5	0.670	79.7					
2	167	1.2	1.7	.675	78.1	11				
3	212	1.6	3.3	.722	64.5	23	1.39163	137.0		
4	257	2.7	6.0	.748	57.7	26	1.41725	141.7		
5	302	3.1	9.1	.765	53.5	26	1.42648	142.3		
6	347	3.9	13.0	.778	50.4	25	1.43374	140.7		
7	392	4.7	17.7	.789	47.8	24	1.43962	138.0		
8	437	5.7	23.4	.801	45.2	24	1.44529	137.6		
9	482	8.0	31.4	.814	42.3	25	1.45193	137.4		
10	527	10.7	42.1	.825	40.0	26	1.45884	142.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.0	47.1	0.845	36.0	31	1.46614	142.6	40	15
12	437	10.0	57.1	.854	34.2	32	1.46870	139.9	45	30
13	482	7.8	64.9	.863	32.5	33	1.47403	140.4	56	50
14	527	7.0	71.9	.874	30.4	35			81	65
15	572	6.5	78.4	.889	27.7	39			145	85
Residuum		20.8	99.2	.931	20.5					

Carbon residue, Conradson Residuum 3.7 percent, crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.3	0.697	71.5	
Total gasoline and naphtha	17.7	0.759	54.9	
Kerosene distillate	24.4	.816	41.9	
Gas oil	14.2	.850	35.0	
Nonviscous lubricating distillate	14.1	.858-.878	33.4-29.7	50-100
Medium lubricating distillate	8.0	.878-.895	29.7-26.6	100-200
Viscous lubricating distillate				Above 200
Residuum	20.8	.931	20.5	
Distillation loss	.8			

Item 139
Bureau of Mines Bartlesville Laboratory
Sample 53064

IDENTIFICATION

Bayou Sale field
Marin, St. Mary, Miocene
10,100-10,300 feet

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.844 Gravity, ° API, 36.2 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.6	3.6	0.693	72.7	-	1.39495	139.8		
4	257	2.8	6.4	.755	55.9	29	1.42166	144.1		
5	302	3.6	10.0	.775	51.1	31	1.43291	149.0		
6	347	3.5	13.5	.788	48.1	30	1.43931	148.0		
7	392	5.0	18.5	.799	45.6	29	1.44395	144.0		
8	437	6.3	24.8	.808	43.6	28	1.44985	140.7		
9	482	9.2	34.0	.822	40.6	29	1.45687	146.0		
10	527	11.4	45.4	.835	38.0	31	1.46384	148.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.5	50.9	0.848	35.4	33			39	Below 5
12	437	9.2	60.1	.852	34.6	31			44	25
13	482	7.0	67.1	.863	32.5	33			55	50
14	527	6.5	73.6	.874	30.4	35			76	65
15	572	6.2	79.8	.887	28.0	38			130	80
Residuum		18.1	97.9	.928	21.0					

Carbon residue, Conradson Residuum 3.1 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.6	0.693	72.7	
Total gasoline and naphtha	18.5	0.765	53.5	
Kerosene distillate	15.5	.816	41.9	
Gas oil	25.4	.844	36.2	
Nonviscous lubricating distillate	12.8	.857-.877	33.6-29.9	50-100
Medium lubricating distillate	7.6	.877-.889	29.9-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.1	.928	21.0	
Distillation loss	2.1			

Item 140
Bureau of Mines Bartlesville Laboratory
Sample 60059

IDENTIFICATION

Bayou Sorrel field
Lower Miocene
9,298-9,301 feet

Louisiana
Iberville Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.820 Gravity, ° API, 41.1 Pour point, ° F, 5
Sulfur percent 0.11 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 36 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.666	81.0					
2	167	3.3	4.7	.686	74.8	15	1.37990	121.7		
3	212	4.2	8.9	.713	67.0	18	1.39959	124.5		
4	257	7.2	16.1	.737	60.5	20	1.41159	128.0		
5	302	6.6	22.7	.759	54.9	23	1.42261	130.7		
6	347	6.4	29.1	.779	50.1	26	1.43344	136.6		
7	392	6.9	36.0	.794	46.7	27	1.44187	140.6		
8	437	7.7	43.7	.805	44.3	26	1.44864	139.2		
9	482	10.2	53.9	.820	41.1	28	1.45606	145.5		
10	527	10.0	63.9	.833	38.4	30	1.46459	147.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	8.0	71.9	0.852	34.6	35	1.47275	151.5	41	15
12	437	5.1	77.0	.866	32.3	37	1.47659	148.4	48	35
13	482	4.0	81.0	.874	30.4	38	1.48274	150.0	62	50
14	527	4.0	85.0	.891	27.3	43	1.48823	-	96	70
15	572	3.7	88.7	.902	25.4	45			195	80
Residuum		10.1	98.8	.946	18.1					

Carbon residue, Conradson Residuum 5.2 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.9	0.696	71.8	
Total gasoline and naphtha	36.0	0.749	57.4	
Kerosene distillate	17.9	.814	42.3	
Gas oil	21.2	.845	36.0	
Nonviscous lubricating distillate	8.2	.865-.892	32.1-27.1	50-100
Medium lubricating distillate	5.4	.892-.905	27.1-24.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.1	.946	18.1	
Distillation loss	1.2			

Item 141
Bureau of Mines Bartlesville Laboratory
Sample 60052

IDENTIFICATION

Black Bay, West field
9,200', Miocene
9,178 - 9,185 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.853 Gravity, ° API, 34.4 Pour point, ° F, below 5
Sulfur, percent, 0.19 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 46 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 758 mm. Hg
First drop 113 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	--	--	--	--	--	--	--	--	--
3	212	2.6	2.6	0.706	68.9	-	1.39971	129.4	--	--
4	257	3.1	5.7	0.739	60.0	21	1.41235	132.0	--	--
5	302	3.7	9.4	0.762	54.2	25	1.42308	135.4	--	--
6	347	4.2	13.6	0.780	49.2	26	1.43298	137.1	--	--
7	392	5.8	19.4	0.796	46.3	28	1.44076	138.4	--	--
8	437	4.9	24.3	0.807	42.8	27	1.44701	139.1	--	--
9	482	7.6	31.9	0.820	41.1	28	1.45389	140.8	--	--
10	527	2.1	41.0	0.834	38.2	30	1.46161	143.0	--	--

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	6.0	47.0	0.846	35.8	32	1.46906	148.8	40	Below 5
12	437	8.3	55.3	0.854	34.2	32	1.47238	147.4	46	20
13	482	6.8	62.1	0.866	31.9	34	1.47868	144.0	58	50
14	527	5.8	67.9	0.881	29.1	38	1.48434	--	81	60
15	572	6.1	74.0	0.892	27.1	40	--	--	135	70
Residuum		24.5	98.5	0.940	19.0	--	--	--	--	--

Carbon residue, Conradson Residuum 4.6 percent crude 1.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.706	68.9	
Total gasoline and naphtha	19.4	0.765	53.5	
Kerosene distillate	12.5	0.815	42.1	
Gas oil	21.9	0.843	36.4	
Nonviscous lubricating distillate	12.9	0.858-0.884	33.4-28.6	50-100
Medium lubricating distillate	7.3	0.884-0.898	28.6-26.1	100-300
Viscous lubricating distillate	--	--	--	Above 300
Residuum	24.5	0.940	19.0	
Distillation loss	1.5	--	--	

Item 142
Bureau of Mines Bartlesville Laboratory
Sample 64032

IDENTIFICATION

Bonnet Carré field
Operculinoides 4, Miocene
9,400 - 9,470 feet

Louisiana
St. John the Baptist Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.839 Gravity, ° API, 37.2 Pour point, ° F, below 5
Sulfur, percent, 0.13 Color, dark green
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, 0.025

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	0.5	0.5	0.643	88.6	--	--	--	--	--
2	167	1.2	1.7	0.662	82.2	3.7	1.37151	125.3	--	--
3	212	3.2	4.9	0.717	65.9	20	1.39875	127.9	--	--
4	257	5.0	9.9	0.744	58.7	24	1.41338	133.2	--	--
5	302	5.0	14.9	0.765	53.5	26	1.42576	139.3	--	--
6	347	5.5	20.4	0.784	49.0	28	1.43612	143.5	--	--
7	392	5.4	25.8	0.800	45.4	30	1.44366	142.7	--	--
8	437	5.6	31.4	0.812	42.8	30	1.45022	142.9	--	--
9	482	7.3	38.7	0.824	40.2	30	1.45700	147.1	--	--
10	527	6.5	45.2	0.839	37.2	32	1.46395	149.7	--	--

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	8.2	53.6	0.851	34.8	34	1.46856	146.9	42	20
12	437	7.9	61.5	0.856	33.8	33	1.47098	143.4	51	45
13	482	6.4	67.9	0.860	33.0	31	1.47597	--	66	60
14	527	6.3	74.2	0.868	31.5	32	--	--	98	90
15	572	5.9	80.1	0.874	30.4	32	--	--	175	100
Residuum		17.6	97.7	0.945	18.2	--	--	--	--	--

Carbon residue, Conradson Residuum 6.7 percent, crude 1.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.9	0.696	71.8	
Total gasoline and naphtha	25.8	0.759	54.9	
Kerosene distillate	13.1	0.819	41.3	
Gas oil	19.8	0.846	35.7	
Nonviscous lubricating distillate	14.5	0.855-0.868	33.9-31.5	50-100
Medium lubricating distillate	7.9	0.868-0.876	31.5-30.0	100-300
Viscous lubricating distillate	1.0	0.876-0.877	30.0-29.9	Above 300
Residuum	17.6	0.945	18.2	
Distillation loss	3.3	--	--	

Item 143
Bureau of Mines Bartlesville Laboratory
Sample 54949

IDENTIFICATION

Bully Camp field
Miocene
6,468-6,505 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.849 Gravity, ° API, 35.2 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 44 sec. Nitrogen, percent, 0.046

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Trace 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	0.1	0.1							
2	167	.7	.8	0.699	70.9	-				
3	212	1.4	2.2	.710	67.8	17				
4	257	2.4	4.6	.748	57.7	26	1.40592	137.0		
5	302	3.1	7.7	.769	52.5	28	1.42723	139.7		
6	347	4.2	11.9	.786	48.5	29	1.43703	141.7		
7	392	5.4	17.3	.810	45.2	30	1.44381	139.0		
8	437	7.3	24.6	.811	43.0	29	1.44927	140.4		
9	482	9.5	34.1	.819	41.3	28	1.45498	140.1		
10	527	13.8	47.9	.832	38.6	30	1.46230	144.9		

Trace 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	5.4	53.3	0.853	34.4	35	1.46978	145.0	41	10
12	437	9.9	63.2	.860	33.0	35	1.47237	143.8	46	25
13	482	7.3	70.5	.872	30.8	37	1.47791	139.4	50	45
14	527	6.2	76.7	.884	28.6	40			86	60
15	572	6.1	82.8	.892	27.1	40			150	75
Residuum		16.8	99.6	.931	20.5					

Carbon residue, Conradson Residuum 2.6 percent crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.2	0.706	68.9	
Total gasoline and naphtha	17.3	0.772	51.8	
Kerosene distillate	16.8	.816	41.9	
Gas oil	27.0	.845	36.0	
Nonviscous lubricating distillate	13.9	.864-.886	32.3-28.2	50-100
Medium lubricating distillate	7.8	.886-.896	28.2-26.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.8	.931	20.5	
Distillation loss	.4			

Item 144
Bureau of Mines Bartlesville Laboratory
Sample 64088

IDENTIFICATION

Burrwood field
10,100' Bigenerina Florida D, Miocene-Pliocene
10,663 - 10,684 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.841 Gravity, ° API, 36.8 Pour point, ° F, below 5
Sulfur, percent, 0.34 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.062

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Trace 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.6	1.6	0.637	90.6					
2	167	2.1	3.7	.662	82.2	3.7	1.37247	127.7		
3	212	4.0	7.7	.706	68.9	15	1.39556	127.5		
4	257	5.1	12.8	.735	61.0	19	1.40985	133.2		
5	302	5.1	17.9	.755	55.2	21	1.42067	137.3		
6	347	5.1	23.0	.773	51.6	23	1.43019	136.9		
7	392	4.8	27.8	.789	47.0	24	1.43750	138.2		
8	437	5.6	33.4	.801	45.2	24	1.44441	137.4		
9	482	6.5	39.9	.814	42.3	25	1.45154	140.9		
10	527	6.6	46.5	.828	39.4	27	1.45897	143.8		

Trace 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	5.8	52.3	0.847	35.6	32	1.46693	149.0	42	10
12	437	6.7	59.0	.855	34.0	32	1.47176	146.7	48	35
13	482	6.0	65.0	.865	32.1	34	1.47895	-	65	60
14	527	6.0	71.0	.881	29.1	38	1.48365	-	110	75
15	572	6.0	77.0	.897	26.2	43			205	95
Residuum		21.8	98.8	.957	16.4					

Carbon residue, Conradson Residuum 1.7 percent, crude 1.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.7	0.660	76.7	
Total gasoline and naphtha	27.8	0.740	59.8	
Kerosene distillate	12.1	.808	43.6	
Gas oil	16.5	.841	36.8	
Nonviscous lubricating distillate	10.3	.856-.877	33.8-29.8	50-100
Medium lubricating distillate	7.0	.877-.896	29.8-26.4	100-200
Viscous lubricating distillate	3.3	.896-.905	26.4-24.9	Above 200
Residuum	21.8	.957	16.4	
Distillation loss	1.2			

1/ Distillation discontinued at 522°F.

Item 145
Bureau of Mines Bartlesville Laboratory
Sample 53032

IDENTIFICATION

Caddo-Pine Island field
Annona, Upper Cretaceous
1,446-1,468 feet

Louisiana
Caddo Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.841 Gravity, ° API, 36.8 Pour point, ° F, below 5
Sulfur, percent, 0.37 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 44 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	-	-	-	-	-	-	-	-	-
2	167	1.8	1.8	-	-	-	-	-	-	-
3	212	3.9	5.7	0.712	67.2	-	1.39768	127.1	-	-
4	257	5.0	10.7	.748	57.7	26	1.41679	137.1	-	-
5	302	5.2	15.9	.764	53.7	26	1.42608	139.3	-	-
6	347	5.9	21.8	.782	49.5	27	1.43495	140.7	-	-
7	392	5.2	27.0	.797	46.0	28	1.43990	140.6	-	-
8	437	5.6	32.6	.811	43.0	29	1.44966	140.4	-	-
9	482	6.8	39.4	.822	40.6	29	1.45571	140.8	-	-
10	527	8.2	47.6	.831	38.8	29	1.46082	144.0	-	-

Stage 2—Distillation continued at 40 mm Hg

11	392	6.1	53.7	0.844	36.2	31	-	-	40	10
12	437	6.3	60.0	.849	35.2	29	-	-	45	25
13	482	6.5	66.5	.857	33.6	30	-	-	56	45
14	527	6.4	72.9	.868	31.5	32	-	-	79	65
15	572	5.4	78.3	.878	29.7	34	-	-	135	85
Residuum		21.5	99.8	.930	20.7		-	-		

Carbon residue, Conradson Residuum 7.9 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.7	0.712	67.2	
Total gasoline and naphtha	27.0	0.760	54.7	
Kerosine distillate	12.4	.817	41.7	
Gas oil	29.4	.841	36.8	
Nonviscous lubricating distillate	12.1	.852-.871	34.6-31.0	50-100
Medium lubricating distillate	5.4	.871-.882	31.0-28.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.5	.930	20.7	
Distillation loss	.2			

Item 146
Bureau of Mines Bartlesville Laboratory
Sample 58019

IDENTIFICATION

Caillou Island field
70 series, Miocene
12,640-12,880 feet

Louisiana
Terrebonne Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.848 Gravity, ° API, 35.4 Pour point, ° F, below 5
Sulfur percent 0.23 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 45 sec. Nitrogen, percent, 0.040

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.4	0.4	0.668	80.3	-	-	-	-	-
2	167	1.7	2.1	.670	79.7	7.5	-	-	-	-
3	212	4.3	6.4	.712	67.2	18	1.39645	128.0	-	-
4	257	4.9	11.3	.739	50.1	21	1.41197	133.9	-	-
5	302	5.9	17.2	.761	54.4	24	1.42279	135.0	-	-
6	347	5.6	22.8	.778	50.4	25	1.43199	136.0	-	-
7	392	5.3	28.1	.791	47.4	25	1.43950	135.5	-	-
8	437	5.5	33.6	.807	43.8	27	1.44745	137.6	-	-
9	482	6.6	40.2	.824	40.2	30	1.45641	140.7	-	-
10	527	7.0	47.2	.840	37.0	33	1.46481	144.1	-	-

Stage 2—Distillation continued at 40 mm Hg

11	392	5.8	53.0	0.851	34.8	34	1.47257	148.9	42	Below 5
12	437	6.5	59.5	.861	32.8	35	1.47719	148.9	49	30
13	482	5.4	64.9	.875	30.2	38	1.48426	-	64	50
14	527	5.5	70.4	.890	27.5	42	1.49006	-	100	64
15	572	5.7	76.1	.903	25.2	46	1.49701	-	210	74
Residuum		23.1	99.2	.952	17.1					

Carbon residue, Conradson Residuum 6.3 percent, crude 1.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.4	0.698	71.2	
Total gasoline and naphtha	28.1	0.752	56.7	
Kerosine distillate	12.1	.816	41.9	
Gas oil	16.5	.848	35.4	
Nonviscous lubricating distillate	11.0	.862-.890	32.7-27.5	50-100
Medium lubricating distillate	5.0	.890-.901	27.5-25.6	100-200
Viscous lubricating distillate	3.4	.901-.910	25.6-24.0	Above 200
Residuum	23.1	.952	17.1	
Distillation loss	.8			

Item 147
Bureau of Mines Bartlesville Laboratory
Sample 61095

IDENTIFICATION

Cameron, West (Block 45) field
Planulina, Miocene
9,955-10,010 feet

Louisiana
Cameron Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.829 Gravity, ° API 39.2 Pour point, ° F, 30
Sulfur percent, less than 0.10 Color green
Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refract. index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.4	2.4	0.730	62.3	-	1.40871	139.5		
4	257	2.7	5.1	.753	56.4	28	1.42111	142.1		
5	302	3.2	8.3	.770	52.3	28	1.43064	146.3		
6	347	3.9	12.2	.783	49.2	28	1.43737	147.8		
7	392	6.0	18.2	.795	46.5	27	1.44297	146.6		
8	437	9.2	27.4	.805	44.3	26	1.44916	146.9		
9	482	12.7	40.1	.818	41.5	27	1.45706	148.6		
10	527	18.8	58.9	.830	39.0	28	1.46392	151.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	11.5	70.4	0.841	36.8	29	1.46831	150.2	40	35
12	437	11.2	81.6	.846	35.8	28	1.46904	145.7	45	55
13	482	6.6	88.2	.858	33.8	30	1.47504	147.7	57	70
1/4	527	4.4	92.6	.871	31.0	33				
16	572									
Residuum		6.7	99.3	.930	20.7					

Carbon residue, Conradson Residuum 2,3 percent crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.4	0.730	62.3	
Total gasoline and naphtha	18.2	0.773	51.6	
Kerosene distillate	21.9	.813	42.6	
Gas oil	39.6	.838	37.4	
Nonviscous lubricating distillate	12.9	.851-.876	34.8-30.0	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	6.7	.930	20.7	
Distillation loss	.7			

1/ Distillation discontinued at 527°F.

Item 148
Bureau of Mines Bartlesville Laboratory
Sample 60064

IDENTIFICATION

Chacahoula field
Robulus 9, Miocene
12,640-12,645 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.836 Gravity, ° API, 37.8 Pour point, ° F, 40
Sulfur, percent 0.10 Color green
Viscosity, Saybolt Universal at 100°F, 47 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 759 mm. Hg
First drop 144 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.8	1.8	0.707	68.6	-	1.39983	130.1		
4	257	2.5	4.3	.741	59.5	22	1.41329	135.0		
5	302	2.7	7.0	.760	54.7	24	1.42388	135.6		
6	347	3.6	10.6	.775	51.1	24	1.43235	133.5		
7	392	3.8	14.4	.788	48.1	24	-	-		
8	437	5.7	20.1	.798	45.8	23	1.44315	136.3		
9	482	9.3	29.4	.808	43.6	22	1.44856	133.3		
10	527	9.6	39.0	.819	41.3	23	1.45421	135.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.9	45.9	0.834	38.2	26	1.45997	135.8	40	25
12	437	11.5	57.4	.841	36.8	26	1.46217	132.9	45	40
13	482	8.4	65.8	.850	35.0	27	1.46740	-	56	55
14	527	8.4	74.2	.860	33.0	28			77	75
16	572	8.0	82.2	.872	30.8	31			130	90
Residuum		16.8	99.0	.916	23.0					

Carbon residue, Conradson Residuum 2.2 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.8	0.707	68.6	
Total gasoline and naphtha	14.4	0.761	54.4	
Kerosene distillate	24.6	.810	43.2	
Gas oil	17.2	.838	37.4	
Nonviscous lubricating distillate	17.4	.845-.865	36.0-32.1	50-100
Medium lubricating distillate	8.6	.865-.878	32.1-29.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.8	.916	23.0	
Distillation loss	1.0			

Item 149
Bureau of Mines Bartlesville Laboratory
Sample 60050

IDENTIFICATION

Charenton field
Upper Miocene
6,430 - 6,432 feet

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.841 Gravity, ° API, 36.8 Pour point, ° F, 15
Sulfur, percent, 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 42 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 149 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	--	--	--	--	--	--	--	--	--
3	212	2.2	2.2	0.719	65.3	--	1.40171	141.3	--	--
4	257	2.6	4.8	.751	56.9	27	1.41879	139.5	--	--
5	302	3.2	8.0	.769	52.5	28	1.42916	142.1	--	--
6	347	4.1	12.1	.782	49.5	27	1.43716	145.2	--	--
7	392	4.9	17.0	.795	46.5	27	1.44282	144.1	--	--
8	437	6.5	23.5	.806	44.1	27	1.44858	141.4	--	--
9	482	9.1	32.6	.821	40.9	29	1.45576	145.2	--	--
10	527	12.0	44.6	.832	38.6	29	1.46222	147.6	--	--

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	8.2	52.8	0.846	35.8	32	1.46829	149.0	40	20
12	437	12.2	65.0	.851	34.8	30	1.46919	145.8	45	40
13	482	9.3	74.3	.858	33.4	30	1.47322	--	56	60
14	527	7.9	82.2	.869	31.3	32	1.47863	--	76	70
15	572	5.4	87.6	.880	29.3	35	--	--	135	80
Residuum		11.6	99.2	.933	20.2	--	--	--	--	--

Carbon residue, Conradson Residuum 4.0 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.2	0.719	65.3	
Total gasoline and naphtha	17.0	0.770	52.3	
Kerosene distillate	15.6	.815	42.1	
Gas oil	31.4	.843	36.4	
Nonviscous lubricating distillate	17.0	.854-.873	34.2-30.6	50-100
Medium lubricating distillate	6.6	.873-.884	30.6-28.6	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	11.6	.933	20.2	
Distillation loss	.8	--	--	

Item 150
Bureau of Mines Bartlesville Laboratory
Sample 50022

IDENTIFICATION

Clear Creek field
Bearhead Creek, Eocene
8,848-8,870 feet

Louisiana
Beauregard Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.795 Gravity, ° API, 46.5 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100°F., 34 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.6	4.6	0.644	88.2	--	--	--	--	--
2	167	5.0	9.6	.676	77.8	10	1.38107	120.1	--	--
3	212	6.4	16.0	.717	65.9	20	1.39884	124.0	--	--
4	257	9.7	25.7	.740	59.7	22	1.41067	128.9	--	--
5	302	7.5	33.2	.756	55.7	22	1.42067	133.5	--	--
6	347	6.5	39.7	.773	51.6	23	1.42945	132.3	--	--
7	392	6.6	46.3	.783	49.2	22	1.43705	134.7	--	--
8	437	3.7	50.0	.800	45.4	24	1.44388	135.7	--	--
9	482	6.1	56.1	.814	42.3	25	1.45132	140.1	--	--
10	527	7.4	63.5	.831	38.8	29	1.46110	145.5	--	--

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.7	67.2	0.847	35.6	32	1.46964	148.4	40	25
12	437	6.0	73.2	.853	34.4	31	1.47186	148.3	45	45
13	482	3.8	77.0	.861	32.8	32	1.47693	145.2	55	65
14	527	4.1	81.1	.875	30.2	35	--	--	75	85
15	572	5.0	86.1	.892	27.1	40	--	--	155	105
Residuum		9.3	95.4	.942	18.7	--	--	--	--	--

Carbon residue, Conradson Residuum 3.5 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	16.0	0.683	75.7	
Total gasoline and naphtha	46.3	0.734	61.3	
Kerosene distillate	9.8	.809	43.4	
Gas oil	7.4	.831	38.8	
Nonviscous lubricating distillate	9.2	.845-.857	36.0-33.6	50-100
Medium lubricating distillate	7.8	.857-.880	33.6-29.3	100-200
Viscous lubricating distillate	5.6	.880-.900	29.3-25.7	Above 200
Residuum	9.3	.942	18.7	
Distillation loss	4.6	--	--	

Item 151
Bureau of Mines Bartlesville Laboratory
Sample 61042

IDENTIFICATION

Clovelly field
M, reservoir B, Miocene
12,567 - 12,569 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.852 Gravity, ° API, - 34.6 Pour point, ° F, below 5
Sulfur, percent 0.16 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 42 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 745 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.2	1.2	0.866	74.8					
2	167	1.1	2.3	.882	76.0	13	1.439193	156.2		
3	212	2.6	4.9	.729	62.6	26	1.40574	137.3		
4	257	5.0	9.9	.749	57.4	26	1.41762	140.1		
5	302	5.1	15.0	.763	54.0	25	1.42704	141.2		
6	347	5.5	20.5	.781	49.7	27	1.43547	136.2		
7	392	5.3	25.8	.797	46.0	28	1.44276	143.1		
8	437	6.0	31.8	.811	43.0	29	1.45028	142.4		
9	482	6.7	38.5	.827	39.6	31	1.45849	144.5		
10	527	8.3	46.8	.841	36.8	33	1.46640	157.0		

Stage 2—Distillation continued at 40 mm. Hg

11	392	6.7	53.5	0.857	33.6	37	1.47379	147.8	41	Below 5
12	437	7.2	60.7	.863	32.5	36	1.47638	153.1	48	20
13	482	6.7	67.4	.876	30.0	39	1.48297	153.6	62	45
14	527	6.2	73.6	.891	27.3	43	1.48878	145.7	96	50
15	572	5.8	79.4	.899	25.9	44	1.49578	-	168	80
Residuum		20.5	99.9	.944	18.4					

Carbon residue, Conradson Residuum 5.3 percent, crude 1.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.9	0.708	68.4	
Total gasoline and naphtha	25.8	0.761	54.4	
Kerosene distillate	6.0	.811	43.0	
Gas oil	26.3	.846	35.8	
Nonviscous lubricating distillate	12.7	.865-.892	32.1-27.1	50-100
Medium lubricating distillate	8.6	.892-.903	27.1-25.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.5	.944	18.4	
Distillation loss	1			

Item 152
Bureau of Mines Bartlesville Laboratory
Sample 57117

IDENTIFICATION

Cote Blanche Bay, West field
Upper Miocene

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.857 Gravity, ° API, - 33.6 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, dark green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.033

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 751 mm. Hg
First drop 126 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.1	2.1	0.712	67.2		1.40004	132.8		
4	257	2.9	5.0	.756	55.7	29	1.41989	143.5		
5	302	3.1	8.1	.775	51.1	31	1.43073	144.7		
6	347	3.9	12.0	.790	47.6	31	1.43855	147.3		
7	392	4.6	16.6	.804	44.5	32	1.44535	140.6		
8	437	5.5	22.1	.818	41.5	33	1.45269	144.2		
9	482	8.1	30.2	.834	38.2	35	1.46107	148.9		
10	527	8.7	38.9	.846	35.8	36	1.46861	150.4		

Stage 2—Distillation continued at 40 mm. Hg

11	392	7.7	46.6	0.853	34.4	35	1.46861	-	41	Below 5
12	437	8.6	55.2	.864	32.3	37	1.47641	-	47	26
13	482	7.9	63.1	.873	30.6	37	1.48156	-	60	46
14	527	6.6	69.7	.883	28.8	39	1.48607	-	86	70
15	572	6.9	76.6	.893	27.0	41	-	-	155	86
Residuum		21.9	98.5	.933	20.2					

Carbon residue, Conradson Residuum 3.9 percent, crude 0.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.1	0.712	67.2	
Total gasoline and naphtha	16.6	0.775	51.1	
Kerosene distillate	5.5	.818	41.5	
Gas oil	30.8	.848	35.4	
Nonviscous lubricating distillate	15.0	.866-.885	31.9-28.4	50-100
Medium lubricating distillate	8.7	.885-.898	28.4-26.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.9	.933	20.2	
Distillation loss	1.5			

Bureau of Mines Item 153
Sample Bartlesville Laboratory
60046 ---

IDENTIFICATION

Cote Blanche Island field
1, Lower Miocene
13,986 - 14,090 feet

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.831 Gravity, ° API 38.8 Pour point, ° F, below 5
Sulfur percent less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 38 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 100 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.1	2.1	0.703	69.8	-	1.39399	130.9		
4	257	4.7	6.8	.735	61.0	19	1.40881	126.9		
5	302	7.7	14.5	.760	54.7	24	1.42175	131.9		
6	347	10.8	25.3	.780	49.9	26	1.43292	134.1		
7	392	9.1	34.4	.798	45.8	29	1.44215	142.1		
8	437	9.6	44.0	.813	42.6	30	1.45075	144.9		
9	482	9.8	53.8	.834	38.2	35	1.46177	152.0		
10	527	9.3	63.1	.847	35.6	36	1.46883	154.9		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	3.6	66.7	0.864	32.3	40	1.47752	156.9	40	Below 5
12	437	7.4	74.1	.871	31.0	40	1.47803	154.0	45	15
13	482	5.1	79.2	.876	30.0	39	1.48238	153.4	58	40
14	527	6.0	85.2	.888	27.9	41	1.48838	-	92	65
15	572	3.5	88.7	.900	25.7	44			180	75
Residuum		10.0	98.7	.934	20.0					

Carbon residue, Conradson Residuum 3.4 percent crude 0.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.1	0.703	69.8	
Total gasoline and naphtha	34.4	0.764	53.7	
Kerosene distillate	9.6	.813	42.6	
Gas oil	29.9	.849	35.2	
Nonviscous lubricating distillate	9.8	.873-.889	30.6-27.7	50-100
Medium lubricating distillate	6.0	.889-.904	27.7-25.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.0	.934	20.0	
Distillation loss	1.3			

Bureau of Mines Item 154
Sample Bartlesville Laboratory
46039 ---

IDENTIFICATION

Cotton Valley field
Bodcaw, Cotton Valley, Jurassic
8,465-8,495 feet

Louisiana
Webster Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.718 Gravity ° API 65.6 Pour point, ° F, -
Sulfur percent less than 0.10 Color, lighter than NPA 1
Viscosity, Saybolt Universal at 100°F, less than 32 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	11.4	11.4	0.633	92.0					
2	167	12.7	24.1	.664	81.6					
3	212	15.9	40.0	.704	69.5	14	1.37480	128.2		
4	257	14.8	54.8	.733	61.5	18	1.39564	134.3		
5	302	11.7	66.5	.753	56.4	20	1.41148	140.1		
6	347	8.4	74.9	.763	54.0	18	1.42224	145.0		
7	392	5.7	80.6	.772	51.8	16	1.42853	143.7		
8	437	4.7	85.3	.782	49.5	15	1.43226	140.6		
9	482	3.6	88.9	.792	47.2	15	1.43766	139.1		
1/10	527	2.5	91.4	.802	44.9	-	1.44431	142.5		
							1.44949	144.1		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392									
12	437									
13	482									
14	527									
15	572									
Residuum		3.4	94.8	0.823	40.4					

Carbon residue, Conradson Residuum 0.1 percent crude 0.02 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	40.0	0.671	79.4	
Total gasoline and naphtha	80.6	0.711	61.5	
Kerosene distillate	10.8	.790	47.6	
Gas oil	-	-	-	
Nonviscous lubricating distillate	-	-	-	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	3.4	.823	40.4	
Distillation loss	5.2			

1/ Distillation discontinued at 505° F.

Item 155
Bureau of Mines Bartlesville Laboratory
Sample 53038

IDENTIFICATION

Cox Bay field
Miocene
8 900-10,300 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity specific 0.866 Gravity, ° API 31.2 Pour point, ° F, below 5
Sulfur percent 0.38 Color brownish black
Viscosity, Saybolt Universal at 77°F, 70 sec; at 100°F, 56 sec Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso. 100° F	Cloud test ° F
1	122	1.6	1.6							
2	167	1.2	2.8	0.652	85.5	-	1.37030	127.9		
3	212	2.2	5.0	.708	68.4	16	1.39969	126.7		
4	257	3.6	8.6	.737	60.5	20	1.41251	133.0		
5	302	3.6	12.2	.758	55.2	23	1.42198	140.0		
6	347	3.9	16.1	.778	50.4	25	1.43164	134.1		
7	392	4.3	20.4	.795	46.5	27	1.44001	132.8		
8	437	4.9	25.3	.810	43.2	29	1.44784	133.6		
9	482	6.5	31.8	.826	39.8	31	1.45617	135.2		
10	527	7.9	39.7	.843	36.4	34	1.46566	144.4		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso. 100° F	Cloud test ° F
11	392	4.7	44.4	0.860	33.0	38			41	Below 5
12	437	8.3	52.7	.870	31.1	39			48	15
13	482	6.0	58.7	.884	28.6	43			66	40
14	527	5.0	63.7	.897	26.3	46			100	55
15	572	8.3	72.0	.907	24.5	47			230	75
Residuum		27.2	99.2	.960	15.9					

Carbon residue, Conradson Residuum 7.6 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.0	0.677	77.5	
Total gasoline and naphtha	20.4	0.746	58.2	
Kerosene distillate	4.9	.810	43.2	
Gas oil	24.1	.847	35.6	
Nonviscous lubricating distillate	11.8	.872-.897	30.8-26.3	50-100
Medium lubricating distillate	5.1	.897-.905	26.3-24.9	100-200
Viscous lubricating distillate	5.7	.905-.913	24.9-23.5	Above 200
Residuum	27.2	.960	15.9	
Distillation loss	.8			

Item 156
Bureau of Mines Bartlesville Laboratory
Sample 50010

IDENTIFICATION

Crowley, North field
Upper Miocene
4,900-4,920 feet

Louisiana
Acadia Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.847 Gravity, ° API 35.6 Pour point, ° F, 35
Sulfur percent less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 42 sec Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 756 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso. 100° F	Cloud test ° F
1	122	0.2	0.2							
2	167	1.2	1.4	0.676	77.8	-				
3	212	2.1	3.5	.728	62.9	25	1.39861	138.5		
4	257	3.7	7.2	.762	54.2	32	1.42513	150.7		
5	302	3.5	10.7	.784	49.0	35	1.43867	160.9		
6	347	4.0	14.7	.795	46.5	33	1.44451	156.1		
7	392	3.6	18.3	.802	44.9	31	1.44798	154.5		
8	437	5.6	23.9	.816	41.9	32	1.45549	154.8		
9	482	7.4	31.3	.834	38.2	35	1.46551	161.1		
10	527	12.0	43.3	.847	35.6	36	1.47273	165.4		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso. 100° F	Cloud test ° F
11	392	6.7	50.0	0.854	34.2	36			41	25
12	437	10.3	60.3	.857	33.6	33			45	40
13	482	8.7	69.0	.864	32.3	33			56	60
14	527	7.1	76.1	.874	30.4	35			76	75
15	572	8.0	84.1	.883	28.8	36			135	95
Residuum		14.9	99.0	.922	22.0					

Carbon residue, Conradson Residuum 2.2 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.5	0.707	68.6	
Total gasoline and naphtha	18.3	0.771	52.0	
Kerosene distillate	5.6	.816	41.9	
Gas oil	35.8	.849	35.2	
Nonviscous lubricating distillate	16.0	.860-.877	33.0-29.9	50-100
Medium lubricating distillate	8.4	.877-.887	29.9-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	14.9	.922	22.0	
Distillation loss	1.0			

Item 157
Bureau of Mines Bartlesville Laboratory
Sample 59153

IDENTIFICATION

Delhi field
Tuscaloosa, Upper Cretaceous
3,342-3,352 feet

Louisiana
Richland Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.817 Gravity, ° API, 41.7 Pour point, ° F, 25
Sulfur, percent, less than 0.10 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 39 sec. Nitrogen, percent, 0.053

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 737 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visco 100° F	Cloud test ° F
1	122	2.5	2.5	0.645	87.9					
2	167	2.8	5.3	.665	81.3	5.1	1.37437	123.6		
3	212	4.8	10.1	.708	68.4	16	1.39710	126.7		
4	267	7.1	17.2	.736	60.8	20	1.40943	127.7		
5	302	5.5	22.7	.755	55.9	21	1.42009	132.1		
6	347	5.3	28.0	.769	52.5	21	1.42945	134.5		
7	392	5.1	33.1	.785	48.8	23	1.43747	137.1		
8	437	4.8	37.9	.799	45.6	24	1.44429	139.9		
9	482	5.6	43.5	.810	43.2	23	1.45181	142.1		
10	527	6.5	50.0	.827	39.6	27	1.45897	146.4		

STAGE 2—Distillation continued at 40 mm Hg

11	592	7.6	57.6	0.840	37.0	29	1.46696	148.6	40	24
12	437	6.5	64.1	.848	35.4	29	1.47169	148.3	48	44
13	482	5.3	69.4	.863	32.5	33	1.47719	147.4	61	70
14	527	5.8	75.2	.872	30.8	34	---	---	87	80
15	572	5.6	80.8	.883	28.8	36	---	---	155	94
Residium		16.8	97.6	.940	19.0					

Carbon residue, Conradson Residium 5.1 percent, crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.1	0.680	76.6	
Total gasoline and naphtha	33.1	0.735	61.0	
Kerosine distillate	10.4	.805	44.3	
Gas oil	18.3	.837	37.6	
Nonviscous lubricating distillate	11.6	.850-.874	35.0-30.4	50-100
Medium lubricating distillate	7.4	.874-.888	30.4-27.9	100-200
Viscous lubricating distillate	---	---	---	Above 200
Residium	16.8	.940	19.0	
Distillation loss	2.4			

Item 158
Bureau of Mines Bartlesville Laboratory
Sample 54071

IDENTIFICATION

Delta Duck Club field
Miocene

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.853 Gravity, ° API, 34.4 Pour point, ° F, 25
Sulfur, percent, 0.27 Color, greenish black
Viscosity, Saybolt Universal at 77°F, 66 sec., 100°F, 52 sec. Nitrogen, percent, 0.074

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visco 100° F	Cloud test ° F
1	122	0.5	0.5							
2	167	1.5	2.0	0.670	79.7					
3	212	2.1	4.1	.719	65.3	21	1.39066	135.8		
4	257	3.8	7.9	.742	59.2	23	1.41488	139.2		
5	302	4.5	12.4	.759	54.9	23	1.42449	140.4		
6	347	4.8	17.2	.775	51.1	24	1.43238	138.9		
7	392	5.4	22.6	.786	48.5	23	1.43872	139.8		
8	437	5.9	28.5	.801	45.2	24	1.44512	136.6		
9	482	6.7	35.2	.810	43.2	23	1.45185	139.1		
10	527	8.8	44.0	.828	39.4	27	1.45956	141.3		

STAGE 2—Distillation continued at 40 mm Hg

11	592	3.7	47.7	0.844	46.2	31	1.46710	143.5	41	10
12	437	7.2	54.9	.851	34.8	30	1.47030	143.3	45	30
13	482	6.5	61.4	.862	32.7	32	1.47644	145.8	56	45
14	527	6.0	67.4	.877	29.9	36	---	---	81	65
15	572	6.3	73.7	.892	27.1	40	---	---	145	80
Residium		26.3	100.0	.956	16.5					

Carbon residue, Conradson Residium 8.0 percent crude 2.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.1	0.695	72.1	
Total gasoline and naphtha	22.6	0.754	56.2	
Kerosine distillate	12.6	.806	44.1	
Gas oil	19.5	.840	37.0	
Nonviscous lubricating distillate	11.6	.856-.881	33.8-29.1	50-100
Medium lubricating distillate	7.4	.881-.899	29.1-25.9	100-200
Viscous lubricating distillate	---	---	---	Above 200
Residium	26.3	.956	16.5	
Distillation loss	.0			

Item 159
Bureau of Mines Bartlesville Laboratory
Sample 53035

IDENTIFICATION

Delta Farms field
Miocene
8,780-9,752 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.847 Gravity, ° API, 35.6 Pour point, ° F, below 5
Sulfur, percent, 0.26 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.0	1.0							
2	167	2.2	3.2	0.676	77.8	-	1.38233	131.7		
3	212	2.4	5.6	.721	64.8	22	1.40273	126.5		
4	257	5.0	10.6	.746	58.2	25	1.41532	122.1		
5	302	4.7	15.3	.767	52.0	27	1.42739	137.7		
6	347	5.3	20.6	.784	49.0	28	1.43565	140.5		
7	392	5.4	26.0	.797	46.0	28	1.44253	136.9		
8	437	7.0	33.0	.810	43.2	29	1.44883	138.3		
9	482	7.1	40.1	.823	40.4	30	1.45630	140.6		
10	527	8.6	48.7	.838	37.4	32	1.46645	147.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.1	52.8	0.855	34.0	36	--		41	5
12	437	8.6	61.4	.863	32.5	36	--		47	20
13	482	5.6	67.0	.875	30.2	38	--		62	40
14	527	5.7	72.7	.886	28.2	40	--		96	60
15	572	5.4	78.1	.895	26.6	42	--		185	80
Residuum		20.6	98.7	.948	17.8					

Carbon residue, Conradson Residuum 6.6 percent crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.6	0.695	72.1	
Total gasoline and naphtha	26.0	0.757	55.4	
Kerosene distillate	14.1	.817	41.7	
Gas oil	18.5	.849	35.2	
Nonviscous lubricating distillate	11.5	.865-.887	32.1-28.0	50-100
Medium lubricating distillate	6.2	.887-.896	28.0-26.4	100-200
Viscous lubricating distillate	1.8	.896-.899	26.4-25.9	Above 200
Residuum	20.6	.948	17.8	
Distillation loss	1.3			

Item 160
Bureau of Mines Bartlesville Laboratory
Sample 53044

IDENTIFICATION

Duck Lake field
Upper Miocene
10,892-10,898 feet

Louisiana
St. Martin Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.843 Gravity, ° API, 36.4 Pour point, ° F, 30
Sulfur, percent, 0.14 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.8	1.8							
4	257	1.9	3.7	0.737	60.5	-	1.41369	140.9		
5	302	2.3	6.0	.775	51.1	31				
6	347	2.6	8.6	.787	48.3	30	1.44083	149.4		
7	392	3.1	11.7	.797	46.0	28	1.44492	146.2		
8	437	4.6	16.3	.810	43.2	29	1.45026	146.0		
9	482	8.5	24.8	.822	40.6	29	1.45687	145.5		
10	527	13.6	38.4	.831	38.8	29	1.46224	146.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	13.1	51.5	0.843	36.4	30	--		39	15
12	437	14.9	66.4	.845	36.0	28	--		45	35
13	482	7.0	73.4	.856	33.8	29	--		56	55
14	527	6.7	80.1	.866	31.9	31	--		77	75
15	572	5.4	85.5	.877	29.9	33	--		120	90
Residuum		14.3	99.8	.921	22.1					

Carbon residue, Conradson Residuum 2.9 percent, crude 0.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.8			
Total gasoline and naphtha	11.7	0.771	52.0	
Kerosene distillate	13.1	.818	41.5	
Gas oil	39.4	.841	36.8	
Nonviscous lubricating distillate	15.9	.850-.872	35.0-30.8	50-100
Medium lubricating distillate	5.4	.872-.882	30.8-27.1	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	14.3	.921	22.1	
Distillation loss	.2			

Item 161
Bureau of Mines Bartlesville Laboratory
Sample 59024

IDENTIFICATION

Egan field
Lower Miocene
9,810-10,010 feet

Louisiana
Acadia Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.829 Gravity, ° API, 39.2 Pour point, ° F, below 5
Sulfur, percent less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 38 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 84. ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	0.6	0.6							
2	167	1.2	1.8	0.669	80.0	-	1.38517	134.0		
3	212	2.4	4.2	.720	65.0	21	1.40239	134.5		
4	257	3.4	7.6	.751	56.9	27	1.41862	142.2		
5	302	3.7	11.3	.771	52.0	29	1.43109	148.5		
6	347	4.6	15.9	.785	48.8	29	1.43842	149.3		
7	392	5.0	20.9	.796	46.3	28	1.44353	146.3		
8	437	7.8	28.7	.806	44.1	27	1.44916	142.6		
9	482	12.5	41.2	.820	41.1	28	1.45583	146.9		
10	527	16.5	57.7	.832	38.6	29	1.46264	148.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
11	392	8.1	65.8	0.841	36.8	29			41	20
12	437	8.9	74.7	.848	35.4	29			46	35
13	482	5.1	79.8	.861	32.8	32			58	55
14	527	4.1	83.9	.874	30.4	35			85	70
15	572	4.3	88.2	.886	28.2	37			160	85
Residuum		10.5	98.7	.929	20.8					

Carbon residuum, Conradson Residuum 3.2 percent crude 0.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.2	0.698	71.2	
Total gasoline and naphtha	20.9	0.762	54.2	
Kerosene distillate	20.3	.815	42.1	
Gas oil	31.4	.838	37.4	
Nonviscous lubricating distillate	10.1	.852-.876	34.6-30.0	50-100
Medium lubricating distillate	5.5	.876-.892	30.0-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.5	.929	20.8	
Distillation loss	1.3			

Item 162
Bureau of Mines Bartlesville Laboratory
Sample 53063

IDENTIFICATION

Erath field
7,000' 7,300', and 7,700' Miocene

Louisiana
Vermilion Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.871 Gravity, ° API, 52.0 Pour point, ° F, below 5
Sulfur percent 0.20 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 54 sec., 77°F., 63 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167	2.5	2.5	0.678	77.2	-				
3	212	1.7	4.2	.732	61.8	27	1.39175	125.9		
4	257	1.6	5.8	.748	57.7	26	-	-		
5	302	2.5	8.3	.766	53.2	27	1.41940	130.5		
6	347	3.1	11.4	.790	47.6	31	1.43729	134.7		
7	392	3.6	15.0	.808	43.6	33	1.44691	137.2		
8	437	5.5	20.5	.827	39.6	37	1.45511	136.5		
9	482	8.4	28.9	.845	36.0	40	1.46453	137.1		
10	527	11.0	39.9	.861	32.8	43	1.47338	145.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
11	392	6.2	46.1	0.875	30.2	45			42	Below 5
12	437	9.8	55.9	.878	29.7	43			49	10
13	482	8.4	64.3	.886	28.2	44			66	30
14	527	7.7	72.0	.897	26.3	46			110	50
15	572	7.3	79.3	.906	24.7	47			220	70
Residuum		20.5	99.8	.940	19.0					

Carbon residuum, Conradson Residuum 3.5 percent crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.2	0.700	70.6	
Total gasoline and naphtha	15.0	0.761	54.4	
Kerosene distillate	-	-	-	
Gas oil	36.6	.857	33.6	
Nonviscous lubricating distillate	14.8	.879-.895	29.5-26.6	50-100
Medium lubricating distillate	8.0	.895-.905	26.6-24.9	100-200
Viscous lubricating distillate	4.4	.905-.910	24.9-24.0	Above 200
Residuum	20.5	.940	19.0	
Distillation loss	.2			

Item 163
Bureau of Mines Bartlesville Laboratory
Sample 64044

Eugene Island (Block 18) field
N, Miocene
9,582 - 9,587 feet

IDENTIFICATION

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity specific 0.829 Gravity, ° API 39.2 Pour point, ° F 40
Sulfur percent 0.07 Color, green
Viscosity, Saybolt Universal at 100°F., 37 sec. Nitrogen, percent, 0.020

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.8	0.8	0.683	75.7	-	1.37842	129.8		
3	212	1.0	1.8	.706	68.9	15	1.39460	137.0		
4	257	2.0	3.8	.742	59.2	23	1.41411	143.1		
5	302	3.1	6.9	.767	53.0	27	1.42866	149.2		
6	347	3.0	9.9	.784	49.0	28	1.43697	147.3		
7	392	4.6	14.5	.795	46.5	27	1.44190	143.0		
8	437	7.6	22.1	.804	44.5	26	1.44648	138.5		
9	482	12.4	34.5	.814	42.3	25	1.45181	139.6		
1/10	527	13.1	47.6	.825	40.0	26	1.45703	141.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
11	392	10.3	57.9	0.842	36.6	30	1.46305	139.1	42	20
12	437	12.2	70.1	.847	35.6	28	1.46507	138.0	48	40
13	482	8.6	78.7	.855	34.0	29	1.47009	-	62	65
14	527	6.1	84.8	.864	32.3	30			86	85
15	572	5.7	90.5	.874	30.4	32			140	105
Residuum		9.1	99.6	.905	24.9					

Carbon residue, Conradson Residuum Nil percent, crude Nil percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.8	0.696	71.9	
Total gasoline and naphtha	14.5	0.767	53.0	
Kerosine distillate	33.1	.816	41.9	
Gas oil	17.9	.844	36.2	
Nonviscous lubricating distillate	17.8	.848-.867	35.3-31.8	50-100
Medium lubricating distillate	7.2	.867-.879	31.8-29.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	9.1	.905	24.9	
Distillation loss	.4			

1/ Distillation discontinued at 523°F.

Item 164
Bureau of Mines Bartlesville Laboratory
Sample 61110

Eugene Island (Block 32) field
Miocene
7,500 feet

IDENTIFICATION

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.829 Gravity, ° API 39.2 Pour point, ° F 15
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100°F., 32 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 153 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.3	1.3	0.730	62.3	-	1.40770	143.5		
4	257	1.9	3.2	.752	56.7	27	1.42227	147.9		
5	302	2.1	5.3	.766	53.2	27	1.42984	145.4		
6	347	3.4	8.7	.778	50.4	25	1.43631	147.3		
7	392	4.3	13.0	.788	48.1	24	1.44052	147.4		
8	437	8.5	21.5	.801	45.2	24	1.44556	140.8		
9	482	15.0	36.5	.812	42.8	24	1.45136	139.2		
10	527	16.9	53.4	.825	40.0	26	1.45695	140.1		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
11	392	9.3	62.7	0.838	37.4	28	1.46291	138.1	40	20
12	437	11.7	74.4	.843	36.4	27	1.46490	136.7	45	30
13	482	6.9	81.3	.853	34.4	28	1.46923	140.6	56	70
14	527	5.3	86.6	.869	31.3	32	1.47473	-	76	80
15	572	4.6	91.2	.875	30.2	32			115	90
Residuum		8.4	99.6	.909	24.2					

Carbon residue, Conradson Residuum 1.3 percent, crude 0.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.3	0.730	62.3	
Total gasoline and naphtha	13.0	0.771	52.0	
Kerosine distillate	40.4	.815	42.1	
Gas oil	19.5	.842	36.6	
Nonviscous lubricating distillate	14.2	.848-.873	35.4-30.6	50-100
Medium lubricating distillate	4.1	.873-.878	30.6-29.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	8.4	.909	24.2	
Distillation loss	.4			

Item 165
Bureau of Mines Bartlesville Laboratory
Sample 64117

IDENTIFICATION

Eugene Island (Block 45) field
10,000', Miocene
10,060 - 10,073 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.837 Gravity, ° API, 37.6 Pour point, ° F, 25
Sulfur, percent, 0.08 Color, dark green
Viscosity, Saybolt Universal at 100°F, 47 sec. Nitrogen, percent, 0.035

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745. mm. Hg
First drop 129 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	0.9	0.9	0.669	80.0	—	1.38220	128.8		
3	212	1.3	2.2	0.709	68.1	16	1.39631	127.7		
4	257	2.5	4.7	0.735	61.0	19	1.40955	131.6		
5	302	3.0	7.7	0.754	56.2	21	1.42087	138.7		
6	347	4.0	11.7	0.770	52.3	22	1.42973	139.7		
7	392	3.9	15.6	0.785	48.8	22	1.43688	138.0		
8	437	6.1	21.7	0.800	45.4	24	1.44324	135.8		
9	482	8.6	30.3	0.812	42.8	24	1.44989	138.0		
1/10	527	8.6	38.9	0.824	40.2	25	1.45606	138.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	11.5	50.4	0.839	37.2	28	1.46268	139.5	42	30
12	437	9.4	59.8	0.846	35.8	28	1.46571	136.7	49	50
13	482	8.6	68.4	0.854	34.2	28	1.47114	—	64	65
14	527	6.9	75.3	0.868	31.5	32	1.47684	—	91	85
15	572	6.8	82.1	0.877	29.8	33	—	—	160	100
Residuum		16.9	99.0	0.923	21.8	—	—	—	—	—

Carbon residue, Conradson Residuum 3.0 percent, crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.2	0.693	72.8	
Total gasoline and naphtha	15.6	0.734	56.1	
Kerosene distillate	23.3	0.813	42.5	
Gas oil	16.8	0.841	36.8	
Nonviscous lubricating distillate	17.0	0.847-0.869	35.7-31.3	50-100
Medium lubricating distillate	9.4	0.869-0.881	31.3-29.0	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	16.9	0.923	21.8	
Distillation loss	1.0			

1/ Distillation discontinued at 518° F.

Item 166
Bureau of Mines Bartlesville Laboratory
Sample 64118

IDENTIFICATION

Eugene Island (Block 126) field
D-1, Pliocene
5,808 - 5,856 feet

Louisiana
St. Mary Parish
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.855 Gravity, ° API, 34.0 Pour point, ° F, below 5
Sulfur percent 0.15 Color, dark green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.030

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 135 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	1.6	1.6	0.701	70.4	—	1.39116	124.4		
3	212	2.5	4.1	0.727	63.1	25	1.40330	125.3		
4	257	1.6	5.9	0.741	59.5	22	1.41247	129.2		
5	302	4.7	10.6	0.756	55.7	22	1.41977	129.0		
6	347	6.8	17.4	0.777	50.6	25	1.43116	135.1		
7	392	6.9	24.3	0.799	49.6	29	1.44220	137.0		
8	437	7.5	31.8	0.819	41.3	33	1.45230	138.9		
9	482	8.4	40.2	0.837	37.6	36	1.46139	140.9		
10	527	8.1	48.3	0.853	34.4	39	1.46872	158.9		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	5.7	54.0	0.866	31.9	41	1.47682	146.9	45	Below 5
12	437	7.1	61.1	0.876	30.0	42	1.47973	145.5	54	do.
13	482	6.3	67.4	0.882	28.9	42	1.48461	—	78	do.
14	527	5.7	73.1	0.896	26.4	45	1.48968	—	135	do.
15	572	6.4	79.5	0.903	25.2	45	—	—	230	100
Residuum		20.1	99.6	0.937	19.5	—	—	—	—	—

Carbon residue, Conradson Residuum 4.1 percent, crude 0.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.1	0.717	65.9	
Total gasoline and naphtha	24.3	0.766	53.1	
Kerosene distillate	7.5	0.819	41.3	
Gas oil	22.9	0.851	34.8	
Nonviscous lubricating distillate	11.9	0.872-0.887	30.9-28.0	50-100
Medium lubricating distillate	7.8	0.887-0.901	26.0-25.6	100-200
Viscous lubricating distillate	5.1	0.901-0.907	25.6-24.6	Above 200
Residuum	20.1	0.937	19.5	
Distillation loss	.4			

Bureau of Mines
Sample
Item 167
Bartlesville
64046
Laboratory

IDENTIFICATION

Eugene Island (Block 126) field
DD, Miocene
10,533 - 10,543 feet

Louisiana
St. Mary Parish
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.845 Gravity, ° API, 36.0 Pour point, ° F, 50
Sulfur, percent, 0.10 Color, green
Viscosity, Saybolt Universal at 100°F, 44 sec. Nitrogen, percent, 0.004

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.8	1.8	0.720	65.0	-	1.40490	151.0		
4	257	2.1	3.9	.757	55.4	30	1.42452	155.7		
5	302	2.6	6.5	.770	52.3	28	1.43144	156.8		
6	347	2.9	9.4	.776	50.4	25	1.43558	150.9		
7	392	3.8	13.2	.788	48.1	24	1.43947	146.2		
8	437	4.3	17.5	.801	45.2	24	1.44577	145.8		
9	482	7.2	24.7	.815	42.1	26	1.45351	148.0		
10	527	7.4	32.1	.826	39.8	26	1.45957	148.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
11	392	10.0	42.1	0.845	36.0	31	1.46555	145.8	41	25
12	437	13.8	55.9	.851	34.8	30	1.46735	139.4	49	45
13	482	11.1	67.0	.859	33.2	31	1.47166	-	63	80
14	527	9.0	76.0	.869	31.3	32	-	-	99	105
15	572	7.5	83.5	.877	29.8	33	-	-	155	120
Residuum		16.3	99.8	.913	23.5					

Carbon residue, Conradson Residuum 1.0 percent, crude 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.8	0.720	65.0	
Total gasoline and naphtha	13.2	0.768	52.7	
Kerosene distillate	11.5	.810	43.2	
Gas oil	25.2	.841	36.8	
Nonviscous lubricating distillate	21.8	.852-.869	34.7-31.3	50-100
Medium lubricating distillate	11.8	.869-.881	31.3-29.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.3	.913	23.5	
Distillation loss	.2			

1/ Distillation discontinued at 514°F.
2/ Distillation discontinued at 563°F.

Bureau of Mines
Sample
Item 168
Bartlesville
61129
Laboratory

IDENTIFICATION

Eugene Island (Block 188) Field
9,080', Miocene
9,082 - 9,092 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.892 Gravity, ° API, 27.4 Pour point, ° F, below 5
Sulfur, percent, 0.35 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 149 sec., 100°F, 91 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 266 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347	1.6	1.6	0.778	50.4	-	1.33030	130.5		
7	392	2.5	4.1	.811	43.0	35	1.44473	130.5		
8	437	4.5	8.6	.826	39.8	36	1.45348	131.8		
9	482	7.7	16.3	.841	36.8	38	1.46197	137.0		
10	527	10.5	26.8	.858	33.4	41	1.47061	139.7		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
11	392	5.0	31.8	0.879	29.5	47	1.47855	143.2	43	Below 5
12	437	11.9	43.7	.884	28.6	46	1.48210	143.0	51	do
13	482	10.0	53.7	.892	27.1	46	1.48722	144.5	74	15
14	527	9.4	63.1	.905	24.9	49	1.49215	-	125	20
15	572	8.7	71.8	.915	23.1	51	1.49762	-	265	25
Residuum		26.9	98.7	.947	17.9					

Carbon residue, Conradson Residuum 4.7 percent, crude 1.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	-	-	-	
Total gasoline and naphtha	4.1	0.798	45.8	
Kerosene distillate	-	-	-	
Gas oil	32.7	.856	33.8	
Nonviscous lubricating distillate	16.9	.883-.899	28.8-25.9	50-100
Medium lubricating distillate	9.3	.899-.910	25.9-24.0	100-200
Viscous lubricating distillate	8.8	.910-.920	24.0-22.3	Above 200
Residuum	26.9	.947	17.9	
Distillation loss	1.3			

Bureau of Mines Item 169
Bartlesville Laboratory
Sample 64082

IDENTIFICATION

Eugene Island (Block 208) field
GS C-1, Miocene
6,365 - 6,371 feet

Louisiana
St. Mary Parish
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API, --- 37.4 --- Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, --- dark green
Viscosity, Saybolt Universal at 100°F., 42 sec. --- Nitrogen, percent, 0.027 ---

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 740 mm. Hg
First drop 115 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.3	1.3	0.677	77.5	-	1.38101	129.2		
3	212	2.4	3.7	.714	66.7	18	1.39854	130.6		
4	257	4.5	8.2	.738	60.2	21	1.41112	134.2		
5	302	4.3	12.5	.759	54.9	23	1.42206	136.6		
6	347	6.1	18.6	.776	50.8	24	1.43139	137.6		
7	392	6.3	24.9	.792	47.2	26	1.43967	139.2		
8	437	7.1	32.0	.806	44.2	27	1.44681	139.7		
9	482	7.9	39.9	.819	41.3	28	1.45378	141.2		
10	527	8.6	48.7	.833	38.4	30	1.46080	144.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	6.1	54.8	0.847	35.6	32	1.46761	146.0	42	10
12	437	8.0	62.8	.851	34.8	30	1.47103	143.7	49	35
13	482	6.4	69.2	.866	31.9	34	1.47705	-	66	50
14	527	5.7	74.9	.879	29.5	37	1.48294	-	100	70
15	572	4.8	79.7	.886	28.2	37	-	-	165	85
Residuum		18.9	98.6	.931	20.5					

Carbon residuum, Conradson Residuum 3.5 percent crude 0.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.7	0.701	70.4	
Total gasoline and naphtha	24.9	0.759	54.9	
Kerosine distillate	15.0	.813	42.6	
Gas oil	19.3	.841	36.7	
Nonviscous lubricating distillate	12.8	.852-.879	34.6-29.5	50-100
Medium lubricating distillate	7.1	.879-.889	29.5-27.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.9	.931	20.5	
Distillation loss	1.4			

Bureau of Mines Item 170
Bartlesville Laboratory
Sample 61010

IDENTIFICATION

Fausse Point field
B, Miocene
10,044 - 10,052 feet

Louisiana
Iberia Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.855 --- Gravity, ° API, 34.0 --- Pour point, ° F, 45
Sulfur, percent, 0.11 Color, --- greenish black
Viscosity, Saybolt Universal at 100°F., 49 sec. --- Nitrogen, percent, 0.02 ---

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 147 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.4	1.4	0.729	62.6	-	1.40817	133.5		
4	257	1.5	2.9	.753	56.4	28	1.42183	139.9		
5	302	2.0	4.9	.772	51.8	29	1.43221	155.9		
6	347	2.3	7.2	.784	49.0	28	1.44023	136.2		
7	392	2.8	10.0	.799	45.6	29	1.44580	138.4		
8	437	4.2	14.2	.810	43.2	29	1.45399	133.0		
9	482	8.2	22.4	.829	39.2	32	1.46219	156.1		
10	527	9.2	32.1	.837	37.6	32	1.46677	159.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	6.5	38.6	0.845	36.0	31	1.46985	160.6	39	25
12	437	10.8	49.4	.851	34.8	30	1.46950	-	45	50
13	482	7.4	56.8	.857	33.6	30	1.47275	-	55	60
14	527	9.6	66.4	.866	31.9	31	1.47900	-	75	70
15	572	8.4	74.8	.876	30.0	33	-	-	125	95
Residuum		21.9	96.7	.918	22.6					

Carbon residuum, Conradson Residuum 3.1 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.4	0.729	62.6	
Total gasoline and naphtha	10.0	0.773	51.6	
Kerosine distillate	4.2	.810	43.2	
Gas oil	34.4	.841	36.8	
Nonviscous lubricating distillate	17.5	.854-.871	34.2-31.0	50-100
Medium lubricating distillate	8.7	.871-.881	31.0-29.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.9	.918	22.6	
Distillation loss	3.3			

Bureau of Mines Item 171
Bartlesville Laboratory
 Sample 60044

IDENTIFICATION

Garden Island Bay field
 Miocene
 5,900 - 5,920 feet

Louisiana
 Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity specific 0.851 Gravity, ° API, 34.8 Pour point, ° F, below 5
 Sulfur percent 0.22 Color, brownish green
 Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.06

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
 First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167	2.3	2.3	0.671	79.4	-	1.37808	123.7		
3	212	2.9	5.2	.714	66.7	18	1.39737	126.3		
4	257	4.6	9.8	.746	58.2	25	1.41324	129.9		
5	302	4.5	14.3	.767	53.0	27	1.42504	131.5		
6	347	4.8	19.1	.786	48.5	29	1.43514	132.9		
7	392	4.5	23.6	.801	45.2	30	1.44318	133.6		
8	437	5.3	28.9	.814	42.3	31	1.45006	138.0		
9	482	6.3	35.2	.827	39.6	31	1.45643	142.4		
10	527	7.9	43.1	.838	37.4	32	1.46371	145.7		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
11	392	5.1	48.2	0.854	34.2	36	1.47160	147.8	40	10
12	437	6.4	54.6	.859	33.2	34	1.47514	146.0	47	30
13	482	6.4	61.0	.873	30.6	37	1.48192	145.9	60	50
14	527	9.7	70.7	.897	26.3	46	1.49097	-	105	70
15	572	6.0	76.7	.905	24.9	46			250	90
Residuum		20.9	97.6	.958	16.2					

Carbon residue, Conradson Residuum 2.4 percent, crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.2	0.695	72.1	
Total gasoline and naphtha	23.6	0.757	55.4	
Kerosene distillate	5.3	.814	42.3	
Gas oil	24.0	.843	36.4	
Nonviscous lubricating distillate	11.9	.862-.894	32.7-26.8	50-100
Medium lubricating distillate	6.2	.894-.902	26.8-25.4	100-200
Viscous lubricating distillate	5.7	.902-.908	25.4-24.3	Above 200
Residuum	20.9	.958	16.2	
Distillation loss	2.4			

Bureau of Mines Item 172
Bartlesville Laboratory
 Sample 61033

IDENTIFICATION

Gibson field
 Miocene
 8,900 - 9,500 feet

Louisiana
 Terrebonne Parish

GENERAL CHARACTERISTICS

Gravity specific 0.829 Gravity, ° API, 39.2 Pour point, ° F, 45
 Sulfur percent less than 0.10 Color, NPA 5
 Viscosity, Saybolt Universal at 100°F, 36 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
 First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.9	3.9	0.711	67.5	-	1.39942	134.6		
4	257	3.7	7.6	.743	58.9	14	1.41505	143.8		
5	302	4.0	11.6	.763	54.0	25	1.42668	147.0		
6	347	3.9	15.5	.779	50.1	26	1.43451	153.3		
7	392	4.5	20.0	.790	47.6	25	1.43997	146.3		
8	437	5.7	25.7	.801	45.2	24	1.44521	150.7		
9	482	8.7	34.4	.815	42.1	26	1.45176	154.5		
10	527	11.3	45.7	.827	39.6	27	1.45865	150.0		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
11	392	6.5	52.2	0.848	35.4	33	1.46486	148.3	40	15
12	437	12.6	64.8	.852	34.6	31	1.46608	158.7	45	40
13	482	10.2	75.0	.855	34.0	29	1.46961	-	56	60
14	527	7.9	82.9	.867	31.7	31			76	75
15	572	6.9	89.8	.875	30.2	32			120	95
Residuum		9.6	99.4	.906	24.7					

Carbon residue, Conradson Residuum 0.5 percent, crude 0.01 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.9	0.711	67.5	
Total gasoline and naphtha	20.0	0.758	55.2	
Kerosene distillate	14.4	.809	43.4	
Gas oil	29.3	.841	36.8	
Nonviscous lubricating distillate	19.4	.853-.871	34.4-31.0	50-100
Medium lubricating distillate	6.7	.871-.879	31.0-29.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	9.6	.906	24.7	
Distillation loss	.6			

Item 173
Bureau of Mines Bartlesville Laboratory
Sample 53045

IDENTIFICATION

Golden Meadow field
Upper Miocene
8,410-8,600 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.837 Gravity, ° API, 37.6 Pour point, ° F, 25
Sulfur, percent, 0.18 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 44 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 97 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	--	--	--	--	--	--	--	--	--
3	212	3.3	3.3	0.701	70.4	--	1.39921	136.6	--	--
4	257	0	3.3	--	--	--	--	--	--	--
5	302	7.3	10.6	.759	54.9	--	1.42305	141.9	--	--
6	347	4.0	14.6	.781	49.7	27	1.43489	145.0	--	--
7	392	4.5	19.1	.790	47.6	25	1.43971	139.9	--	--
8	437	5.8	24.9	.799	45.6	24	1.44464	138.8	--	--
9	482	7.2	32.1	.811	43.0	24	1.45101	137.5	--	--
10	527	10.0	42.1	.823	40.4	25	1.45760	141.8	--	--

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	6.0	48.1	0.839	37.2	28	--	--	39	15
12	437	10.4	58.5	.843	36.4	27	--	--	43	35
13	482	9.4	67.9	.854	34.2	28	--	--	54	55
14	527	6.8	74.7	.864	32.3	30	--	--	75	75
15	572	7.1	81.8	.877	29.9	33	--	--	125	90
Residuum		17.4	99.2	.920	22.3	--	--	--	--	--

Carbon residue, Conradson Residuum 2.7 percent, crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.3	0.701	70.4	
Total gasoline and naphtha	19.1	0.761	54.4	
Kerosene distillate	23.0	.813	42.6	
Gas oil	17.7	.841	36.8	
Nonviscous lubricating distillate	15.0	.845-.871	36.0-31.0	50-100
Medium lubricating distillate	7.0	.871-.884	31.0-28.6	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	17.4	.920	22.3	
Distillation loss	.8	--	--	

Item 174
Bureau of Mines Bartlesville Laboratory
Sample 53040

IDENTIFICATION

Good Hope field
Upper Miocene
7,800-7,815 feet

Louisiana
St. Charles Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.846 Gravity, ° API, 35.8 Pour point, ° F, 25
Sulfur, percent, 0.28 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 45 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 739 mm. Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	--	--	--	--	--	--	--	--	--
2	167	1.3	1.3	--	--	--	--	--	--	--
3	212	1.5	2.8	0.696	71.8	--	1.39900	136.7	--	--
4	257	2.9	5.7	.752	56.7	27	1.41952	144.1	--	--
5	302	3.3	9.0	.772	51.8	29	1.43092	145.7	--	--
6	347	3.9	12.9	.787	48.3	30	1.43856	149.6	--	--
7	392	4.1	17.0	.799	45.6	29	1.44451	141.5	--	--
8	437	5.2	22.2	.811	43.0	29	--	--	--	--
9	482	8.7	30.9	.824	40.2	30	1.45641	142.0	--	--
10	527	11.0	41.9	.834	38.2	30	1.46205	141.8	--	--

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	6.9	48.8	0.846	35.8	32	--	--	41	15
12	437	12.3	61.1	.850	35.0	30	--	--	47	35
13	482	5.1	66.2	.856	33.8	29	--	--	58	55
14	527	9.7	75.9	.866	31.9	31	--	--	81	75
15	572	7.1	83.0	.879	29.5	34	--	--	155	90
Residuum		16.8	99.8	.923	21.8	--	--	--	--	--

Carbon residue, Conradson Residuum 3.1 percent, crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.8	0.696	71.8	
Total gasoline and naphtha	17.0	0.766	53.2	
Kerosene distillate	13.9	.819	41.3	
Gas oil	26.6	.842	36.8	
Nonviscous lubricating distillate	15.8	.851-.869	34.8-31.3	50-100
Medium lubricating distillate	9.7	.869-.884	31.3-28.6	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	16.8	.923	21.8	
Distillation loss	.2	--	--	

Item 175
Bureau of Mines Bartlesville -- Laboratory
Sample 53039 --

IDENTIFICATION

Grand Bay field
Miocene
6,600-10,000 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.850 --- Gravity, ° API, -- 35.0 --- Pour point, ° F, ---below 5 ---
Sulfur, percent, -- 0.31 --- Color, ---brownish green ---
Viscosity, Saybolt Universal at 100°F., 48 sec. --- Nitrogen, percent, ---

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745. -- mm. Hg
First drop 85 --- ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	0.9	0.9							
2	167	1.0	1.9							
3	212	2.4	4.3	0.691	73.3		1.38737	131.6		
4	257	3.7	8.0	.745	58.4	24	1.41412	126.9		
5	302	3.9	11.9	.767	53.0	27	1.42673	135.2		
6	347	4.3	16.2	.786	48.5	29	1.43723	137.2		
7	392	4.3	20.5	.801	45.2	30	1.44473	139.5		
8	437	5.3	25.8	.813	42.6	30	1.45068	138.8		
9	482	7.2	33.0	.825	40.0	31	1.45684	141.7		
10	527	8.8	41.8	.836	37.8	31	1.46315	146.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.5	47.3	0.848	35.4	33			40	Below 5
12	437	10.1	57.4	.854	34.2	32			46	-- 20
13	482	7.3	64.7	.865	32.1	34			59	-- 45
14	527	6.1	70.8	.877	29.9	36			84	-- 60
15	572	6.4	77.2	.887	28.0	38			145	-- 80
Residuum		22.6	99.8	.935	19.8					

Carbon residue, Conradson Residuum 4.2 percent, crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.3	0.691	73.3	
Total gasoline and naphtha	20.5	0.758	55.2	
Kerosene distillate	12.5	.820	41.1	
Gas oil	22.1	.846	35.8	
Nonviscous lubricating distillate	14.3	.857-.879	33.6-29.5	50-100
Medium lubricating distillate	7.8	.879-.892	29.5-27.1	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	22.6	.935	19.8	
Distillation loss	.2			

Item 176
Bureau of Mines Bartlesville --- Laboratory
Sample --- 60048 ---

IDENTIFICATION

Grand Isle (Block 16) field
BF-1, E segment, Pliocene
6,952 - 6,961 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 --- Gravity, ° API, ---36.4 --- Pour point, ° F, ---below 5 ---
Sulfur, percent, 0.18 --- Color, ---green ---
Viscosity, Saybolt Universal at 100°F., 40 sec. --- Nitrogen, percent, 0.04 ---

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure -- 755 -- mm. Hg
First drop 122 --- ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	1.4	1.4	0.676	77.8		1.37644	--		
3	212	3.2	4.6	.712	67.2	18	1.39640	128.8		
4	257	4.9	9.5	.744	58.7	24	1.41300	129.5		
5	302	5.1	14.6	.765	53.5	26	1.42429	131.3		
6	347	5.7	20.3	.783	49.2	28	1.43366	133.1		
7	392	5.5	25.8	.796	46.3	28	1.44098	136.4		
8	437	6.5	32.3	.811	43.0	29	1.44798	136.9		
9	482	8.5	40.8	.822	40.6	29	1.45508	140.5		
10	527	8.7	49.5	.836	37.8	31	1.46249	143.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.3	54.8	0.848	35.4	33	1.47019	149.6	40	Below 5
12	437	8.0	62.8	.861	32.8	35	1.47415	146.1	46	-- 20
13	482	6.1	68.9	.872	30.8	37	1.48085	--	61	-- 40
14	527	5.1	74.0	.887	28.0	41	1.48678	--	88	-- 60
15	572	5.7	79.7	.897	26.3	43	1.49226	--	160	-- 70
Residuum		18.6	98.3	.941	18.9					

Carbon residue, Conradson Residuum 2.7 percent, crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.6	0.701	70.4	
Total gasoline and naphtha	25.8	0.760	54.7	
Kerosene distillate	15.0	.817	41.2	
Gas oil	19.2	.846	35.8	
Nonviscous lubricating distillate	11.7	.864-.889	32.3-27.7	50-100
Medium lubricating distillate	7.3	.889-.902	27.7-25.4	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	18.6	.941	18.9	
Distillation loss	1.7			

Item 177
Bureau of Mines .. Bartlesville .. Laboratory
Sample .. 60047 ..

IDENTIFICATION

Grand Isle (Block 18) field
B-2, Pliocene
8,875-8,890 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, .. 0.852 .. Gravity, ° API, .. 34.6 .. Pour point, ° F., .. below 5 ..
Sulfur, percent, .. 0.22 .. Color, .. green ..
Viscosity, Saybolt Universal at .. 100°F., .. 46 sec. .. Nitrogen, percent, .. 0.04 ..

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, .. 742 .. mm. Hg
First drop, 140 .. ° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr 60/60° F	° API, 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test, ° F
1	122	...	...	...	...	...	...	...	...	...
2	167	...	...	...	...	...	...	...	...	...
3	212	2.1	2.1	0.707	68.6	-	1.39698	128.0	...	...
4	257	3.4	5.5	0.739	60.0	21	1.41005	132.2	...	...
5	302	4.5	10.0	0.761	54.4	24	1.42140	132.4	...	...
6	347	5.5	15.5	0.780	49.9	26	1.43116	133.5	...	...
7	392	5.5	21.0	0.796	46.3	28	1.43969	136.1	...	...
8	437	6.9	27.9	0.811	43.0	29	1.44809	135.6	...	...
9	482	8.5	36.4	0.826	39.8	31	1.45616	142.1	...	...
10	527	9.2	45.6	0.840	37.0	33	1.46382	147.2	...	...

Stage 2—Distillation continued at 40 mm Hg

11	392	7.7	53.3	0.854	34.2	36	1.47254	149.6	41	Below 5
12	437	8.1	61.4	0.866	31.9	37	1.47762	150.1	47	15
13	482	6.8	68.2	0.880	29.3	41	1.48506	157.2	62	30
14	527	6.8	75.0	0.896	26.4	45	1.49196	...	100	50
15	572	6.1	81.1	0.907	24.5	47	...	...	225	60
Residuum	...	17.6	98.7	0.947	17.9	...	...	...	...	...

Carbon residue, Conradson: Residuum, 5.1 .. percent; crude, 0.8 .. percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline ..	2.1	0.707	68.6	50-100
Total gasoline and naphtha ..	21.0	0.766	53.2	
Kerosine distillate ..	6.9	0.811	43.0	
Gas oil ..	31.1	0.844	36.2	
Nonviscous lubricating distillate ..	12.6	0.869-0.896	31.3-26.4	
Medium lubricating distillate ..	9.2	0.896-0.910	26.4-24.0	100-200
Viscous lubricating distillate ..	...	...	...	Above 200
Residuum ..	17.6	0.947	17.9	
Distillation loss ..	1.3	...	...	

Item 178
Bureau of Mines .. Bartlesville .. Laboratory
Sample .. 60020 ..

IDENTIFICATION

Grand Isle (Block 47) field
Pliocene and Miocene
7,900-13,500 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, .. 0.857 .. Gravity, ° API, .. 33.6 .. Pour point, ° F., .. below 5 ..
Sulfur, percent, .. 0.23 .. Color, .. brownish green ..
Viscosity, Saybolt Universal at .. 77°F., .. 77 sec., 100°F., .. 56 sec. .. Nitrogen, percent, .. 0.04 ..

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, .. 746 .. mm. Hg
First drop, 77 .. ° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr 60/60° F	° API, 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test, ° F
1	122	...	...	...	...	...	...	...	...	...
2	167	1.7	1.7	0.675	78.1	-	1.38917	133.9	...	...
3	212	2.0	3.7	0.704	69.5	14	1.39622	130.9	...	...
4	257	3.2	6.9	0.727	60.5	20	1.40924	132.5	...	...
5	302	3.2	10.1	0.759	54.9	23	1.42175	132.8	...	...
6	347	3.8	13.9	0.779	50.1	26	1.43247	132.6	...	...
7	392	4.1	18.0	0.795	46.5	27	1.44076	138.3	...	...
8	437	5.9	23.9	0.809	43.4	28	1.44831	138.8	...	...
9	482	6.8	30.7	0.823	40.4	30	1.44562	139.2	...	...
10	527	9.0	39.7	0.835	38.0	31	1.46305	145.6	...	...

Stage 2—Distillation continued at 40 mm Hg

11	392	7.7	47.4	0.852	34.6	35	1.47077	144.7	42	10
12	437	7.2	54.6	0.864	32.3	37	1.47472	147.0	49	30
13	482	6.9	61.5	0.873	30.6	37	1.48111	143.5	62	50
14	527	6.9	68.4	0.887	28.0	41	1.48688	...	100	65
15	572	5.9	74.3	0.899	25.9	44	...	...	180	75
Residuum	...	24.6	98.9	0.945	18.2	...	...	...	...	...

Carbon residue, Conradson: Residuum, 5.7 .. percent; crude, 1.5 .. percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline ..	3.7	0.691	73.3	50-100
Total gasoline and naphtha ..	18.0	0.754	56.2	
Kerosine distillate ..	12.7	0.816	41.9	
Gas oil ..	20.9	0.846	35.8	
Nonviscous lubricating distillate ..	13.4	0.865-0.887	32.1-28.0	
Medium lubricating distillate ..	9.3	0.887-0.904	28.0-25.0	100-200
Viscous lubricating distillate ..	...	...	...	Above 200
Residuum ..	24.6	0.945	18.2	
Distillation loss ..	1.1	...	...	

Item 179
Bureau of Mines Bartlesville Laboratory
Sample 60014

IDENTIFICATION

Greenwood-Waskom field
Nacatoch, Upper Cretaceous
1 110-1 180 feet

Louisiana
Caddo Parish

GENERAL CHARACTERISTICS

Gravity specific 0.834 Gravity, ° API 38.2 Pour point, ° F, below 5
Sulfur percent 0.21 Color brownish black
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 118 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refract ve index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.4	1.4	0.678	77.2	-	1.38085	132.7		
3	212	3.6	5.0	.717	63.9	20	1.40079	134.6		
4	257	5.8	10.8	.741	59.5	22	1.41382	136.0		
5	302	6.0	16.8	.759	54.9	23	1.42261	137.7		
6	347	6.3	23.1	.774	51.3	23	1.43116	139.1		
7	392	5.8	28.9	.789	47.8	24	1.43709	148.5		
8	437	5.8	34.7	.802	44.9	25	1.44488	137.6		
9	482	6.9	41.6	.815	42.1	26	1.45143	137.2		
10	527	9.0	50.6	.826	39.8	26	1.45771	140.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.3	54.9	0.839	37.2	28	1.46428	144.4	40	20
12	437	6.3	61.2	.844	36.2	27	1.46740	147.1	45	35
13	482	6.4	67.6	.856	33.8	29	1.47298	144.1	56	50
14	527	5.9	73.5	.868	31.5	32	1.47834	150.2	78	70
15	572	5.4	78.9	.878	29.7	34			130	90
Residuum		20.1	99.0	.932	20.3					

Carbon residue, Conradson Residuum 6.2 percent crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.0	0.706	68.9	
Total gasoline and naphtha	28.9	0.756	55.7	
Kerosene distillate	12.7	.809	43.4	
Gas oil	20.5	.837	37.6	
Nonviscous lubricating distillate	10.9	.853-.872	34.4-30.8	50-100
Medium lubricating distillate	5.9	.872-.883	30.8-28.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.1	.932	20.3	
Distillation loss	1.0			

Item 180
Bureau of Mines Bartlesville Laboratory
Sample 61092

IDENTIFICATION

Gueydan field
Alliance, Upper Miocene
3,385 feet

Louisiana
Vermilion Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.822 Gravity ° API, 27.1 Pour point, ° F, below 5
Sulfur percent 0.17 Color, greenish black
Viscosity, Saybolt Universal at 27°F., 88 sec., 100°F., 75 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 253 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347	1.6	1.6	0.786	48.5	-	1.43314	130.6		
7	392	2.6	4.2	.825	40.0	41	1.45092	132.2		
8	437	6.1	10.3	.850	35.0	48	1.46349	137.7		
9	482	10.4	20.7	.866	31.9	50	1.47390	144.1		
10	527	13.3	34.0	.880	29.3	52	1.48258	154.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.0	41.0	0.888	27.9	52	1.48922	157.0	45	Below 5
12	437	11.5	52.5	.892	27.1	50	1.49180	157.4	52	do
13	482	10.4	62.9	.899	25.9	50	1.49523	157.4	75	do
14	527	10.9	73.8	.906	24.7	50	1.49916	159.6	160	do
15	572	8.2	82.0	.916	23.0	52			Over 400	do
Residuum		16.5	98.5	.941	18.9					

Carbon residue, Conradson Residuum 4.6 percent crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	4.2	0.810	43.2	
Kerosene distillate	-	-	-	
Gas oil	39.8	.869	31.3	
Nonviscous lubricating distillate	16.8	.891-.901	27.3-25.6	50-100
Medium lubricating distillate	9.1	.901-.908	25.6-24.3	100-200
Viscous lubricating distillate	12.1	.908-.920	24.3-22.3	Above 200
Residuum	16.5	.941	18.9	
Distillation loss	1.5			

Bureau of Mines Item 181
Bartlesville Laboratory
Sample 64120

IDENTIFICATION

Hackberry, East field
Main Camerina, Miocene
7,256 - 7,260 feet

Louisiana
Cameron Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.878 Gravity, ° API, 22.7 Pour point, ° F, below 5
Sulfur, percent, 0.30 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 71 sec., 100°F, 57 sec. Nitrogen, percent, 0.054

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 131 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	0.8	0.8	0.696	71.8	-	1.38530	137.6		
3	212	1.4	2.2	.729	62.6	26	1.40636	140.3		
4	257	3.2	5.4	.759	54.9	31	1.42270	148.3		
5	302	3.9	9.3	.779	50.1	33	1.43394	150.2		
6	347	4.4	13.7	.796	46.3	34	1.44154	146.2		
7	392	4.5	18.2	.811	43.0	35	1.44936	145.5		
8	437	6.6	24.8	.832	38.6	39	1.45935	147.2		
9	482	7.4	32.2	.851	34.8	43	1.46866	166.0		
1/10	527	7.9	40.1	.865	32.1	45	1.47741	159.8		

Stage 2—Distillation continued at 40 mm. Hg

11	392	7.7	47.8	0.879	22.5	47	1.48547	161.5	43	Below 5
12	437	8.5	56.3	.887	28.0	47	1.48988	164.0	54	20
13	482	7.0	63.3	.899	25.9	50	1.49565	-	78	40
2/14	527	7.1	70.4	.913	23.5	53	-	-	150	55
15	572									
Residuum		29.5	99.9	.944	18.4					

Carbon residue, Conradson Residuum 4.6 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.2	0.717	65.9	
Total gasoline and naphtha	18.2	0.780	49.9	
Kerosene distillate	-	.859	-	
Gas oil	30.9	.884-.903	28.6-25.2	50-100
Nonviscous lubricating distillate	12.9	.903-.920	25.2-22.3	100-200
Medium lubricating distillate	8.4	-	-	Above 200
Viscous lubricating distillate	-	-	-	
Residuum	29.5	.944	18.4	
Distillation loss	.1			

1/ Distillation discontinued at 518°F.

2/ Distillation discontinued at 527°F.

Bureau of Mines Item 182
Bartlesville Laboratory
Sample 50015

IDENTIFICATION

Hackberry, West field
Upper Miocene
3,050-3,090 feet

Louisiana
Cameron Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.869 Gravity, ° API, 31.3 Pour point, ° F, below 5
Sulfur, percent, 0.29 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 45 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 142 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.3	2.3	0.715	66.4	-	1.40143	140.1		
4	257	4.0	6.3	.766	53.2	34	1.42726	164.9		
5	302	5.1	11.4	.785	48.8	36	1.43912	160.4		
6	347	4.7	16.1	.796	46.3	34	1.44603	155.6		
7	392	5.9	22.0	.806	44.1	32	1.44903	143.8		
8	437	7.0	29.0	.825	40.0	36	1.45830	152.7		
9	482	8.0	37.0	.847	35.6	41	1.47075	162.8		
10	527	9.1	46.1	.864	32.3	44	1.48060	169.8		

Stage 2—Distillation continued at 40 mm. Hg

11	392	5.3	51.4	0.876	30.0	46	-	-	41	Below 5
12	437	8.0	59.4	.884	28.6	46	-	-	48	5
13	482	7.6	67.0	.896	26.4	48	-	-	63	30
14	527	5.8	72.8	.903	25.2	49	-	-	100	45
15	572	6.7	79.5	.912	23.7	50	-	-	220	70
Residuum		20.2	99.7	.945	18.2					

Carbon residue, Conradson Residuum 5.2 percent, crude 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.3	0.715	66.4	
Total gasoline and naphtha	22.0	0.782	49.5	
Kerosene distillate	7.0	.825	40.0	
Gas oil	27.5	.865	32.1	
Nonviscous lubricating distillate	13.4	.885-.903	28.4-25.2	50-100
Medium lubricating distillate	5.2	.903-.910	25.2-24.0	100-200
Viscous lubricating distillate	4.4	.910-.917	24.0-22.8	Above 200
Residuum	20.2	.945	18.2	
Distillation loss	.3			

Item 183
Bureau of Mines Bartlesville Laboratory
Sample 53031

IDENTIFICATION

Haynesville field Louisiana
Pettit, Lower Cretaceous Claiborne Parish
5,255-5,330 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.820 Gravity, ° API, 41.1 Pour point, ° F, 15
Sulfur, percent, 0.66 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 42 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	3.0	3.0	0.636	91.0					
2	167	3.0	6.0	.667	80.6	6.1	1.37687	122.8		
3	212	5.1	11.1	.698	71.2	11	1.39404	126.4		
4	257	7.2	18.3	.719	65.3	12	1.40453	123.9		
5	302	6.7	25.0	.737	60.5	13	1.41177	134.9		
6	347	6.4	31.4	.754	56.2	14	1.42155	130.0		
7	392	5.7	37.1	.770	52.3	15	1.43021	131.5		
8	437	5.4	42.5	.785	48.8	17	1.43805	133.3		
9	482	5.6	48.1	.799	45.6	18	1.44562	137.5		
10	527	5.7	53.8	.815	42.1	21	1.45370	142.5		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	2.7	56.5	0.832	38.6	25			39	20
12	437	5.1	61.6	.840	37.0	25			43	35
13	482	5.9	67.5	.853	34.4	28			53	50
14	527	3.7	71.2	.866	31.9	31			73	70
15	572	5.5	76.7	.877	29.9	33			115	85
Residuum		23.3	100.0	.952	17.1					

Carbon residue, Conradson Residuum 11.7 percent, crude 3.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.1	0.673	78.8	
Total gasoline and naphtha	37.1	0.722	64.5	
Kerosene distillate	16.7	.800	45.4	
Gas oil	9.2	.839	37.2	
Nonviscous lubricating distillate	9.3	.849-.873	35.2-30.6	50-100
Medium lubricating distillate	4.4	.873-.883	30.6-28.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.3	.952	17.1	
Distillation loss	.0			

Item 184
Bureau of Mines Bartlesville Laboratory
Sample 53033

IDENTIFICATION

Haynesville, East field Louisiana
Birdsong-Owens, Upper Cretaceous Claiborne Parish
5,179-5,189 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.804 Gravity, ° API, 44.5 Pour point, ° F, 20
Sulfur, percent, 0.57 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 39 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	3.7	3.7	0.628	93.8					
2	167	4.7	8.4	.663	81.9	4.2	1.37399	124.4		
3	212	5.7	14.1	.694	72.4	8.9	1.38923	126.8		
4	257	6.4	20.5	.714	66.7	9.4	1.39978	122.9		
5	302	6.2	26.7	.729	62.6	8.9	1.40881	124.1		
6	347	5.9	32.6	.748	57.7	11	1.41780	126.3		
7	392	5.5	38.1	.765	53.5	13	1.42699	122.6		
8	437	5.2	43.3	.778	50.4	14	1.43455	129.0		
9	482	5.4	48.7	.793	46.9	15	1.44152	131.3		
10	527	6.1	54.8	.808	43.6	18	1.44933	135.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	4.0	58.8	0.825	40.0	22			38	20
12	437	5.4	64.2	.832	38.6	21			43	35
13	482	5.5	69.7	.843	36.4	23			51	55
14	527	4.3	74.0	.854	34.2	25			67	75
15	572	5.1	79.1	.866	31.9	28			98	90
Residuum		20.6	99.7	.932	20.3					

Carbon residue, Conradson Residuum 8.6 percent, crude 2.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	14.1	0.666	81.0	
Total gasoline and naphtha	38.1	0.711	67.5	
Kerosene distillate	16.7	.794	46.7	
Gas oil	11.6	.832	38.6	
Nonviscous lubricating distillate	10.5	.842-.866	36.6-31.9	50-100
Medium lubricating distillate	2.2	.866-.872	31.9-30.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.6	.932	20.3	
Distillation loss	.3			

Bureau of Mines Item 185
Bartlesville Laboratory
Sample 57105

IDENTIFICATION

Iowa field
C, Miocene
5,050-5,080 feet

Louisiana
Calcasieu Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.877 Gravity, ° API, 29.9 Pour point, ° F, below 5
Sulfur, percent, 0.20 Color, brownish-green
Viscosity, Saybolt Universal at 100°F., 49 sec. Nitrogen, percent, 0.039

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 146 mm. Hg
First drop 172 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	--						--		
2	167							--		
3	212	1.1	1.1	0.735	61.0	-				
4	257	2.0	3.1	.761	54.4	32				
5	302	3.0	6.1	.783	49.2	35	1.42198	126.9		
6	347	4.0	10.1	.810	43.2	41	1.44485	137.0		
7	392	5.4	15.5	.830	39.0	44	1.45592	143.0		
8	437	7.1	22.6	.845	36.0	45	1.46368	143.3		
9	482	9.5	32.1	.858	33.4	46	1.47119	149.1		
10	527	14.2	46.3	.872	30.8	48	1.48044	157.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	9.1	55.4	0.874	30.4	45	1.48481	-	41	Below 5
12	437	9.2	64.6	.879	29.5	44	1.48617	-	48	dg.
13	482	5.4	70.0	.894	26.8	47	1.49206	-	64	dg.
14	527	5.8	75.8	.907	24.5	50	1.49764	-	100	dg.
15	572	5.6	81.4	.916	23.0	52	1.50325	-	210	dg.
Residuum		18.4	99.8	.947	17.9					

Carbon residue, Conradson Residuum 4.7 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.1	0.735	61.0	
Total gasoline and naphtha	10.1	.784	49.0	
Kerosene distillate	--	--	--	
Gas oil	50.9	.862	32.7	
Nonviscous lubricating distillate	11.9	.881-.907	29.1-24.5	50-100
Medium lubricating distillate	5.2	.907-.915	24.5-23.1	100-200
Viscous lubricating distillate	3.3	.915-.920	23.1-22.3	Above 200
Residuum	18.4	.947	17.9	
Distillation loss	.2			

Bureau of Mines Item 186
Bartlesville Laboratory
Sample 54102

IDENTIFICATION

Jeanerette field
Q, Miocene
6,500-6,580 feet

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.846 Gravity, ° API, 35.8 Pour point, ° F, 30
Sulfur, percent, 0.15 Color, dark green
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, 0.027

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167	0.6	0.6							
3	212	1.0	1.6	0.723	64.2	-				
4	257	1.8	3.4	.760	54.7	31				
5	302	2.1	5.5	.775	51.1	31	1.42265	147.7		
6	347	2.6	8.1	.792	47.2	32	1.44292	154.4		
7	392	3.4	11.5	.802	44.9	31	1.44751	149.6		
8	437	4.9	16.4	.813	42.6	30	1.45288	148.9		
9	482	9.5	25.9	.825	40.6	31	1.45956	150.2		
10	527	14.5	40.4	.835	38.0	31	1.46487	154.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	11.3	51.7	0.847	35.6	32	1.46872	146.9	40	20
12	437	12.1	63.8	.850	35.0	30	1.46944	142.2	46	40
13	482	8.8	72.6	.857	33.6	30	1.47351	142.8	56	55
14	527	7.6	80.2	.866	31.9	31			78	75
15	572	6.9	87.1	.879	29.5	34			130	90
Residuum		12.5	99.6	.927	21.1					

Carbon residue, Conradson Residuum 4.3 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.6	0.723	64.2	
Total gasoline and naphtha	11.5	0.777	50.6	
Kerosene distillate	14.4	.821	40.9	
Gas oil	36.1	.844	36.2	
Nonviscous lubricating distillate	17.5	.855-.871	34.0-31.0	50-100
Medium lubricating distillate	7.6	.871-.885	31.0-28.4	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	12.5	.927	21.1	
Distillation loss	.4			

Bureau of Mines
Sample
Item 187
Bartlesville
64114
Laboratory

IDENTIFICATION

Johnson Bayou field
Amphistegina I-2, Miocene
7,132 - 7,136 feet

Louisiana
Cameron Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.821 Gravity, ° API 40.2 Pour point, ° F, -20
Sulfur, percent 0.05 Color, green
Viscosity, Saybolt Universal at 100°F, 38 sec. Nitrogen, percent, 0.019

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 129 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167	0.9	0.9	0.644	88.2	-	1.37706	133.2		
3	212	1.5	2.4	.699	70.9	11	1.40135	139.1		
4	257	2.9	5.3	.749	57.4	26	1.41750	144.2		
5	302	3.8	9.1	.767	53.0	27	1.42939	157.8		
6	347	4.8	13.9	.780	49.9	26	1.43629	149.4		
7	392	6.2	20.1	.791	47.4	25	1.44104	145.1		
8	437	9.0	29.1	.803	44.7	25	1.44703	144.6		
9	482	15.3	44.4	.816	41.9	26	1.45487	147.2		
10	527	16.2	60.6	.827	39.6	27	1.46096	149.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
11	392	15.2	75.8	0.840	37.0	29	1.46544	146.7	42	45
12	437	10.0	85.8	.847	35.6	28	1.46555	143.5	47	55
13	482	4.7	90.5	.849	35.2	26	1.47034	143.9	56	85
14	527									
15	572									
Residuum		8.9	99.4	.903	25.2					

Carbon residue, Conradson Residuum 1.0 percent, crude 0.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.4	0.678	77.2	
Total gasoline and naphtha	20.1	0.764	53.7	
Kerosine distillate	24.3	.811	43.0	
Gas oil	30.2	.833	38.4	
Nonviscous lubricating distillate	15.9	.844-.850	36.2-35.0	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	8.9	.903	25.2	
Distillation loss	.6			

1/ Distillation discontinued at 518°F.
2/ Distillation discontinued at 464°F.

Bureau of Mines
Sample
Item 188
Bartlesville
61090
Laboratory

IDENTIFICATION

Krotz Springs field
Frio, Oligocene
8,843 feet

Louisiana
St. Landry Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.759 Gravity, ° API, 54.9 Pour point, ° F, below 5
Sulfur percent, less than 0.10 Color, NPA 4
Viscosity, Saybolt Universal at 100°F, 34 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	7.5	7.5	0.646	87.5					
2	167	9.0	16.5	.670	79.7	7.1	1.37622	124.5		
3	212	13.3	29.8	.716	66.1	19	1.39224	128.4		
4	257	14.5	44.3	.747	57.9	25	1.41512	136.2		
5	302	9.0	53.3	.764	53.7	26	1.42659	143.4		
6	347	8.1	61.4	.778	50.4	25	1.43438	145.1		
7	392	5.6	67.0	.789	47.8	24	1.43968	144.1		
8	437	7.8	74.8	.807	43.8	27	1.44966	148.1		
9	482	2.9	77.7	.823	40.4	30	1.46018	156.5		
10	527	4.8	82.5	.834	38.2	30	1.46582	158.7		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
11	392	2.9	85.4	0.848	35.4	33	1.47265	158.2	40	30
12	437	3.0	88.4	.852	34.6	31	1.47416	156.5	45	55
13	482	2.0	90.4	.860	33.0	31	1.47839	156.8	54	70
14	527									
15	572									
Residuum		5.7	96.1	.917	22.8					

Carbon residue, Conradson Residuum Nil percent, crude Nil percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	29.8	0.684	75.4	
Total gasoline and naphtha	67.0	0.729	62.6	
Kerosine distillate	10.7	.811	43.0	
Gas oil	10.6	.843	36.4	
Nonviscous lubricating distillate	2.1	.856-.863	33.8-32.5	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	5.7	.917	22.8	
Distillation loss	2.9			

1/ Distillation discontinued at 482°F

Item 189
Bureau of Mines Bartlesville Laboratory
Sample 60023

IDENTIFICATION

La Rose field
11,400', Lower Miocene
11,390-11,396 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.850 Gravity, ° API, 35.0 Pour point, ° F, 25
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 49 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.7	0.7	0.707	68.6	—	1.40890	144.6		
3	212	1.2	1.9	0.728	62.9	38	1.40556	143.9		
4	257	1.4	3.3	0.753	56.4	34	1.42157	150.5		
5	302	2.4	5.7	0.772	51.8	29	1.43190	154.9		
6	347	3.3	9.0	0.785	48.8	29	1.43718	159.4		
7	392	3.9	12.9	0.793	46.9	26	1.44203	163.9		
8	437	5.9	18.8	0.803	44.7	25	1.44687	162.3		
9	482	8.4	27.2	0.816	41.9	26	1.45367	163.8		
10	527	11.1	38.3	0.830	39.0	28	1.46032	165.5		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	9.2	47.5	0.838	37.4	28	1.46648	165.9	40	20
12	437	11.4	58.9	0.842	35.2	22	1.46851	164.6	46	40
13	482	8.9	67.8	0.852	33.2	31	1.47428	167.4	59	60
14	527	7.3	75.1	0.874	30.4	35	1.48126	—	84	75
15	572	7.7	82.8	0.883	28.8	36	—	—	145	95
Residuum		17.2	100.0	0.936	19.7					

Carbon residue, Conradson Residuum 5.3 percent, crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.9	0.720	65.0	
Total gasoline and naphtha	12.9	0.772	51.8	
Kerosene distillate	14.3	0.811	43.0	
Gas oil	29.1	0.838	37.4	
Nonviscous lubricating distillate	17.2	0.852-0.877	34.6-29.9	50-100
Medium lubricating distillate	9.2	0.877-0.887	29.9-28.0	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	17.2	0.936	19.7	
Distillation loss	0.0			

Item 190
Bureau of Mines Bartlesville Laboratory
Sample 53037

IDENTIFICATION

Lafitte field
Upper Miocene
4,000-10,000 feet

Louisiana
Jefferson Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.844 Gravity, ° API, 36.2 Pour point, ° F, below 5
Sulfur, percent, 0.30 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 45 sec. Nitrogen, percent, —

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 736 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.6	1.6							
3	212	2.5	4.1	0.702	70.1	—	1.39437	126.6		
4	257	3.6	7.7	0.747	57.9	25	1.41708	141.8		
5	302	3.9	11.6	0.769	53.7	26	1.42616	142.1		
6	347	4.8	16.4	0.778	50.4	25	1.43319	139.9		
7	392	4.4	20.8	0.790	47.6	25	1.43892	135.8		
8	437	6.5	27.3	0.802	44.9	25	1.44473	137.4		
9	482	7.3	34.6	0.816	41.9	26	1.45193	137.0		
10	527	9.8	44.4	0.829	39.2	28	1.45911	142.1		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.6	49.0	0.843	36.4	30	—	—	40	10
12	437	8.1	57.1	0.849	35.2	29	—	—	45	30
13	482	7.0	64.1	0.858	33.4	30	—	—	55	50
14	527	8.8	72.9	0.872	30.8	34	—	—	80	65
15	572	5.5	78.4	0.885	28.4	37	—	—	140	85
Residuum		21.3	99.7	0.932	20.3					

Carbon residue, Conradson Residuum 4.6 percent crude 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.1	0.702	70.1	
Total gasoline and naphtha	20.8	0.758	55.2	
Kerosene distillate	13.8	0.809	43.4	
Gas oil	22.4	0.839	37.2	
Nonviscous lubricating distillate	13.9	0.853-0.876	34.6-30.0	50-100
Medium lubricating distillate	7.5	0.876-0.890	30.0-27.5	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	21.3	0.932	20.3	
Distillation loss	0.3			

Item 191
Bureau of Mines Bartlesville Laboratory
Sample 60049

IDENTIFICATION

Lake Barre field
R-1, Miocene
16,534 - 16,542 feet

Louisiana
Terrebonne Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.823 Gravity, ° API, 40.4 Pour point, ° F, below 5
Sulfur percent 0.14 Color, green
Viscosity, Saybolt Universal at 100°F, 39 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 756 mm. Hg
First drop 111 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc, 100° F	Cloud test, ° F
1	122									
2	167	3.0	3.0	0.875	78.1	-	1.38799	133.7		
3	212	4.8	7.8	.712	67.2	18	1.39734	128.0		
4	257	7.5	15.3	.739	60.0	21	1.41150	135.4		
5	302	7.8	23.1	.759	54.9	23	1.42279	136.2		
6	347	7.5	30.6	.776	50.9	24	1.43176	138.0		
7	392	5.6	36.2	.789	47.8	24	1.43709	149.7		
8	437	6.3	42.5	.802	44.9	25	1.44565	139.7		
9	482	8.1	50.6	.819	41.3	28	1.45432	143.2		
10	527	6.9	57.5	.833	38.4	30	1.46155	145.6		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc, 100° F	Cloud test, ° F
11	392	5.1	62.6	0.850	35.0	34	1.46950	145.9	41	15
12	437	11.8	74.4	.860	33.0	35	1.47472	147.7	51	40
13	482	4.9	79.3	.875	30.2	38	1.48319	147.3	85	60
14	527	3.1	82.4	.886	28.2	40			125	70
15	572	2.8	85.2	.891	27.3	40			185	80
Residuum		14.0	99.2	.932	20.3					

Carbon residue, Conradson Residuum 2.2 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.8	0.698	71.2	
Total gasoline and naphtha	36.2	0.750	57.2	
Kerosine distillate	14.4	.812	42.8	
Gas oil	16.3	.845	36.0	
Nonviscous lubricating distillate	11.5	.858-.874	33.4-30.4	50-100
Medium lubricating distillate	6.8	.874-.899	30.4-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	14.0	.932	-	
Distillation loss	.8			

Item 192
Bureau of Mines Bartlesville Laboratory
Sample 54062

IDENTIFICATION

Lake Chicot field
8,100', Miocene
8,170-8,185 feet

Louisiana
St. Martin Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.760 Gravity, ° API, 54.7 Pour point, ° F, below 5
Sulfur, percent, 0.11 Color, green
Viscosity, Saybolt Universal at 100°F, 32 sec. Nitrogen, percent, 0.014

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc, 100° F	Cloud test, ° F
1	122	7.5	7.5	0.832	92.4					
2	167	8.2	15.7	.666	81.0	5.6	1.37442	123.1		
3	212	9.7	25.4	.706	68.9	15	1.39428	122.4		
4	257	11.0	36.4	.731	62.1	18	1.40714	125.9		
5	302	9.1	45.5	.750	57.2	19	1.41760	130.3		
6	347	8.3	53.8	.769	52.5	21	1.42807	134.6		
7	392	7.2	61.0	.785	48.8	23	1.43678	134.8		
8	437	7.2	68.2	.801	45.2	24	1.44442	139.1		
9	482	7.4	75.6	.817	41.7	27	1.45294	139.9		
10	527	6.9	82.5	.834	38.2	30	1.46221	147.6		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc, 100° F	Cloud test, ° F
11	392	3.5	86.0	0.853	34.4	35	1.47132	149.8	40	20
12	437	3.0	89.0	.859	33.2	34	1.47567	152.5	47	40
13	482	1.6	90.6	.873	30.6	37	1.48216	150.6	60	55
14	527	1.4	92.0	.882	28.9	43			79	70
15	572	1.9	93.9	.898	26.1	-			165	85
Residuum		2.0	95.9	.946	18.1					

Carbon residue, Conradson Residuum, 3.4 percent, crude, 0.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	25.4	0.671	79.4	
Total gasoline and naphtha	61.0	0.720	65.0	
Kerosine distillate	14.6	.809	43.4	
Gas oil	12.5	.844	36.2	
Nonviscous lubricating distillate	3.7	.862-.886	32.7-28.2	50-100
Medium lubricating distillate	1.9	.886-.904	28.2-25.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	2.0	.946	18.1	
Distillation loss	4.1			

1/ Distillation discontinued at 298°F.

Bureau of Mines Item 193
Bartlesville
Sample 60063 Laboratory

IDENTIFICATION

Lake Palourde, East field
Camerina 1, Miocene
12,829 - 12,833

Louisiana
Assumption Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.870 Gravity, ° API 31.1 Pour point, ° F, 35
Sulfur, percent, 0.13 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 86 sec., 100° F., 74 sec. Nitrogen percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 759 mm Hg
First drop 126 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.0	2.0	0.700	70.6	-	1.39520	138.3		
4	257	1.3	3.3	.750	57.2	27	1.41704	150.1		
5	302	1.6	4.9	.766	53.2	27	1.42956	152.0		
6	347	1.7	6.6	.781	49.7	27	1.43863	148.4		
7	392	1.9	8.5	.793	46.9	26	1.44488	150.3		
8	437	2.0	10.5	.807	43.8	27	1.45258	152.2		
9	482	4.8	15.3	.829	39.2	32	1.46390	159.4		
10	527	6.0	21.3	.844	36.2	35	1.47160	163.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.3	28.6	0.862	32.7	39	1.47638	155.7	40	20
12	437	11.9	40.5	.868	31.5	38	1.47657	150.0	47	35
13	482	12.4	52.9	.871	31.0	37	1.47834	-	60	55
14	527	12.0	64.9	.879	29.5	37	1.48090	-	88	70
15	572	12.9	77.8	.889	27.7	39			165	80
Residuum		21.8	99.6	.937	19.5					

Carbon residue, Conradson Residuum 4.8 percent crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.0	0.700	70.6	
Total gasoline and naphtha	8.5	0.757	55.4	
Kerosine distillate	2.0	.807	43.8	
Gas oil	27.0	.854	34.2	
Nonviscous lubricating distillate	23.4	.869-.880	31.3-29.3	50-100
Medium lubricating distillate	16.9	.880-.894	29.3-26.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.8	.937	19.5	
Distillation loss	.4			

Bureau of Mines Item 194
Bartlesville
Sample 57118 Laboratory

IDENTIFICATION

Lake Peltto field
Upper Miocene

Louisiana
Terrebonne Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.852 Gravity, ° API, 34.6 Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen percent, 0.035

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 751 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.9	0.9	0.685	75.1	-				
3	212	1.8	2.7	.705	69.2	14				
4	257	2.7	5.4	.742	59.2	23	1.40189	130.6		
5	302	3.2	8.6	.764	53.7	26	1.42464	133.0		
6	347	4.6	13.2	.782	49.5	27	1.43423	132.3		
7	392	4.7	17.9	.797	46.0	28	1.44165	135.7		
8	437	7.5	25.4	.815	42.1	31	1.44878	139.8		
9	482	8.5	33.9	.828	39.4	32	1.45636	136.0		
10	527	11.2	45.1	.840	37.0	33	1.46382	139.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.3	50.4	0.852	34.6	35	1.47150	-	41	Below 5
12	437	10.5	60.9	.857	33.6	33	1.47451	-	46	16
13	482	6.5	67.4	.873	30.6	37	1.48159	-	58	40
14	527	6.1	73.5	.886	28.2	40	1.48733	-	85	66
15	572	6.1	79.6	.897	26.3	43	1.49305	-	160	86
Residuum		19.3	98.9	.941	18.9					

Carbon residue, Conradson Residuum 3.9 percent, crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.7	0.698	71.2	
Total gasoline and naphtha	17.9	0.764	53.7	
Kerosine distillate	7.5	.815	42.1	
Gas oil	33.1	.844	36.2	
Nonviscous lubricating distillate	13.2	.862-.888	32.7-27.9	50-100
Medium lubricating distillate	7.9	.888-.901	27.9-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.3	.941	18.9	
Distillation loss	1.1			

Item 195
Bureau of Mines Bartlesville Laboratory
Sample 60045

IDENTIFICATION

Lake Salvador field
Miocene
8,550 feet

Louisiana
St. Charles Parish

GENERAL CHARACTERISTICS

Gravity specific 0.848 Gravity ° API, 35.4 Pour point, ° F, 45
Sulfur percent 0.14 Color, dark green
Viscosity, Saybolt Universal at 100°F, 47 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 124 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.8	1.8	0.719	65.3	-	1.40273	135.5		
4	257	2.4	4.2	.751	56.9	27	1.41879	141.5		
5	302	2.9	7.1	.769	52.5	28	1.42968	146.7		
6	347	3.3	10.4	.782	49.5	27	1.43578	149.0		
7	392	4.2	14.6	.792	47.2	26	1.44062	141.6		
8	437	5.7	20.3	.803	44.7	25	1.44643	143.6		
9	482	8.1	28.4	.818	41.5	27	1.45367	146.2		
10	527	9.9	38.3	.830	39.0	28	1.46054	146.5		

Stage 2—Distillation continued at 40 mm. Hg

11	392	6.8	45.1	0.844	36.2	31	1.46714	141.8	40	20
12	437	11.0	56.1	.851	34.8	30	1.47017	144.0	46	40
13	482	9.9	66.0	.863	32.5	33	1.47566	-	60	60
14	527	9.4	75.4	.879	29.5	37		100	70	
15	572	9.0	84.4	.893	27.0	41		255	100	
Residuum		14.3	98.7	.944	18.4					

Carbon residue, Conradson Residuum 5.6 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.8	0.719	65.3	
Total gasoline and naphtha	14.6	0.769	52.5	
Kerosene distillate	13.8	.812	42.8	
Gas oil	25.3	.841	36.8	
Nonviscous lubricating distillate	15.0	.854-.875	34.2-30.2	50-100
Medium lubricating distillate	8.0	.875-.886	30.2-28.2	100-200
Viscous lubricating distillate	7.7	.886-.900	28.2-25.7	Above 200
Residuum	14.3	.944	18.4	
Distillation loss	1.3			

Item 196
Bureau of Mines Bartlesville Laboratory
Sample 53042

IDENTIFICATION

Lake St. John field
Basal Tuscaloosa, Upper Cretaceous
9,138-9,146 feet

Louisiana
Tensas Parish

GENERAL CHARACTERISTICS

Gravity specific 0.832 Gravity, ° API, 38.6 Pour point, ° F, 25
Sulfur percent 0.17 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 39 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 736 mm. Hg
First drop 111 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
1	122									
2	167	1.8	1.8							
3	212	4.4	6.2	0.714	66.7	-	1.39930	127.4		
4	257	8.0	14.2	.745	58.4	24	1.41518	136.4		
5	302	5.8	20.0	.763	54.0	25	1.42559	137.5		
6	347	6.1	26.1	.778	50.4	25	1.43413	143.4		
7	392	6.0	32.1	.790	47.6	25	1.44094	140.2		
8	437	6.3	38.4	.804	44.5	26	1.44782	142.6		
9	482	6.8	45.2	.818	41.5	27	1.45558	144.8		
10	527	7.8	53.0	.830	39.0	28	1.46243	149.2		

Stage 2—Distillation continued at 40 mm. Hg

11	392	4.0	57.0	0.845	36.0	31			41	20
12	437	7.5	64.5	.852	34.6	31			46	40
13	482	6.8	71.3	.861	32.8	32			59	60
14	527	5.6	76.9	.871	31.0	33			86	80
15	572	6.2	83.1	.884	28.6	37			155	95
Residuum		16.2	99.3	.936	19.7					

Carbon residue, Conradson Residuum 5.7 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.2	0.714	66.7	
Total gasoline and naphtha	32.1	0.757	55.4	
Kerosene distillate	13.1	.811	43.0	
Gas oil	17.8	.841	36.8	
Nonviscous lubricating distillate	12.3	.855-.873	34.0-30.6	50-100
Medium lubricating distillate	7.8	.873-.891	30.6-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.2	.936	19.7	
Distillation loss	.7			

Item 197
Bureau of Mines Bartlesville Laboratory
Sample 60060

IDENTIFICATION

Lake Verret, West field
Middle Q. Miocene
7,669 - 7,679 feet

Louisiana
St. Martin Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.836 Gravity, ° API 32.8 Pour point, ° F, below 5
Sulfur, percent, 0.08 Color, green
Viscosity, Saybolt Universal at 100°F, 39 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122									
2	167	1.4	1.4	0.692	73.0	-	1.38865	127.1		
3	212	2.3	3.7	0.708	68.4	16	1.39722	130.2		
4	257	3.7	7.4	0.744	58.7	24	1.41575	141.5		
5	302	2.9	10.3	0.769	52.5	28	1.43019	147.7		
6	347	3.7	14.0	0.786	48.5	29	1.43930	147.6		
7	392	4.7	18.7	0.798	45.8	29	1.44510	147.0		
8	437	6.8	25.5	0.809	43.4	28	1.45033	145.0		
9	482	9.9	35.4	0.821	40.9	29	1.45633	144.9		
10	527	9.2	44.6	0.831	38.8	29	1.46195	145.7		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
11	392	10.3	54.9	0.842	36.6	30	1.46693	145.7	40	15
12	437	13.7	68.6	0.854	34.2	32	1.46886	145.3	46	40
13	482	6.8	75.4	0.862	32.7	32	1.47436	-	58	50
14	527	5.5	80.9	0.877	29.9	36	1.47988	-	81	70
15	572	6.1	87.0	0.885	28.4	37	-	-	150	80
Residuum	11.7	98.7	0.927	21.1	-	-	-	-	-	-

Carbon residue, Conradson Residuum 3.0 percent, crude 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.7	0.702	70.1	
Total gasoline and naphtha	18.7	0.761	54.4	
Kerosine distillate	16.7	0.816	41.2	
Gas oil	30.0	0.842	36.6	
Nonviscous lubricating distillate	13.6	0.857-0.879	33.6-29.5	50-100
Medium lubricating distillate	8.0	0.879-0.889	29.5-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	11.7	0.927	21.1	
Distillation loss	1.3	-	-	

Item 198
Bureau of Mines Bartlesville Laboratory
Sample 59178

IDENTIFICATION

Lake Washington field
Miocene
8,000-13,500 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.886 Gravity, ° API 28.2 Pour point, ° F, below 5
Sulfur, percent 0.37 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 82 sec. 130°F, 56 sec. Nitrogen, percent, 0.146

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 737 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122	1.2	1.2	0.664	81.6					
2	167	1.3	2.5	0.668	80.3	6.5	1.37188	127.0		
3	212	2.8	5.3	0.708	68.4	16	1.39451	130.0		
4	257	3.7	9.0	0.742	59.2	23	1.41241	134.6		
5	302	3.4	12.4	0.761	54.4	24	1.42314	134.7		
6	347	3.7	16.1	0.776	50.9	24	1.43304	137.4		
7	392	3.9	20.0	0.797	46.0	28	1.44146	136.3		
8	437	3.7	23.7	0.815	42.1	31	1.45025	137.2		
9	482	4.1	28.4	0.830	39.0	33	1.45908	144.6		
10	527	5.6	35.0	0.851	34.8	38	1.47024	148.9		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
11	392	5.1	40.1	0.872	30.8	44	1.48264	157.1	42	10
12	437	5.7	45.8	0.886	28.2	47	1.48876	158.7	50	20
13	482	5.7	51.5	0.900	25.7	50	1.49617	169.1	68	34
14	527	7.1	58.6	0.917	22.8	55	1.50397	-	120	50
15	572	6.9	65.5	0.928	21.0	57	-	-	300	60
Residuum	32.5	98.0	0.985	12.2	-	-	-	-	-	-

Carbon residue, Conradson Residuum 9.2 percent, crude 3.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.688	74.2	
Total gasoline and naphtha	20.0	0.748	57.7	
Kerosine distillate	3.7	0.815	42.1	
Gas oil	19.3	0.856	33.8	
Nonviscous lubricating distillate	9.7	0.886-0.911	28.2-23.8	50-100
Medium lubricating distillate	5.5	0.911-0.925	23.8-21.5	100-200
Viscous lubricating distillate	7.3	0.925-0.933	21.5-20.2	Above 200
Residuum	32.5	0.985	12.2	
Distillation loss	2.0	-	-	

1/ Distillation discontinued at 565°F.

Item 199
Bureau of Mines Bartlesville Laboratory
Sample 57114

IDENTIFICATION

Leeville field
Upper Miocene

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.848 Gravity, ° API, 35.4 Pour point, ° F, below 5
Sulfur, percent 0.20 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 45 sec. Nitrogen, percent, 0.019

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 180 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U Visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.3	1.3	0.723	64.2	-				
4	257	3.8	5.1	.739	60.0	21	1.41047	134.6		
5	302	6.3	11.4	.760	54.7	24	1.42238	129.0		
6	347	7.5	18.9	.775	51.1	24	1.43082	120.5		
7	392	7.9	26.8	.791	47.4	25	1.43874	130.5		
8	437	8.2	35.0	.807	43.8	27	1.44610	133.9		
9	482	7.5	42.5	.821	40.9	29	1.45402	133.7		
10	527	9.8	52.3	.838	37.4	32	1.46276	138.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.6	54.9	0.847	35.6	32	1.46891	-	41	Below 5
12	437	6.0	60.9	.862	32.7	36	1.47371	-	47	26
13	482	5.5	66.4	.871	31.0	37	1.47967	-	60	40
14	527	5.5	71.9	.886	28.2	40	1.48698	-	89	60
15	572	6.2	78.1	.902	25.4	45		-	185	76
Residuum		21.7	99.8	.944	18.4					

Carbon residue, Conradson Residuum 4.7 percent crude, 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.3	0.723	64.2	
Total gasoline and naphtha	26.8	0.769	52.4	
Kerosine distillate	15.7	.814	42.3	
Gas oil	16.8	.844	36.2	
Nonviscous lubricating distillate	10.7	.864-.888	32.3-27.9	50-100
Medium lubricating distillate	6.1	.888-.905	27.9-24.9	100-200
Viscous lubricating distillate	2.0	.905-.910	24.9-24.0	Above 200
Residuum	21.7	.944	18.4	
Distillation loss	.2			

Item 200
Bureau of Mines Bartlesville Laboratory
Sample 59180

IDENTIFICATION

Lisbon, West field
Silo, Lower Cretaceous
5,300-5,500 feet

Louisiana
Claiborne Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.858 Gravity, ° API, 33.4 Pour point, ° F, 30
Sulfur, percent, 1.04 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 71 sec.; 130°F, 55 sec. Nitrogen, percent, 0.086

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 737 mm. Hg
First drop 124 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U Visc 100° F	Cloud test ° F
1	122									
2	167	1.3	1.3	0.672	79.1	-	1.37557	125.5		
3	212	2.2	3.5	.694	72.4	8.9	1.38850	123.9		
4	257	4.6	8.1	.714	66.7	9.4	1.39908	123.8		
5	302	5.2	13.3	.728	62.9	8.5	1.40787	123.8		
6	347	5.0	18.3	.748	57.7	11	1.41663	124.5		
7	392	5.5	23.8	.763	54.0	12	1.42662	128.3		
8	437	4.0	27.8	.779	50.1	14	1.43556	132.0		
9	482	5.0	32.8	.797	46.0	17	1.44304	133.2		
10	527	6.2	39.0	.813	42.6	20	1.45219	135.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.2	42.2	0.832	38.6	25	1.46297	145.4	40	14
12	437	5.8	48.0	.842	36.6	26	1.46845	148.4	44	24
13	482	5.6	53.6	.856	33.8	29	1.47553	156.9	53	50
14	527	5.2	58.8	.873	30.6	34	1.48337	162.1	73	64
15	572	5.4	64.2	.884	28.6	37		110		80
Residuum		34.9	99.1	.972	14.1					

Carbon residue, Conradson Residuum 10.8 percent crude 4.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.5	0.686	74.8	
Total gasoline and naphtha	23.8	0.731	62.1	
Kerosine distillate	15.2	.799	45.6	
Gas oil	10.0	.840	37.0	
Nonviscous lubricating distillate	11.1	.851-.881	34.8-29.1	50-100
Medium lubricating distillate	4.1	.881-.890	29.1-27.5	100-200
Viscous lubricating distillate				Above 200
Residuum	34.9	.972	14.1	
Distillation loss	.9			

Item 201
Bureau of Mines Bartlesville Laboratory
Sample 61047

IDENTIFICATION

Little Lake field
Textularia Panamensis 2, Miocene

Louisiana
Jefferson Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.844 Gravity, ° API, 35.2 Pour point, ° F, below 5
Sulfur, percent, 0.15 Color, dark green
Viscosity, Saybolt Universal at 100°F, 46 sec Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.7	2.7	0.714	66.7	-	1.40297	134.0		
4	257	3.0	5.7	.739	60.0	21	1.41382	140.3		
5	302	3.4	9.1	.760	54.7	24	1.42555	142.6		
6	347	3.8	12.9	.762	54.2	18	1.43310	142.2		
7	392	4.4	17.3	.788	48.1	24	1.43863	139.3		
8	437	5.5	22.8	.800	45.4	24	1.44482	139.8		
9	482	8.2	31.0	.814	42.3	25	1.45208	139.8		
10	527	10.6	41.6	.827	39.6	27	1.45895	145.0		

Stage 2—Distillation continued at 40 mm Hg

11	892	5.3	46.9	0.842	35.6	30	1.46537	142.0	40	10
12	437	11.6	58.5	.844	36.2	27	1.46696	140.1	45	15
13	482	9.8	68.3	.858	33.4	30	1.47232	138.9	56	45
14	527	7.2	75.5	.869	31.3	32	1.47868	136.4	79	65
15	572	6.7	82.2	.883	28.8	36			135	100
Residuum		17.6	99.8	.933	20.2					

Carbon residue, Conradson Residuum 3.9 percent crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.7	0.714	66.7	
Total gasoline and naphtha	17.3	0.757	55.4	
Kerosene distillate	13.7	.808	43.6	
Gas oil	25.6	.838	37.4	
Nonviscous lubricating distillate	16.9	.851-.874	34.8-30.4	50-100
Medium lubricating distillate	7.7	.874-.889	30.4-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.6	.933	20.2	
Distillation loss	.2			

Item 202
Bureau of Mines Bartlesville Laboratory
Sample 64089

IDENTIFICATION

Main Pass (Block 35) field
7,200', Buccella Mansfieldi A, Upper Miocene
7,198 - 7,205 field

Louisiana
Plaquemines Parish
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.873 Gravity, ° API, 30.6 Pour point, ° F, below 5
Sulfur, percent, 0.19 Color, brownish green
Viscosity, Saybolt Universal at 11°F, 77 sec., 100°F, 51 sec Nitrogen, percent, 0.071

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 156 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.2	1.2	0.714	66.7	-	1.39929	125.9		
4	257	1.9	3.1	.742	59.2	23	1.41023	126.0		
5	302	2.3	5.4	.764	53.7	26	1.42206	126.7		
6	347	3.6	9.0	.790	47.6	31	1.43631	135.2		
7	392	4.5	13.5	.808	43.6	33	1.44659	139.3		
8	437	6.1	19.6	.821	40.9	34	1.45399	141.7		
9	482	7.7	27.3	.833	38.4	34	1.46073	145.0		
10	527	8.7	36.0	.845	36.0	35	1.46767	151.0		

Stage 2—Distillation continued at 40 mm Hg

11	892	7.7	43.7	0.863	32.5	40	1.47587	152.9	43	Below 5
12	437	9.0	52.7	.874	30.4	41	1.48019	153.9	52	20
13	482	7.3	60.0	.861	29.1	41	1.48753	-	71	35
14	527	7.5	67.5	.896	26.4	45	1.49389	-	125	55
15	572									
Residuum		31.7	99.2	.944	18.4					

Carbon residue, Conradson Residuum 5.1 percent crude 1.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.2	0.714	66.7	
Total gasoline and naphtha	13.5	0.778	50.4	
Kerosene distillate	6.1	.821	40.9	
Gas oil	26.7	.849	35.1	
Nonviscous lubricating distillate	14.0	.872-.889	30.2-27.7	50-100
Medium lubricating distillate	7.2	.889-.904	27.7-25.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	31.7	.944	18.4	
Distillation loss	.8			

1/ Distillation discontinued at 522°F

2/ Distillation discontinued at 527°F

Item 203
Bureau of Mines Bartlesville Laboratory
Sample 59165

IDENTIFICATION

Main Pass (Block 69) field
Miocene
5,550-8,190 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity specific 0.873 Gravity ° API 30.6 -- Pour point, ° F, below 5
Sulfur percent 0.25 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 85 sec., 100°F., 61 sec. Nitrogen, percent, 0.098

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.1	0.1	0.657	83.9					
2	167	.9	1.0	.667	80.6	6.1	1.37306	124.9		
3	212	1.6	2.6	.717	65.9	20	1.39523	125.8		
4	257	2.8	5.4	.744	58.7	24	1.41289	130.1		
5	302	3.1	8.5	.767	53.0	27	1.42616	137.1		
6	347	3.5	12.0	.790	47.6	31	1.43739	138.3		
7	392	4.0	16.0	.805	44.3	32	1.44602	139.8		
8	437	4.6	20.6	.820	41.1	33	1.45313	141.3		
9	482	5.7	26.3	.834	38.2	35	1.46032	144.5		
10	527	8.5	34.8	.843	36.4	34	1.46814	147.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	5.5	40.3	0.858	33.4	37	1.47605	152.9	41	14
12	437	8.0	48.3	.864	32.3	37	1.47906	151.2	47	24
13	482	7.6	55.9	.879	29.5	40	1.48527	152.9	60	36
14	527	6.3	62.2	.891	27.3	43	1.49147	-	89	54
15	572	7.4	69.6	.901	25.6	45	1.49691	-	165	70
Residuum		29.6	99.2	.953	17.0					

Carbon residue, Conradson Residuum 6.2 percent crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.697	71.5	
Total gasoline and naphtha	16.0	0.766	53.2	
Kerosene distillate	4.6	.820	41.1	
Gas oil	25.4	.842	35.2	
Nonviscous lubricating distillate	11.4	.867-.888	31.7-27.9	50-100
Medium lubricating distillate	12.2	.888-.906	27.9-24.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.6	.953	17.0	
Distillation loss	.8			

Item 204
Bureau of Mines Bartlesville Laboratory
Sample 60029

IDENTIFICATION

Nebo-Hemphill field
Wilcox, Eocene
3,370-3,380 feet

Louisiana
LaSalle Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.819 Gravity, ° API, 41.3 -- Pour point, ° F, below 5
Sulfur percent less than 0.10 Color, greenish black --
Viscosity, Saybolt Universal at 100°F., 36 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7	0.662	88.2					
2	167	3.3	4.0	.673	78.8	8.9	1.37737	121.2		
3	212	7.1	11.1	.713	67.0	18	1.39731	120.0		
4	257	8.2	19.3	.738	60.2	21	1.40979	124.1		
5	302	5.9	25.2	.757	55.4	22	1.41995	127.6		
6	347	5.5	30.7	.776	50.9	24	1.43036	130.8		
7	392	4.7	35.4	.793	46.9	26	1.43967	133.0		
8	437	4.8	40.2	.808	43.6	28	1.44742	135.0		
9	482	5.0	45.2	.820	41.1	28	1.45440	139.0		
10	527	6.5	51.7	.833	38.4	30	1.46123	142.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	5.6	57.3	0.843	36.4	30	0.46274	145.8	40	20
12	437	7.5	64.8	.848	35.4	29	1.46898	146.6	45	40
13	482	6.7	71.5	.859	33.2	31	1.47384	-	56	70
14	527	5.5	77.0	.870	31.1	33	-	-	78	75
15	572	5.7	82.7	.881	29.1	38	-	-	130	95
Residuum		15.1	97.8	.934	20.0					

Carbon residue, Conradson Residuum 2.9 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.698	71.2	
Total gasoline and naphtha	35.4	0.742	59.2	
Kerosene distillate	9.8	.814	42.3	
Gas oil	19.2	.842	36.6	
Nonviscous lubricating distillate	12.2	.853-.879	34.4-29.5	50-100
Medium lubricating distillate	6.1	.879-.904	29.5-25.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.1	.934	20.0	
Distillation loss	2.2			

Item 205
Bureau of Mines Bartlesville Laboratory
Sample 60030

IDENTIFICATION

Olla field
Wilcox, Eocene
2,226-2,234 feet

Louisiana
LaSalle Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.877 Gravity, ° API, 29.9 Pour point, ° F, 30
Sulfur, percent, 0.15 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 93 sec.; 100°F, 63 sec. Nitrogen, percent, 0.09

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 182 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.9	0.9	0.748	57.7		1.41209	123.4		
4	257	2.1	3.0	0.758	55.2	30	1.41733	122.5		
5	302	2.7	5.7	0.771	52.0	29	1.42487	123.7		
6	347	3.2	8.9	0.790	47.6	31	1.43366	125.3		
7	392	3.3	12.2	0.806	44.1	32	1.44254	125.2		
8	437	4.2	16.4	0.822	40.6	34	1.45099	129.7		
9	482	5.1	21.5	0.832	38.6	34	1.45771	130.4		
10	527	7.3	28.8	0.840	37.0	33	1.46287	137.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.2	32.0	0.847	35.6	32	1.46827	136.9	41	15
12	437	10.0	42.0	0.851	34.8	30	1.46988	142.4	46	35
13	482	8.1	50.1	0.860	33.0	31	1.47460		56	55
14	527	9.4	59.5	0.874	30.4	35			78	75
15	572	8.0	67.5	0.887	28.0	38			145	90
Residuum		32.2	99.7	0.950	17.5					

Carbon residue, Conradson Residuum 4.2 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	0.9	0.748	57.7	
Total gasoline and naphtha	12.2	0.782	49.5	
Kerosene distillate	4.2	0.822	40.6	
Gas oil	24.4	0.843	36.4	
Nonviscous lubricating distillate	16.9	0.855-0.878	34.0-29.7	50-100
Medium lubricating distillate	9.8	0.878-0.893	29.7-27.0	100-300
Viscous lubricating distillate	-	-	-	Above 200
Residuum	32.2	0.950	17.5	
Distillation loss	0.3			

Item 206
Bureau of Mines Bartlesville Laboratory
Sample 64121

IDENTIFICATION

Opelousas field
Cockfield 2, Eocene
10,215 - 16,405 feet

Louisiana
St. Landry Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.799 Gravity, ° API, 45.6 Pour point, ° F, below 5
Sulfur, percent, 0.06 Color, green
Viscosity, Saybolt Universal at 100°F, 40 sec. Nitrogen, percent, 0.020

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.0	4.0	0.632	92.4					
2	167	4.1	8.1	0.671	79.4	8.0	1.37731	125.6		
3	212	7.4	15.5	0.711	67.5	17	1.39713	125.2		
4	257	8.8	24.3	0.735	61.0	19	1.40923	131.1		
5	302	6.6	30.9	0.753	56.4	20	1.41919	133.8		
6	347	5.9	36.8	0.769	52.5	21	1.42825	135.0		
7	392	5.1	41.9	0.783	49.2	22	1.43519	136.5		
8	437	5.3	47.2	0.797	46.0	23	1.44209	136.2		
9	482	5.9	53.1	0.811	43.0	24	1.44966	139.4		
10	527	7.0	60.1	0.824	40.2	25	1.45730	142.6		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.7	64.8	0.841	36.8	29	1.46454	144.2	41	30
12	437	6.1	70.9	0.847	35.6	28	1.46693	143.2	48	45
13	482	4.9	75.8	0.855	34.0	29	1.47290		61	65
14	527	4.5	80.3	0.873	30.6	34			92	90
15	572	4.7	85.0	0.887	28.0	38			175	110
Residuum		12.6	97.6	0.931	20.5					

Carbon residue, Conradson Residuum 2.3 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	15.5	0.680	76.6	
Total gasoline and naphtha	41.9	0.728	62.8	
Kerosene distillate	18.2	0.812	42.8	
Gas oil	8.6	0.843	36.3	
Nonviscous lubricating distillate	9.8	0.848-0.874	35.3-30.3	50-100
Medium lubricating distillate	5.5	0.874-0.891	30.3-27.3	100-300
Viscous lubricating distillate	1.0	0.891-0.894	27.3-26.8	Above 300
Residuum	12.8	0.931	20.5	
Distillation loss	2.2			

Bureau of Mines Item 207
Bartlesville Laboratory
Sample 64065

IDENTIFICATION

Ossum, North field
Frio, Oligocene

Louisiana
Lafayette Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.800 Gravity, ° API, 45.4 Pour point, ° F, 10
Sulfur percent, 0.03 Color, Green
Viscosity, Saybolt Universal at 100°F, 34 sec. Nitrogen, percent, 0.022

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API, 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.5	1.5	0.644	88.2					
2	167	2.3	3.8	.672	79.1	8.4	1.37761	133.3		
3	212	5.0	8.8	.714	66.7	18	1.39238	134.5		
4	257	1.6	16.4	.735	61.0	19	1.41067	137.6		
5	302	7.3	23.7	.750	57.2	19	1.41867	139.3		
6	347	7.0	30.7	.763	54.0	18	1.42544	136.9		
7	392	6.2	36.9	.776	50.8	18	1.43224	135.4		
8	437	6.9	43.8	.790	47.6	19	1.43919	136.2		
9	482	7.9	51.7	.802	44.9	20	1.44604	137.2		
1/10	527	6.3	60.0	.814	42.3	21	1.45184	139.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.0	66.0	0.825	40.0	22	1.45784	142.0	41	20
12	437	6.8	72.8	.828	39.4	19	1.46043	139.4	47	60
13	482	6.0	78.8	.842	36.6	23	1.46600	139.0	58	80
14	527	4.6	83.4	.856	33.6	26			80	95
15	572	5.4	88.8	.863	32.5	27			140	110
Residuum		10.3	99.1	.915	23.1					

Carbon residue, Conradson Residuum 2.0 percent crude 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.8	0.691	73.2	
Total gasoline and naphtha	36.9	0.740	59.8	
Kerosene distillate	23.1	.803	44.8	
Gas oil	11.2	.826	39.7	
Nonviscous lubricating distillate	11.6	.832-.858	36.6-33.4	50-100
Medium lubricating distillate	6.0	.858-.867	33.4-31.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.3	.915	23.1	
Distillation loss	.2			

1/ Distillation discontinued at 523°F

Bureau of Mines Item 208
Bartlesville Laboratory
Sample 53047

IDENTIFICATION

Paradis field
Paradis, Miocene
10,220-10,229 feet

Louisiana
St. Charles Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.845 Gravity, ° API, 36.0 Pour point, ° F, below 5
Sulfur percent, 0.23 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm Hg
First drop 136 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API, 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.3	2.3	0.709	68.1	-	1.39762	129.9		
4	257	5.1	7.4	.745	58.4	24	1.41538	135.7		
5	302	7.7	15.1	.764	53.7	26	1.42553	138.5		
6	347	7.8	22.9	.779	50.1	26	1.43413	140.8		
7	392	6.5	29.4	.793	46.9	26	1.44113	140.1		
8	437	7.2	36.6	.808	43.6	28	1.44870	139.9		
9	482	7.1	43.7	.826	39.8	31	1.45757	144.0		
10	527	7.8	51.5	.841	36.8	33	1.46622	149.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.6	58.1	0.857	33.6	37	-	-	40	Below 5
12	437	6.3	64.4	.865	32.1	37	-	-	48	20
13	482	5.9	70.3	.878	29.7	40	-	-	60	40
14	527	5.1	75.4	.889	27.7	42	-	-	99	60
15	572	5.5	80.9	.901	25.6	45	-	-	190	75
Residuum		18.9	99.8	.940	19.0					

Carbon residue, Conradson Residuum 4.4 percent crude 0.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.3	0.709	68.1	
Total gasoline and naphtha	29.4	0.767	53.0	
Kerosene distillate	7.2	.808	43.6	
Gas oil	28.1	.845	36.0	
Nonviscous lubricating distillate	10.2	.867-.889	31.7-27.7	50-100
Medium lubricating distillate	5.8	.889-.903	27.7-25.2	100-200
Viscous lubricating distillate	2.2	.903-.907	25.2-24.5	Above 200
Residuum	18.9	.940	19.0	
Distillation loss	.2			

Bureau of Mines Item 209
Bartlesville Laboratory
Sample 64037

IDENTIFICATION

Patterson field
Miocene

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.856 Gravity, ° API, 33.8 Pour point, ° F, 60
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 95 sec.; 100°F., 53 sec. Nitrogen, percent, 0.023

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 133 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.5	1.5	0.730	62.3	-	1.40905	149.3		
4	257	1.2	2.7	.758	55.2	30	1.42859	161.7		
5	302	1.4	4.1	.775	51.1	31	1.43840	165.1		
6	347	2.0	6.1	.785	48.6	29	1.44410	160.8		
7	392	2.1	8.2	.798	45.8	29	1.44747	154.0		
8	437	3.9	12.1	.810	43.2	29	1.45351	153.1		
9	482	6.0	18.1	.825	40.0	31	1.46145	156.9		
1/10	527	6.3	24.4	.835	38.0	31	1.46669	157.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	10.0	34.4	0.852	34.6	35	1.47108	152.4	41	20
12	437	13.0	47.4	.858	33.4	34	1.47145	147.5	47	45
13	482	13.8	61.2	.862	32.7	32	1.47514	144.2	62	75
14	527	11.2	72.4	.870	31.1	33			90	95
15	572	4.1	76.5	.879	29.5	34			125	105
Residuum		22.0	98.5	.921	22.1					

Carbon residue, Conradson Residuum 2.7 percent, crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.5	0.730	62.3	
Total gasoline and naphtha	8.2	0.773	51.6	
Kerosene distillate	9.9	.819	41.3	
Gas oil	25.5	.850	35.1	
Nonviscous lubricating distillate	25.4	.859-.873	33.3-30.7	50-100
Medium lubricating distillate	7.5	.873-.881	30.7-29.0	100-200
Viscous lubricating distillate				Above 200
Residuum	22.0	.921	22.1	
Distillation loss	1.5			

1/ Distillation discontinued at 511°F.

2/ Distillation discontinued at 545°F.

Bureau of Mines Item 210
Bartlesville Laboratory
Sample 64057

IDENTIFICATION

Pendleton-Mary field
Saratoga, Upper Cretaceous
2,840 feet

Louisiana
Sabine Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.796 Gravity, ° API, 46.3 Pour point, ° F, 20
Sulfur, percent 0.04 Color, green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.016

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 113 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167	1.6	1.6	0.683	75.7	-	1.36313	124.6		
3	212	4.3	5.9	.712	67.2	17	1.39728	127.1		
4	257	6.5	12.4	.734	61.3	19	1.40958	133.8		
5	302	6.7	19.1	.752	56.7	20	1.41971	139.2		
6	347	8.2	27.3	.767	53.0	20	1.42779	140.6		
7	392	8.3	35.6	.778	50.4	19	1.43352	139.5		
8	437	8.2	43.8	.789	47.8	19	1.43874	136.2		
9	482	9.3	53.1	.800	45.4	19	1.44460	135.2		
10	527	9.5	62.6	.812	42.8	20	1.45094	136.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.5	70.1	0.831	38.8	25	1.45843	137.8	40	35
12	437	6.6	76.7	.840	37.0	25	1.46139	137.2	46	65
13	482	4.9	81.6	.845	36.0	24	1.46629	139.6	55	85
14	527	4.1	85.7	.854	34.2	25			73	95
15	572	4.2	89.9	.863	32.5	27			110	110
Residuum		6.3	96.2	.920	22.3					

Carbon residue, Conradson Residuum 4.0 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.9	0.704	69.5	
Total gasoline and naphtha	35.6	0.750	57.1	
Kerosene distillate	27.0	.801	45.2	
Gas oil	13.4	.835	38.0	
Nonviscous lubricating distillate	10.7	.842-.861	36.5-32.9	50-100
Medium lubricating distillate	3.2	.861-.868	32.9-31.6	100-200
Viscous lubricating distillate				Above 200
Residuum	6.3	.920	22.3	
Distillation loss	3.8			

Bureau of Mines Item 211
Bartlesville Laboratory
Sample 50045

IDENTIFICATION

Pointe-a-la-Hache field Louisiana
BF-6, Miocene Plaquemines Parish
8,831-8,843 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.855 Gravity, ° API, 34.0 Pour point, ° F, below 5
Sulfur, percent, 0.19 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 45 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.8	0.8							
2	167	1.1	1.9	0.678	77.2	-				
3	212	2.4	4.3	.716	66.1	19	1.38871	129.5		
4	257	3.8	8.1	.745	58.4	24	1.41471	136.8		
5	302	4.2	12.3	.766	53.2	27	1.42596	140.9		
6	347	5.1	17.4	.783	49.2	28	1.43469	140.2		
7	392	4.7	22.1	.798	45.8	29	1.44164	135.4		
8	437	7.4	29.5	.811	43.0	29	1.44798	134.8		
9	482	8.2	37.7	.826	39.8	31	1.45563	136.4		
10	527	9.5	47.2	.840	37.0	33	1.46450	141.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.0	52.2	0.859	33.2	38			43	Below 5
12	437	9.0	61.2	.872	30.8	40			49	5
13	482	7.0	68.2	.887	28.0	44			66	20
14	527	5.5	73.7	.894	26.8	44			110	40
15	572	5.1	78.8	.907	24.5	47			230	60
Residuum		20.1	98.9	.961	15.7					

Carbon residue, Conradson Residuum 4.6 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.3	0.699	70.9	
Total gasoline and naphtha	22.1	0.760	54.7	
Kerosene distillate	7.4	.811	43.0	
Gas oil	27.8	.845	36.0	
Nonviscous lubricating distillate	12.2	.873-.892	30.6-27.1	50-100
Medium lubricating distillate	5.5	.892-.903	27.1-25.2	100-200
Viscous lubricating distillate	3.8	.903-.912	25.2-23.7	Above 200
Residuum	20.1	.961	15.7	
Distillation loss	1.1			

Bureau of Mines Item 212
Bartlesville Laboratory
Sample 64093

IDENTIFICATION

Port Barre field Louisiana
1,500', Pliocene St. Landry Parish
1,455 - 1,475 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.941 Gravity, ° API 18.9 Pour point, ° F, below 5
Sulfur, percent, 0.45 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 539 sec., 130°F., 207 sec. Nitrogen, percent, 0.120

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm Hg
First drop 189 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392									
8	437	3.3	3.3	0.866	31.9	-	1.46597	126.7		
9	482	5.4	8.7	.880	29.3	57	1.47322	126.0		
10	527	6.5	15.2	.889	27.7	56	1.47911	132.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	9.7	24.9	0.903	25.2	59	1.48868	140.3	49	Below 5
12	437	9.6	34.5	.916	23.0	61	1.49708	150.1	72	dq
13	482	10.3	44.8	.930	20.7	64	1.50655	-	145	dq
14	527	9.9	54.7	.944	18.4	68			450	dq
15	572									
Residuum		44.2	98.9	.980	12.9					

Carbon residue, Conradson Residuum 5.6 percent crude 2.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosene distillate				
Gas oil	20.5	0.886	28.3	
Nonviscous lubricating distillate	13.0	.904-.921	25.1-22.1	50-100
Medium lubricating distillate	6.0	.921-.933	22.1-20.2	100-200
Viscous lubricating distillate	13.2	.933-.951	20.2-17.3	Above 200
Residuum	44.2	.980	12.9	
Distillation loss	1.1			

1/ Distillation discontinued at 513°F
2/ Distillation discontinued at 527°F.

Bureau of Mines Item 213
Bartlesville Laboratory
 Sample 57083 --

IDENTIFICATION

Quarantine Bay field
 Miocene
 6,700-10,900 feet

Louisiana
 Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.866 Gravity, ° API, 31.9 Pour point, ° F, below 5
 Sulfur, percent, 0.27 Color, greenish black
 Viscosity, Saybolt Universal at 77°F, 66 sec. 100°F, 52 sec. Nitrogen, percent, 0.061

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg
 First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	0.5	0.5	0.669	80.0					
2	167	1.1	1.6	0.687	74.5	16				
3	212	2.8	4.4	0.719	65.3	21	1.39254	127.9		
4	257	3.3	7.7	0.749	57.4	26	1.41609	125.2		
5	302	4.5	12.2	0.771	52.0	29	1.42613	131.8		
6	347	3.6	15.8	0.792	47.2	32	1.43739	138.7		
7	392	3.8	19.6	0.806	44.1	32	1.44502	137.8		
8	437	5.6	25.2	0.818	41.5	33	1.45163	139.1		
9	482	6.3	31.5	0.830	39.0	33	1.45832	143.1		
10	527	8.6	40.1	0.843	36.4	34	1.46565	147.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.2	45.3	0.852	34.6	35	1.47327	-	40	24
12	437	7.5	52.8	0.863	32.5	36	1.47721	-	46	32
13	482	6.8	59.6	0.875	30.2	38	1.48459	-	60	40
14	527	6.2	65.8	0.893	27.0	44	1.49082	-	89	56
15	572	6.8	72.6	0.907	24.5	47	1.49786	-	165	70
Residium		26.8	99.4	0.952	17.1					

Carbon residue, Conradson Residium 6.1 percent, crude 1.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.4	0.705	69.2	
Total gasoline and naphtha	19.6	0.763	54.0	
Kerosene distillate	5.6	0.818	41.5	
Gas oil	26.0	0.847	35.6	
Nonviscous lubricating distillate	12.5	0.869-0.895	31.3-26.6	50-100
Medium lubricating distillate	8.5	0.895-0.913	26.6-23.5	100-200
Viscous lubricating distillate	4.4	0.913-0.914	23.5-23.3	Above 200
Residium	26.8	0.952	17.1	
Distillation loss	0.6			

Bureau of Mines Item 214
Bartlesville Laboratory
 Sample 64053 --

IDENTIFICATION

Rayne field
 Homeseeker E, Lower Miocene
 12,540 - 12,680 feet

Louisiana
 Acadia Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.798 Gravity, ° API, 45.8 Pour point, ° F, 35
 Sulfur, percent, 0.02 Color, NEA 1
 Viscosity, Saybolt Universal at 100°F, 34 sec. Nitrogen, percent, 0.006

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
 First drop 61 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.6	1.6	0.651	65.9					
2	167	2.7	4.3	0.672	79.1	8.4	1.37648	132.5		
3	212	5.6	10.1	0.720	65.0	21	1.40318	136.3		
4	257	7.7	17.8	0.747	57.9	25	1.41750	143.7		
5	302	7.9	25.7	0.764	53.7	26	1.42693	147.9		
6	347	7.6	33.3	0.776	50.8	24	1.43327	146.9		
7	392	6.5	39.8	0.786	48.5	23	1.43789	144.0		
8	437	7.4	47.2	0.797	46.0	23	1.44391	143.0		
9	482	6.2	53.4	0.810	43.2	23	1.45099	146.3		
10	527	9.0	62.4	0.824	40.2	25	1.45789	149.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.2	71.6	0.840	37.0	29	1.46390	147.3	42	35
12	437	6.0	77.6	0.843	36.4	27	1.46523	144.6	47	50
13	482	5.1	82.7	0.846	35.6	25	1.46693	142.0	56	65
14	527	5.1	87.8	0.858	33.4	27	-	-	77	85
15	572	3.3	91.1	0.868	31.5	29	-	-	110	100
Residium		7.0	98.1	0.899	25.9					

Carbon residue, Conradson Residium Nil percent, crude Nil percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.1	0.695	72.1	
Total gasoline and naphtha	39.8	0.749	57.4	
Kerosene distillate	24.6	0.811	42.9	
Gas oil	12.1	0.841	36.7	
Nonviscous lubricating distillate	11.7	0.844-0.865	36.2-32.1	50-100
Medium lubricating distillate	2.2	0.865-0.872	32.1-30.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residium	7.0	0.899	25.9	
Distillation loss	1.9			

1/ Distillation discontinued at 559°F

Item 215
Bureau of Mines Bartlesville Laboratory
Sample 53036

IDENTIFICATION

Romere Pass field
Upper Miocene
10,100-10,377 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.838 Gravity, ° API, 37.4 Pour point, ° F, below 5
Sulfur, percent, 0.30 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 44 sec. Nitrogen, percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 736 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1							
2	167	1.9	4.0	0.646	87.5	-	1.36886	122.1		
3	212	3.4	7.4	.710	67.8	17	1.39675	129.3		
4	257	4.9	12.3	.738	60.2	21	1.41036	139.6		
5	302	4.8	17.1	.751	55.4	22	1.42218	137.5		
6	347	4.9	22.0	.774	51.3	23	1.43087	137.2		
7	392	4.4	26.4	.787	48.3	23	1.43754	139.4		
8	437	5.1	31.5	.799	45.6	24	1.44392	135.4		
9	482	5.9	37.4	.813	42.6	25	1.45101	138.5		
10	527	7.9	45.3	.827	39.6	27	1.45929	141.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	48.9	0.842	36.6	30	--	--	40	20
12	437	8.7	57.6	.851	34.8	30	--	--	45	35
13	482	6.0	63.6	.861	32.8	32	--	--	56	55
14	527	5.4	69.0	.873	30.6	34	--	--	78	70
15	572	7.1	76.1	.884	28.6	37	--	--	145	85
Residuum		22.9	99.0	.947	17.9					

Carbon residue, Conradson Residuum 7.1 percent, crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.4	0.675	78.1	
Total gasoline and naphtha	26.4	0.739	60.0	
Kerosene distillate	11.0	.807	43.8	
Gas oil	19.3	.839	37.2	
Nonviscous lubricating distillate	11.7	.855-.877	34.0-29.9	50-100
Medium lubricating distillate	7.7	.877-.890	29.9-27.5	100-200
Viscous lubricating distillate	--	--	--	Above 200
Residuum	22.9	.947	17.9	
Distillation loss	1.0			

Item 216
Bureau of Mines Bartlesville Laboratory
Sample 60017

IDENTIFICATION

Saturday Island field
Miocene
10,350-10,360 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.886 Gravity, ° API, 28.2 Pour point, ° F, below 5
Sulfur, percent, 0.35 Color, brownish black
Viscosity, Saybolt Universal at 77°F, 102 sec. at 100°F, 71 sec. Nitrogen, percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.2	2.2	0.680	76.6	-	1.38426	128.3		
3	212	3.0	5.2	.716	66.1	19	1.39986	130.8		
4	257	3.9	9.1	.752	56.7	27	1.41873	133.8		
5	302	3.5	12.6	.759	54.9	23	1.42221	136.8		
6	347	3.5	16.1	.783	49.2	28	1.43553	139.8		
7	392	5.4	21.5	.805	44.3	32	1.44565	138.1		
8	437	2.6	24.1	.821	40.9	34	1.45367	140.3		
9	482	5.2	29.3	.835	38.0	35	1.46208	143.4		
10	527	6.8	36.1	.856	33.8	41	1.47270	153.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.5	40.6	0.875	30.2	46	1.48344	156.7	43	Below 5
12	437	5.9	46.5	.888	27.9	48	1.49018	168.6	53	20
13	482	7.0	53.5	.904	25.0	52	1.49989	172.9	79	40
14	527	4.9	58.4	.916	23.0	55	1.50655	178.0	145	50
15	572	9.2	67.6	.930	20.7	58	1.51353	--	435	70
Residuum		29.6	97.2	.990	11.4					

Carbon residue, Conradson Residuum 8.6 percent, crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.2	0.701	70.4	
Total gasoline and naphtha	21.5	0.759	54.9	
Kerosene distillate	2.6	.821	40.9	
Gas oil	18.0	.857	33.6	
Nonviscous lubricating distillate	9.9	.884-.908	28.6-24.3	50-100
Medium lubricating distillate	5.5	.908-.919	24.3-22.5	100-200
Viscous lubricating distillate	10.1	.919-.938	22.5-19.4	Above 200
Residuum	29.6	.990	11.4	
Distillation loss	2.8			

Bureau of Mines Item 217
Bartlesville Laboratory
Sample 54058

IDENTIFICATION

Section 28 field
Lower Miocene
10,180-10,210 feet

Louisiana
St. Martin Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.870 — Gravity, ° API, 31.1 — — — Pour point, ° F, 65
Sulfur, percent, 0.20 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 125 sec., 100°F., 66 sec. Nitrogen, percent, 0.051.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 135 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.6	0.6							
3	212	.6	1.2	0.726	63.4	-				
4	257	1.2	2.4	.760	54.7	31	1.41649	154.1		
5	302	1.5	3.9	.783	49.2	35	-	-		
6	347	1.8	5.7	.790	47.6	31	1.44127	161.3		
7	392	1.8	7.5	.800	43.4	30	-	-		
8	437	3.0	10.5	.816	41.9	32	1.45310	158.0		
9	482	5.1	15.6	.833	38.4	34	1.46607	164.2		
10	527	9.3	24.9	.845	36.0	35	1.47187	166.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.8	31.7	0.855	34.0	36	1.47432	158.8	41	25
12	437	10.7	42.4	.860	33.0	35	1.47437	153.6	46	40
13	482	8.9	51.3	.865	32.1	34	1.47755	152.6	58	60
14	527	10.5	61.8	.872	30.8	34			80	75
15	572	8.2	70.0	.886	28.2	37			140	90
Residuum		25.3	95.3	.940	19.0					

Carbon residue, Conradson Residuum 6.2 percent, crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.2	0.726	63.4	
Total gasoline and naphtha	7.5	0.776	50.9	
Kerosene distillate	3.0	.816	41.9	
Gas oil	30.0	.849	35.2	
Nonviscous lubricating distillate	19.2	.861-.877	32.8-29.9	50-100
Medium lubricating distillate	10.3	.877-.892	29.9-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.3	.940	19.0	
Distillation loss	4.7			

Bureau of Mines Item 218
Bartlesville Laboratory
Sample 60025

IDENTIFICATION

Ship Shoal (Block 154) field
Miocene
6,322-6,335 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.881 — Gravity, ° API, 29.1 — — — Pour point, ° F, 15
Sulfur percent, 0.36 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 101 sec., 100°F., 78 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 178 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	1.8	1.8	0.734	61.3	-	1.40734	125.9		
5	302	1.1	2.9	.762	54.2	25	1.41937	123.6		
6	347	2.6	5.5	.779	50.1	26	1.42985	124.6		
7	392	3.2	8.7	.799	43.6	29	1.44028	126.8		
8	437	5.5	14.2	.816	41.9	32	1.45017	131.9		
9	482	7.5	21.7	.833	38.4	34	1.45892	137.6		
10	527	10.2	31.9	.849	35.2	37	1.46819	143.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.9	36.8	0.867	31.7	42	1.47710	144.4	43	Below 5
12	437	9.6	46.4	.874	30.4	41	1.48100	146.7	51	10
13	482	8.9	55.3	.885	28.4	43	1.48701	-	71	35
14	527	7.9	63.2	.900	25.7	47	1.49269	-	120	60
15	572	7.7	70.9	.911	23.8	49			245	75
Residuum		27.7	98.6	.948	17.8					

Carbon residue, Conradson Residuum 3.5 percent, crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	8.7	0.775	51.1	
Kerosene distillate	5.5	.816	41.9	
Gas oil	26.6	.851	34.8	
Nonviscous lubricating distillate	15.0	.873-.894	30.6-26.8	50-100
Medium lubricating distillate	15.1	.894-.916	26.8-23.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.7	.948	17.8	
Distillation loss	1.4			

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.2	0.684	75.4	
Total gasoline and naphtha	32.6	0.729	62.6	
Kerosine distillate	19.5	.796	46.3	
Gas oil	11.3	.833	38.4	
Nonviscous lubricating distillate	11.2	.845-.867	36.0-31.7	50-100
Medium lubricating distillate	7.0	.867-.881	31.7-29.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.8	.936	19.7	
Distillation loss	.6			

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.2	0.680	76.6	
Total gasoline and naphtha	32.3	0.726	63.4	
Kerosene distillate	18.1	.793	46.9	
Gas oil	8.2	.837	37.6	
Nonviscous lubricating distillate	11.7	.846-.879	35.8-29.5	50-100
Medium lubricating distillate	4.3	.879-.892	29.5-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.6	.946	18.1	
Distillation loss	.8			

Item 221
Bureau of Mines Bartlesville Laboratory
Sample 58013

IDENTIFICATION

South Pass (Block 24) field
Miocene
6,000-9,000 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.864 Gravity, ° API, 32.3 Pour point, ° F, below 5
Sulfur, percent, 0.25 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 64 sec. at 100°F, 51 sec. Nitrogen, percent, 0.068

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.662	82.2					
2	167	1.2	2.2	0.669	80.0	7.0				
3	212	2.5	4.7	0.715	66.4	19	1.38683	126.5		
4	257	2.3	7.0	0.748	57.7	26	1.41490	131.7		
5	302	3.3	10.3	0.771	52.0	29	1.42831	138.1		
6	347	3.7	14.0	0.791	47.4	32	1.43709	144.2		
7	392	3.7	17.7	0.809	43.4	34	1.44733	139.6		
8	437	5.1	22.8	0.822	40.6	34	1.45399	144.0		
9	482	6.2	29.0	0.837	37.6	36	1.46201	135.4		
10	527	8.2	37.2	0.849	35.2	37	1.46819	159.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.6	42.8	0.858	33.4	37	1.47731	-	41	Below 5
12	437	9.2	52.0	0.870	31.1	39	1.48103	-	47	14
13	482	7.1	59.1	0.885	28.4	43	1.48786	-	61	40
14	527	6.3	65.4	0.895	26.6	45	1.49409	-	90	66
15	572	7.0	72.4	0.907	24.5	47	1.49936	-	175	74
Residuum		26.3	98.7	0.951	17.3					

Carbon residue, Conradson Residuum 5.2 percent, crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.7	0.692	73.0	
Total gasoline and naphtha	18.7	0.759	54.2	
Kerosene distillate	5.1	0.822	40.6	
Gas oil	25.4	0.852	34.6	
Nonviscous lubricating distillate	14.2	0.871-0.898	31.0-26.1	50-100
Medium lubricating distillate	6.8	0.898-0.910	26.1-24.0	100-200
Viscous lubricating distillate	1.5	0.910-0.913	24.0-23.5	Above 200
Residuum	26.3	0.951	17.3	
Distillation loss	1.3			

Item 222
Bureau of Mines Bartlesville Laboratory
Sample 64063

IDENTIFICATION

South Pass (Block 27) field
N-4, Pliocene
6,647 feet

Louisiana
Plaquemines Parish
Offshore

GENERAL CHARACTERISTICS

Gravity, specific, 0.847 Gravity, ° API, 35.6 Pour point, ° F, below 5
Sulfur, percent, 0.18 Color, dark green
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.049

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 167 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	5.7	5.7	0.731	62.1	-	1.40793	135.6		
4	257	3.3	9.0	0.748	57.7	26	1.41747	138.3		
5	302	6.1	15.1	0.763	54.0	25	1.42515	140.7		
6	347	6.2	21.3	0.780	49.9	26	1.43500	142.4		
7	392	5.7	27.0	0.800	45.4	30	1.44404	140.1		
8	437	7.1	34.1	0.809	43.4	28	1.44902	140.4		
9	482	7.2	41.3	0.823	40.4	30	1.45633	144.6		
10	527	7.7	49.0	0.835	38.0	31	1.46347	147.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.9	54.9	0.855	34.0	36	1.47055	149.4	43	25
12	437	7.5	62.4	0.863	32.5	36	1.47467	148.3	52	35
13	482	7.1	69.5	0.873	30.6	37	1.48238	-	72	60
14	527	4.1	73.6	0.885	28.4	40	1.48848	-	105	85
15	572	5.5	79.1	0.891	27.3	40		-	195	100
Residuum		18.3	97.4	0.952	17.1					

Carbon residue, Conradson Residuum 7.1 percent crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.7	0.731	62.1	
Total gasoline and naphtha	29.0	0.766	53.2	
Kerosene distillate	14.3	0.816	41.9	
Gas oil	15.9	0.846	35.8	
Nonviscous lubricating distillate	13.5	0.861-0.883	32.8-26.7	50-100
Medium lubricating distillate	5.9	0.883-0.891	28.7-27.3	100-200
Viscous lubricating distillate	2.5	0.891-0.894	27.3-26.7	Above 200
Residuum	18.3	0.952	17.1	
Distillation loss	.6			

1/ Distillation discontinued at 563°F.

Item 223
Bureau of Mines Bartlesville Laboratory
Sample 64055

Southeast Pass field
Miocene
8,270 feet

IDENTIFICATION

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.645 Gravity, ° API, 36.0 Pour point, ° F, below 5
Sulfur, percent, 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 40 sec. Nitrogen, percent, 0.030

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	0.8	0.8	0.661	82.6					
2	167	1.7	2.5	.676	77.8	10	1.37925	130.6		
3	212	2.9	5.4	.727	63.1	25	1.40544	135.0		
4	257	5.5	10.9	.757	55.4	30	1.42250	147.4		
5	302	5.9	16.8	.778	50.4	32	1.43474	151.7		
6	347	5.5	22.3	.792	47.2	32	1.44170	151.0		
7	392	4.7	27.0	.802	44.9	31	1.44604	146.5		
8	437	5.7	32.7	.811	43.0	29	1.45039	143.9		
9	482	6.0	40.7	.821	40.9	29	1.45568	143.5		
1/10	527	8.1	46.8	.830	39.0	28	1.46096	146.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.3	55.1	0.842	36.6	30	1.46693	147.3	41	25
12	437	7.4	62.5	.853	34.4	31	1.46998	145.6	47	50
13	482	7.4	69.9	.861	32.8	32	1.47664	-	60	60
14	527	6.0	75.9	.876	30.0	36			95	110
15	572	5.1	81.0	.885	28.4	37			152	120
Residuum		18.9	99.9	.940	19.0					

Carbon residue, Conradson Residuum 5.2 percent, crude 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.4	0.701	70.3	
Total gasoline and naphtha	27.0	0.765	53.4	
Kerosene distillate	13.7	.817	41.7	
Gas oil	19.8	.840	37.0	
Nonviscous lubricating distillate	12.9	.855-.877	34.0-29.9	50-100
Medium lubricating distillate	7.6	.877-.889	29.9-27.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.9	.940	19.0	
Distillation loss	.1			

1/ Distillation discontinued at 523°F.

Item 224
Bureau of Mines Bartlesville Laboratory
Sample 64103

Sweet Bay Lake field
9,900', Miocene
11,135 feet

IDENTIFICATION

Louisiana
St. Mary Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API, 34.0 Pour point, ° F, 45
Sulfur, percent, 0.11 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 49 sec. Nitrogen, percent, 0.030

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 736 mm. Hg
First drop 140 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.9	0.9	0.732	61.8	-	1.40138	142.5		
4	257	1.1	2.0	.744	58.7	24	1.42212	157.6		
5	302	1.3	3.3	.774	51.3	30	1.43310	157.7		
6	347	1.6	4.9	.789	47.8	31	1.43896	155.0		
7	392	1.8	6.7	.790	47.6	25	1.44313	146.2		
8	437	3.6	10.3	.808	43.6	28	1.45003	145.8		
9	482	7.3	17.6	.825	40.0	31	1.45881	153.0		
1/10	527	7.5	25.1	.835	38.0	31	1.46406	153.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	14.3	39.4	0.846	35.8	32	1.46875	151.2	41	20
12	437	14.5	53.9	.853	34.4	31	1.46935	144.2	48	55
13	482	12.0	65.9	.858	33.4	30	1.47363	-	60	70
14	527	9.5	75.4	.870	31.1	33	-	-	87	85
15	572	7.6	83.0	.878	29.7	34	-	-	145	100
Residuum		16.8	99.8	.925	21.5					

Carbon residue, Conradson Residuum 3.5 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.9	0.732	61.8	
Total gasoline and naphtha	6.7	0.771	52.0	
Kerosene distillate	10.9	.819	41.2	
Gas oil	31.3	.845	35.9	
Nonviscous lubricating distillate	23.7	.854-.872	34.2-30.8	50-100
Medium lubricating distillate	10.4	.872-.882	30.8-29.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.8	.925	21.5	
Distillation loss	.2			

1/ Distillation discontinued at 514°F.

Bureau of Mines Item 225
Bartlesville
Sample 64096 Laboratory

Tiger Shoal field
N, Miocene
8,560 feet

IDENTIFICATION

Louisiana
Iberia-Vermilion
Parish Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.853 Gravity, ° API, 34.4 Pour point, ° F, below 5
Sulfur, percent, 0.09 Color, green
Viscosity, Saybolt Universal at 100°F, 46 sec. Nitrogen, percent, 0.020

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 739 mm. Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167	0.8	0.8	0.677	77.5	-	1.37996	130.8		
3	212	4.7	5.5	0.711	67.5	17	1.39640	131.1		
4	257	1.5	7.0	0.737	60.5	20	1.41106	135.2		
5	302	2.4	9.4	0.758	55.2	23	1.42227	139.0		
6	347	2.9	12.3	0.780	49.9	26	1.43349	137.8		
7	392	4.0	16.3	0.797	46.0	28	1.44126	137.7		
8	437	6.3	22.6	0.810	43.2	29	1.44842	135.7		
9	482	9.7	32.3	0.823	40.4	30	1.45454	136.8		
1/10	527	11.1	43.4	0.836	37.8	31	1.46064	137.6		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	10.3	49.7	0.851	34.8	34	1.46745	140.5	42	10
12	437	11.7	61.4	0.861	32.8	35	1.47066	138.2	50	35
13	482	8.4	69.8	0.868	31.5	35	1.47540	-	64	55
14	527	7.1	76.9	0.877	29.8	36	1.48116	-	98	70
15	572	7.4	84.3	0.886	28.2	37		195	85	85
Residuum		15.6	99.9	0.927	21.1					

Carbon residue, Conradson Residuum 3.4 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.5	0.693	72.7	
Total gasoline and naphtha	12.3	0.765	53.4	
Kerosine distillate	16.0	0.818	41.5	
Gas oil	27.2	0.846	35.7	
Nonviscous lubricating distillate	18.0	0.861-0.877	32.8-29.8	50-100
Medium lubricating distillate	7.5	0.877-0.886	29.8-28.1	100-200
Viscous lubricating distillate	3.3	0.886-0.891	28.1-27.4	Above 200
Residuum	15.6	0.927	21.1	
Distillation loss	.1			

1/ Distillation discontinued at 518°F.

Bureau of Mines Item 226
Bartlesville
Sample 64062 Laboratory

Timbalier, South (Block 131) field
E-2, Miocene
8,950 - 8,976 feet

IDENTIFICATION

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.846 Gravity, ° API, 35.8 Pour point, ° F, below 5
Sulfur, percent, 0.20 Color, dark green
Viscosity, Saybolt Universal at 100°F, 42 sec. Nitrogen, percent, 0.039

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 156 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.3	1.3	0.721	64.8	-	1.40446	142.7		
4	257	3.7	5.0	0.752	56.7	27	1.41954	145.1		
5	302	6.3	11.3	0.768	52.7	27	1.42671	145.6		
6	347	8.0	19.3	0.782	49.4	27	1.43575	145.0		
7	392	8.1	27.4	0.796	46.3	28	1.44161	143.2		
8	437	8.7	36.1	0.807	43.8	27	1.44820	144.0		
9	482	8.9	45.0	0.823	40.4	30	1.45616	145.3		
10	527	9.7	54.7	0.836	37.8	31	1.46417	146.9		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	6.4	61.1	0.856	33.8	36	1.47191	147.5	43	5
12	437	7.1	68.2	0.868	31.5	38	1.47566	146.4	50	20
13	482	6.0	74.2	0.878	29.7	40	1.48162	150.5	66	45
14	527	5.5	79.7	0.890	27.5	42	1.48768	-	105	65
15	572	5.0	84.7	0.897	26.2	43	1.49432	-	205	95
Residuum		15.3	100.0	0.941	18.9					

Carbon residue, Conradson Residuum 4.7 percent, crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.3	0.721	64.8	
Total gasoline and naphtha	27.4	0.776	50.7	
Kerosine distillate	17.6	0.815	42.1	
Gas oil	19.6	0.846	35.4	
Nonviscous lubricating distillate	11.7	0.868-0.877	31.5-27.8	50-100
Medium lubricating distillate	5.7	0.877-0.897	27.8-26.3	100-200
Viscous lubricating distillate	2.7	0.897-0.900	26.3-25.7	Above 200
Residuum	15.3	0.941	18.9	
Distillation loss	.0			

Bureau of Mines
Sample
Item 227
Bartlesville
59162
Laboratory

IDENTIFICATION

Timbalier Bay field
Miocene
8,000-12,000 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity specific 0.853 Gravity ° API 34.4 — Pour point, ° F, below 5
Sulfur, percent 0.33 Color, brownish green
Viscosity, Saybolt Universal at 100 ° F., 43 sec. Nitrogen, percent, 0.081

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.6641	89.3					
2	167	1.9	3.5	.675	78.1	9.8	1.37616	125.5		
3	212	4.4	7.9	.711	67.5	17	1.39761	128.7		
4	257	6.3	14.2	.742	59.2	23	1.41309	132.7		
5	302	6.7	20.9	.764	53.7	26	1.42544	140.5		
6	347	5.7	26.6	.783	49.2	28	1.43575	141.3		
7	392	5.0	31.6	.795	46.9	27	1.44321	141.1		
8	437	5.5	37.1	.813	42.6	30	1.45127	141.3		
9	482	5.4	42.5	.833	38.4	34	1.46150	147.9		
10	527	6.4	48.9	.850	35.0	38	1.47202	155.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	5.6	54.5	0.870	31.1	43	1.48167	158.9	43	6
12	437	4.9	59.4	.875	30.2	42	1.48622	162.8	50	10
13	482	6.1	65.5	.888	27.9	45	1.49431	163.0	70	30
14	527	5.0	70.5	.907	24.5	50	1.50096	-	120	55
15	572	6.1	76.6	.920	22.3	54			300	80
Residuum		21.8	98.4	.969	14.5					

Carbon residue, Conradson Residuum 7.7 percent crude 1.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.9	0.688	74.2	
Total gasoline and naphtha	31.6	0.749	57.4	
Kerosene distillate	5.5	.813	42.6	
Gas oil	19.9	.854	34.2	
Nonviscous lubricating distillate	8.9	.875-.899	30.2-25.9	50-100
Medium lubricating distillate	4.6	.899-.913	25.9-23.5	100-200
Viscous lubricating distillate	6.1	.913-.927	23.5-21.1	Above 200
Residuum	21.8	.969	14.5	
Distillation loss	1.6			

Bureau of Mines
Sample
Item 228
Bartlesville
54065
Laboratory

IDENTIFICATION

Valentine field
South Coast 2, Miocene
11,664-11,802 feet

Louisiana
Lafourche Parish

GENERAL CHARACTERISTICS

Gravity specific 0.846 Gravity ° API, 35.8 — Pour point, ° F, 65
Sulfur, percent 0.18 Color, brownish green
Viscosity, Saybolt Universal at 100 ° F., 48 sec. Nitrogen, percent, 0.033

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.6	0.6	0.674	78.4					
2	167	2.4	3.0	.694	72.4	19	1.38947	133.6		
3	212	2.6	5.6	.741	59.5	31	1.41348	143.8		
4	257	2.4	8.0	.757	55.4	30	1.42358	144.4		
5	302	3.6	11.6	.769	52.5	28	1.42933	148.5		
6	347	3.7	15.3	.779	50.1	26	1.43475	144.3		
7	392	3.9	19.2	.789	47.8	24	1.43917	139.7		
8	437	4.7	23.9	.801	45.2	24	1.44475	139.5		
9	482	6.3	30.2	.814	42.3	25	1.45207	141.6		
10	527	8.6	38.8	.828	39.4	27	1.45937	145.3		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.7	43.5	0.842	36.6	30	1.46596	143.2	40	20
12	437	8.7	52.2	.851	34.8	30	1.46802	140.0	44	40
13	482	7.7	59.9	.859	33.2	31	1.47250	143.4	55	55
14	527	8.0	67.9	.868	31.5	32			75	70
15	572	7.6	75.5	.877	29.9	33			125	85
Residuum		23.7	99.2	.923	21.8					

Carbon residue, Conradson Residuum 2.7 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.6	0.714	66.7	
Total gasoline and naphtha	19.2	0.757	55.4	
Kerosene distillate	11.0	.808	43.6	
Gas oil	22.2	.840	37.0	
Nonviscous lubricating distillate	15.5	.855-.873	34.0-30.6	50-100
Medium lubricating distillate	7.6	.873-.881	30.6-29.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.7	.923	21.8	
Distillation loss	.8			

Item 229
Bureau of Mines Bartlesville Laboratory
Sample 53034

IDENTIFICATION

Venice field
Upper Miocene
3,547-11,760 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.837 Gravity, ° API, 37.6 Pour point, ° F, below 5
Sulfur, percent, 0.24 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 41 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.4	1.4							
2	167	1.6	3.0	0.859	83.2	-	1.37870	67.1		
3	212	3.5	6.5	.722	64.5	22	1.40391	138.3		
4	257	5.7	12.2	.748	57.7	26	1.41746	137.2		
5	302	6.2	18.4	.765	53.5	26	1.42670	144.4		
6	347	6.1	24.5	.781	49.7	27	1.43546	141.6		
7	392	5.9	30.4	.794	46.7	27	1.44116	141.7		
8	437	6.1	36.5	.806	44.1	27	1.44779	138.7		
9	482	7.2	43.7	.819	41.3	28	1.45498	145.5		
10	527	8.3	52.0	.832	38.6	29	1.46264	146.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	4.3	56.3	0.847	35.6	32			39	15
12	437	7.9	64.2	.854	34.2	32			44	30
13	482	6.5	70.7	.866	31.9	34			56	50
14	527	4.9	75.6	.879	29.5	37			81	70
15	572	5.0	80.6	.890	27.5	39			140	85
Residuum		19.2	99.8	.946	18.1					

Carbon residue, Conradson Residuum 6.0 percent, crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.5	0.893	72.7	
Total gasoline and naphtha	30.4	0.755	55.9	
Kerosene distillate	13.3	.813	42.6	
Gas oil	20.2	.844	36.2	
Nonviscous lubricating distillate	10.8	.860-.882	33.9-28.9	50-100
Medium lubricating distillate	5.9	.882-.895	28.9-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.2	.946	18.1	
Distillation loss	.2			

Item 230
Bureau of Mines Bartlesville Laboratory
Sample 53030

IDENTIFICATION

Vinton field
D, Oligocene
5,708-5,728 feet

Louisiana
Calcasieu Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.851 Gravity, ° API, 34.8 Pour point, ° F, 35
Sulfur, percent 0.34 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 45 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	1.4	1.4							
3	212	3.1	4.5	0.702	70.1	-	1.41118	139.6		
4	257	4.6	9.1	.754	56.2	28	1.41862	138.1		
5	302	3.8	12.9	.774	51.3	30	1.43251	148.7		
6	347	4.9	17.8	.792	47.2	32	1.44108	149.0		
7	392	4.9	22.7	.803	44.7	31	1.44685	148.6		
8	437	5.3	28.0	.814	42.3	31	1.45288	143.6		
9	482	6.6	34.6	.831	38.8	33	1.46173	153.6		
10	527	7.9	42.5	.846	35.8	36	1.47023	157.7		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	6.2	48.7	0.856	33.8	37			39	10
12	437	8.9	57.6	.858	33.4	34			45	35
13	482	7.2	64.8	.863	32.5	33			56	55
14	527	6.3	71.1	.873	30.6	34			79	75
15	572	6.6	77.7	.886	28.2	37			145	90
Residuum		21.7	99.4	.940	19.0					

Carbon residue, Conradson Residuum 5.1 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.5	0.702	70.1	
Total gasoline and naphtha	22.7	0.766	53.2	
Kerosene distillate	5.3	.814	42.3	
Gas oil	29.0	.849	35.2	
Nonviscous lubricating distillate	13.1	.861-.877	32.8-29.9	50-100
Medium lubricating distillate	7.6	.877-.892	29.9-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.7	.940	19.0	
Distillation loss	.6			

Item 231
Bureau of Mines Bartlesville Laboratory
Sample 61085

IDENTIFICATION

Washington field
Cockfield, Eocene
9,300-9,600 feet

Louisiana
St. Landry Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.733 Gravity, ° API - 61.5 Pour point, ° F, below 5
Sulfur percent, less than 0.10 Color, NPA less than 1
Viscosity, Saybolt Universal at 100°F, 33 sec. Nitrogen percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg

First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	15.6	15.6	0.642	88.9					
2	167	12.5	28.1	.670	79.7	7.5	1.37635	129.2		
3	212	12.2	40.3	.710	67.8	17	1.39690	125.2		
4	257	11.6	51.9	.740	59.7	22	1.41160	131.0		
5	302	9.0	60.9	.759	54.9	23	1.42215	136.4		
6	347	6.6	67.5	.773	51.6	23	1.42990	138.8		
7	392	5.4	72.9	.785	48.8	23	1.43675	138.4		
8	437	5.2	78.1	.797	46.0	23	1.44314	137.1		
9	482	5.1	83.2	.811	43.0	24	1.45043	140.5		
10	527	4.9	88.1	.823	40.4	25	1.45700	143.1		

Stage 2—Distillation continued at 40 mm Hg

11	392									
12	437									
13	482									
14	527									
15	572									
Residuum		7.2	95.3	0.848	35.4					

Carbon residue, Conradson Residuum Nil percent crude Nil percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	40.3	0.671	79.4	
Total gasoline and naphtha	72.9	0.711	67.5	
Kerosene distillate	15.2	.810	43.2	
Gas oil	-	-	-	
Nonviscous lubricating distillate	-	-	-	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	7.2	.848	35.4	
Distillation loss	4.7			

Item 232
Bureau of Mines Bartlesville Laboratory
Sample 52035

IDENTIFICATION

Weeks Island field
Upper Miocene
9,250-15,000 feet

Louisiana
Iberia Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.859 Gravity, ° API - 33.2 Pour point, ° F, below 5
Sulfur percent 0.19 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 58 sec. 100°F, 51 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg

First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167	1.5	1.5							
3	212	2.3	3.8	0.690	73.6	-	1.38834	130.8		
4	257	3.3	7.1	.743	58.9	23	1.41488	135.7		
5	302	4.0	11.1	.766	53.2	27	1.42639	138.7		
6	347	4.0	15.1	.783	49.2	28	1.43557	139.9		
7	392	5.0	20.1	.799	45.6	29	1.44314	140.0		
8	437	4.7	24.8	.812	42.8	30	1.45035	139.0		
9	482	8.5	33.3	.829	39.2	32	1.45862	142.2		
10	527	9.1	42.4	.845	36.0	35	1.46739	146.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.3	47.7	0.861	32.8	39			42	Below 5
12	437	2.2	56.9	.867	31.7	38			48	20
13	482	7.6	64.5	.878	29.7	40			64	40
14	527	5.7	70.2	.892	27.1	43			98	60
15	572	7.3	77.5	.901	25.6	45			190	75
Residuum		22.4	99.9	.942	18.7					

Carbon residue, Conradson Residuum 4.8 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.8	0.690	73.6	
Total gasoline and naphtha	20.1	0.759	54.9	
Kerosene distillate	4.7	.812	42.8	
Gas oil	28.6	.848	35.4	
Nonviscous lubricating distillate	14.1	.868-.892	31.5-27.1	50-100
Medium lubricating distillate	7.1	.892-.902	27.1-25.4	100-200
Viscous lubricating distillate	2.2	.902-.906	25.4-24.7	Above 200
Residuum	22.4	.942	18.7	
Distillation loss	.1			

Item 233
Bureau of Mines Bartlesville Laboratory
Sample 57084

IDENTIFICATION

West Bay field
Miocene
6,400-10,400 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity, specific, 0.865 Gravity, ° API, 32.1 -- Pour point, ° F, -- below 5
Sulfur, percent, 0.27 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 68 sec., 100°F., 54 sec. Nitrogen, percent, 0.071

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 750 mm Hg
First drop 117 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso, 100° F	Cloud test ° F
1	122									
2	167	1.2	1.2	0.683	75.7	-				
3	212	1.8	3.0	.722	64.5	30				
4	257	3.1	6.1	.749	57.4	26	1.40526	132.3		
5	302	3.3	9.4	.767	53.0	27	1.42639	138.7		
6	347	3.8	13.2	.784	49.0	28	1.43460	138.6		
7	392	4.1	17.3	.798	45.8	29	1.44218	137.8		
8	437	5.3	22.6	.813	42.6	30	1.44919	138.9		
9	482	6.7	29.3	.829	39.2	32	1.45692	142.5		
10	527	8.4	37.7	.840	37.0	33	1.46497	145.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso, 100° F	Cloud test ° F
11	392	5.0	42.7	0.847	35.6	32	1.47184	149.2	40	10
12	437	2.3	52.0	.857	33.6	32	1.47538	-	46	30
13	482	6.7	58.7	.872	30.8	33	1.48221	-	58	44
14	527	6.6	65.3	.884	28.6	40	1.48821	-	84	54
15	572	6.7	72.0	.899	25.9	44			150	70
Residuum		27.3	99.3	.947	17.9					

Carbon residue, Conradson Residuum 6.8 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.0	0.706	68.9	
Total gasoline and naphtha	17.3	0.764	53.7	
Kerosene distillate	5.3	.813	42.6	
Gas oil	27.5	.843	36.4	
Nonviscous lubricating distillate	14.6	.862-.890	32.7-27.5	50-100
Medium lubricating distillate	7.3	.890-.906	27.5-24.7	100-200
Viscous lubricating distillate				Above 200
Residuum	27.3	.947	17.9	
Distillation loss	.7			

Item 234
Bureau of Mines Bartlesville Laboratory
Sample 61021

IDENTIFICATION

West Delta (Block 30) field
Miocene
5,800 - 10,000 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.893 Gravity, ° API, -27.0 -- Pour point, ° F, below 5
Sulfur, percent 0.33 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 139 sec., 100°F., 92 sec. Nitrogen, percent, 0.09

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso, 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.3	1.3	0.729	62.6	-	1.40568	129.7		
4	257	1.3	2.6	.739	60.0	21	1.41053	132.2		
5	302	1.6	4.2	.765	53.5	26	1.42244	132.7		
6	347	2.3	6.5	.782	47.8	31	1.43558	135.5		
7	392	3.0	9.5	.808	43.6	33	1.44610	132.0		
8	437	4.7	14.2	.825	40.0	36	1.45421	136.1		
9	482	6.7	20.9	.837	37.6	36	1.46208	139.1		
10	527	8.7	29.6	.853	34.4	39	1.47012	141.1		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso, 100° F	Cloud test ° F
11	392	5.3	34.9	0.869	31.3	43	1.47900	151.6	42	Below 5
12	437	8.8	43.7	.882	28.9	45	1.48446	143.8	51	15
13	482	7.8	51.5	.892	27.1	46	1.49152	153.8	70	30
14	527	7.1	58.6	.904	25.0	49	1.49761	-	115	45
15	572	8.5	67.1	.915	23.1	51			245	60
Residuum		32.7	99.8	.938	16.2					

Carbon residue, Conradson Residuum 5.7 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.3	0.729	62.6	
Total gasoline and naphtha	9.5	0.776	50.9	
Kerosene distillate	4.7	.825	40.0	
Gas oil	24.4	.856	33.8	
Nonviscous lubricating distillate	14.0	.881-.900	29.1-25.7	50-100
Medium lubricating distillate	6.6	.900-.910	25.7-24.0	100-200
Viscous lubricating distillate	7.9	.910-.921	24.0-22.1	Above 200
Residuum	32.7	.938	16.2	
Distillation loss	.2			

Bureau of Mines Item 235
Bartlesville Laboratory
Sample 64078

IDENTIFICATION

West Delta (Block 52) field
7,600', 52-1, Miocene
7,634 - 7,644 feet

Louisiana
Plaquemines Parish

GENERAL CHARACTERISTICS

Gravity specific 0.865 Gravity, ° API, 32.1 Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, dark green
Viscosity, Saybolt Universal at 71°F. 57 sec. 100°F. 51 sec. Nitrogen, percent, 0.074

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.4	0.4	0.654	84.9					
2	167	1.1	1.5	.677	77.5	11	1.37465	123.4		
3	212	2.0	3.5	.722	64.5	22	1.40049	124.7		
4	257	3.3	6.8	.749	57.4	26	1.41406	127.3		
5	302	3.9	10.7	.773	51.6	30	1.42710	131.7		
6	347	4.6	15.3	.799	45.6	35	1.44115	140.1		
7	392	4.7	20.0	.815	42.1	37	1.45108	145.6		
8	437	5.6	25.8	.827	39.6	37	1.45789	147.8		
9	482	7.2	33.0	.840	37.0	36	1.46431	152.4		
10	527	6.3	41.3	.849	35.2	37	1.47019	155.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.1	46.4	0.865	32.1	41	1.47607	155.2	42	Below 5
12	437	8.7	55.1	.870	31.1	39	1.48044	157.7	51	30
13	482	7.4	62.5	.861	29.1	41	1.48773	161.1	69	50
14	527	7.5	70.0	.894	26.8	44			115	70
15	572									
Residuum		29.4	99.4	.944	18.4					

Carbon residue, Conradson Residuum 4.6 percent, crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.5	0.700	70.6	
Total gasoline and naphtha	20.0	0.772	51.8	
Kerosine distillate	-	-	-	
Gas oil	30.0	.848	35.4	
Nonviscous lubricating distillate	13.8	.869-.890	31.2-27.5	50-100
Medium lubricating distillate	6.2	.890-.901	27.5-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.4	.944	18.4	
Distillation loss	.6			

1/ Distillation discontinued at 527°F.

Bureau of Mines Item 236
Bartlesville Laboratory
Sample 61023

IDENTIFICATION

West Delta (Block 83) field
KE, Upper Miocene
10,100 feet

Louisiana
Offshore

GENERAL CHARACTERISTICS

Gravity, specific 0.850 Gravity, ° API, 35.0 Pour point, ° F, below 5.
Sulfur, percent, 0.37 Color, brownish black
Viscosity, Saybolt Universal at 100°F. 48 sec. Nitrogen, percent, 0.06

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 731 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.666	81.0					
2	167	1.4	2.8	.672	79.1	8.4	1.37560	126.8		
3	212	2.7	5.5	.704	69.5	14	1.39360	128.0		
4	257	3.7	9.2	.732	61.8	18	1.40825	126.5		
5	302	4.4	13.6	.755	55.9	21	1.42111	129.0		
6	347	4.0	17.6	.773	51.6	23	1.42928	138.6		
7	392	4.5	22.1	.787	48.3	23	1.43699	136.3		
8	437	5.3	27.4	.801	45.2	24	1.44410	137.8		
9	482	7.3	34.7	.815	42.1	26	1.45192	138.1		
10	527	7.0	41.7	.830	39.0	28	1.45997	140.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.4	46.1	0.842	36.6	30	1.46730	143.8	40	10
12	437	7.1	53.2	.858	33.4	34	1.47114	143.1	46	25
13	482	6.8	60.0	.866	31.9	34	1.47735	146.2	57	45
14	527	5.2	65.2	.883	28.8	39	1.48375	-	79	60
15	572	6.4	71.6	.892	27.1	40	1.49051	-	135	80
Residuum		26.8	98.4	.951	17.3					

Carbon residue, Conradson Residuum 6.7 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.5	0.686	74.8	
Total gasoline and naphtha	22.1	0.744	58.7	
Kerosine distillate	12.6	.809	43.4	
Gas oil	18.0	.842	36.6	
Nonviscous lubricating distillate	12.2	.862-.887	32.7-28.0	50-100
Medium lubricating distillate	6.7	.887-.897	28.0-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.8	.951	17.3	
Distillation loss	1.6			

Bureau of Mines Item 237
Bartlesville Laboratory
 Sample 64056

IDENTIFICATION

White Castle field
 Heterostegina MR, Upper Oligocene
 9,552 - 9,660 feet

Louisiana
 Iberville Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.860 Gravity, ° API, 33.0 Pour point, ° F, below 5
 Sulfur, percent, 0.10 Color, greenish black
 Viscosity, Saybolt Universal at 100°F, 48 sec. Nitrogen, percent, 0.052

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
 First drop 140 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	--	--							
2	167									
3	212	2.6	2.6	0.729	62.6	-	1.40911	142.9		
4	257	1.8	4.4	.762	54.2	32	1.42584	151.9		
5	302	3.1	7.5	.778	50.4	32	1.43564	158.1		
6	347	3.6	11.1	.791	47.4	31	1.44165	155.4		
7	392	4.2	15.3	.800	45.4	30	1.44554	149.6		
8	437	5.6	20.9	.814	42.3	31	1.45274	150.7		
9	482	8.9	29.8	.831	38.8	33	1.46244	155.0		
10	527	9.2	39.0	.845	36.0	35	1.46872	169.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.1	46.1	0.861	32.8	39	1.47488	154.3	42	25
12	437	9.2	55.3	.865	32.1	37	1.47695	152.2	49	40
13	482	7.8	63.1	.877	29.8	39	1.48258	151.5	69	65
14	527	6.7	69.8	.886	28.2	40	1.48743	-	110	85
15	572	7.7	77.5	.897	26.2	43			235	105
Residuum		20.6	98.1	.943	18.6					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.729	62.6	
Total gasoline and naphtha	15.3	0.777	50.6	
Kerosine distillate	5.6	.814	48.3	
Gas oil	30.2	.848	35.4	
Nonviscous lubricating distillate	13.6	.866-.884	32.0-28.6	50-100
Medium lubricating distillate	6.9	.884-.894	28.6-26.8	100-200
Viscous lubricating distillate	5.9	.894-.903	26.8-25.2	Above 200
Residuum	20.6	.943	18.6	
Distillation loss	1.9			

Bureau of Mines Item 238
Bartlesville Laboratory
 Sample 61031

IDENTIFICATION

White Lake, East field
 R, Upper Miocene
 6,390 - 6,400 feet

Louisiana
 Vermilion Parish

GENERAL CHARACTERISTICS

Gravity, specific 0.850 Gravity, ° API, 35.0 Pour point, ° F, below 5
 Sulfur, percent, less than 0.10 Color, NPA 6
 Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen, percent, 0.000

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
 First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.9	2.9	0.719	65.3	--	1.40399	135.7		
4	257	2.3	5.2	.748	57.7	26	1.41721	140.2		
5	302	2.3	7.5	.770	52.3	28	1.42844	142.4		
6	347	2.6	10.1	.787	48.3	30	1.43788	146.4		
7	392	5.5	15.6	.808	43.6	33	1.44905	147.8		
8	437	6.2	21.8	.825	40.0	36	1.45703	147.9		
9	482	10.8	32.6	.838	37.4	37	1.46388	151.4		
10	527	15.3	47.9	.851	34.8	38	1.46998	153.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	27.4	75.3	0.865	32.1	41	1.47600	168.2	46	15
12	437	8.9	84.2	.883	28.8	46	1.48238	178.3	73	50
13	482	7.3	91.5	.892	27.1	46	1.48898	-	145	70
14	527	2.2	93.7	.904	25.0	49		-	255	80
15	572	2.8	96.5	.912	23.7	50		-	-	95
Residuum		3.4	99.9	.924	21.6					

Carbon residue, Conradson Residuum 2.6 percent, crude 0.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.719	65.3	
Total gasoline and naphtha	15.6	0.774	51.3	
Kerosine distillate	6.2	.825	40.0	
Gas oil	42.7	.851	34.8	
Nonviscous lubricating distillate	18.3	.868-.886	31.5-28.2	50-100
Medium lubricating distillate	7.5	.886-.895	28.2-26.6	100-200
Viscous lubricating distillate	6.2	.895-.902	26.6-25.4	Above 200
Residuum	3.4	.924	21.6	
Distillation loss	.1			

1/ Distillation discontinued at 554°F.

Bureau of Mines
Sample
Item 239
Bartlesville
61130 Laboratory

IDENTIFICATION

Albion field
Trenton and Black River, Ordovician
3,950 feet
Michigan
Calhoun County

GENERAL CHARACTERISTICS

Gravity specific 0.816 Gravity ° API 41.2 Pour point, ° F, below 5
Sulfur, percent 0.10 Color, green
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7							
2	167	2.9	4.6	0.667	80.6	6.1	1.37597	124.2		
3	212	4.5	9.1	.701	70.4	12	1.39262	124.7		
4	257	4.7	13.8	.723	64.2	14	1.40429	128.7		
5	302	4.9	18.7	.739	60.0	14	1.41366	130.7		
6	347	5.1	23.8	.754	56.2	14	1.42198	132.1		
7	392	5.1	28.9	.767	53.0	14	1.42881	131.9		
8	437	5.2	34.1	.783	49.2	16	1.43687	134.3		
9	482	6.0	40.1	.799	45.6	18	1.44514	135.7		
10	527	6.1	46.2	.811	43.0	19	1.45218	137.1		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.0	49.2	0.835	38.0	27	1.46210	143.1	39	35
12	437	5.6	54.8	.841	36.8	26	1.46688	146.0	44	40
13	482	6.0	60.8	.856	33.8	29	1.47598	154.9	54	60
14	527	3.2	64.0	.869	31.3	32	1.48218	175.8	73	70
15	572	4.9	68.9	.877	29.9	33			105	85
Residuum		25.7	94.6	.929	20.8					

Carbon residue, Conradson Residuum 3.5 percent crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.1	0.684	75.4	
Total gasoline and naphtha	28.2	0.727	63.1	
Kerosene distillate	17.3	.798	45.8	
Gas oil	9.4	.842	36.6	
Nonviscous lubricating distillate	10.2	.850-.876	35.0-30.0	50-100
Medium lubricating distillate	3.1	.876-.882	30.0-28.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.7	.929	20.8	
Distillation loss	5.4			

Bureau of Mines
Sample
Item 240
Bartlesville
57053 Laboratory

IDENTIFICATION

Coldwater field
Dundee, Devonian
3,721-3,732 feet
Michigan
Isabella County

GENERAL CHARACTERISTICS

Gravity, specific 0.786 Gravity, ° API 48.5 Pour point, ° F, below 5
Sulfur percent, 0.30 Color, NPA 8
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.010

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.9	3.9	0.641	82.3					
2	167	3.4	7.3	.661	82.6	3.2	1.37706	130.2		
3	212	5.6	12.9	.700	70.6	12	1.39181	123.2		
4	257	7.1	20.0	.725	63.7	15	1.40464	125.9		
5	302	6.2	26.2	.742	59.2	15	1.41382	126.4		
6	347	6.7	32.9	.755	55.9	14	1.42111	127.0		
7	392	7.6	40.5	.767	53.0	14	1.42696	129.4		
8	437	6.9	47.4	.780	49.9	15	1.43344	115.6		
9	482	7.0	54.4	.795	46.5	16	1.44126	122.9		
10	527	7.5	61.9	.809	43.4	18	1.44908	121.1		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.9	65.8	0.825	40.0	22	1.45886	130.3	39	20
12	437	5.7	71.5	.845	36.0	28	1.46494	131.7	44	35
13	482	4.0	75.5	.853	34.4	28	1.47172	140.4	53	50
14	527	4.0	79.5	.861	32.8	29	1.47708	138.3	71	65
15	572	4.5	84.0	.884	28.6	37			110	80
Residuum		11.8	95.8	.913	23.5					

Carbon residue, Conradson Residuum 2.7 percent, crude 0.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.9	0.672	79.1	
Total gasoline and naphtha	40.5	0.724	63.9	
Kerosene distillate	21.4	.795	46.5	
Gas oil	10.1	.833	38.4	
Nonviscous lubricating distillate	8.7	.849-.878	35.2-29.7	50-100
Medium lubricating distillate	3.3	.878-.896	29.7-26.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	11.8	.913	23.5	
Distillation loss	4.2			

Item 241
Bureau of Mines Bartlesville Laboratory
Sample 57050

IDENTIFICATION

Deep River field
Richfield, Detroit River, Lower Devonian
4,140-4,177 feet

Michigan
Arenac County

GENERAL CHARACTERISTICS

Gravity, specific, 0.834 Gravity, ° API, 38.2 Pour point, ° F, 45
Sulfur, percent, 0.28 Color, green
Viscosity, Saybolt Universal at 100°F, 43 sec. Nitrogen, percent, 0.059

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.640	89.6					
2	167	2.6	4.2	.674	78.4	9.4	1.37241	123.0		
3	212	4.0	8.2	.715	66.4	19	1.39965	127.3		
4	267	5.0	13.2	.743	58.9	23	1.41531	136.9		
5	302	4.8	18.0	.761	54.4	24	1.42650	142.3		
6	347	5.5	23.5	.773	51.6	23	1.43324	144.7		
7	392	6.0	29.5	.784	49.0	22	1.43732	150.3		
8	437	5.4	34.9	.796	46.3	22	1.44421	137.4		
9	482	5.6	40.5	.810	43.2	23	1.45214	143.3		
10	527	6.4	46.9	.826	39.8	26	1.46145	152.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.9	49.8	0.842	36.6	30	1.47169	157.0	39	20
12	437	5.5	55.3	.854	34.2	32	1.47610	155.1	43	40
13	482	5.5	60.8	.866	31.9	34	1.48287	163.6	52	55
14	527	4.6	65.4	.879	29.5	37			67	70
15	572	6.0	71.4	.888	27.9	38			105	85
Residuum		27.3	98.7	.932	20.3					

Carbon residue, Conradson Residuum 4.0 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.2	0.687	74.5	
Total gasoline and naphtha	29.5	0.744	58.7	
Kerosene distillate	11.0	.803	44.7	
Gas oil	16.4	.841	36.8	
Nonviscous lubricating distillate	10.9	.863-.887	32.5-28.0	50-100
Medium lubricating distillate	3.6	.887-.893	28.0-27.0	100-200
Viscous lubricating distillate				Above 200
Residuum	27.3	.932	20.3	
Distillation loss	1.3			

Item 242
Bureau of Mines Bartlesville Laboratory
Sample 64022

IDENTIFICATION

Pulaski field
Trenton and Black River, Middle Ordovician
4,134 - 4,232 feet

Michigan
Jackson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.819 Gravity, ° API, 41.3 Pour point, ° F, 15
Sulfur, percent, 0.20 Color, greenish black
Viscosity, Saybolt Universal at 100°F, 46 sec. Nitrogen, percent, 0.055

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.642	88.9					
2	167	3.3	6.0	.663	81.9	4.2	1.38137	131.2		
3	212	4.5	10.5	.701	70.4	12	1.39296	126.2		
4	257	5.4	15.9	.724	63.9	14	1.40461	126.6		
5	302	4.5	20.4	.741	59.5	15	1.41458	133.7		
6	347	5.4	25.8	.759	54.9	16	1.42374	134.6		
7	392	5.0	30.8	.774	51.3	17	1.43167	136.5		
8	437	5.0	35.8	.790	47.6	19	1.44020	137.9		
9	482	5.4	41.2	.803	44.7	20	1.44820	141.8		
10	527	6.3	47.5	.815	42.1	21	1.45514	147.1		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.5	52.0	0.834	38.2	26	1.46257	146.9	40	35
12	437	5.1	57.1	.846	35.8	28	1.46935	153.0	46	50
13	482	4.5	61.6	.856	33.4	30	1.47829	161.6	56	65
14	527	4.1	65.7	.876	30.0	36			77	80
15	572	5.0	70.7	.884	28.6	36			130	100
Residuum		25.5	96.2	.940	19.0					

Carbon residue, Conradson Residuum 6.6 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.5	0.674	78.5	
Total gasoline and naphtha	30.8	.724	64.0	
Kerosene distillate	16.7	.804	44.6	
Gas oil	8.9	.840	37.0	
Nonviscous lubricating distillate	9.2	.851-.879	34.8-29.4	50-100
Medium lubricating distillate	5.1	.879-.888	29.4-27.6	100-200
Viscous lubricating distillate				Above 200
Residuum	25.5	.940	19.0	
Distillation loss	3.6			

Bureau of Mines
Sample
Item 243
Bartlesville
64069
Laboratory

IDENTIFICATION

Scipio field
Trenton, Middle Ordovician
3,854 - 3,874 feet

Michigan
Hillsdale County

GENERAL CHARACTERISTICS

Gravity, specific 0.818 Gravity, ° API, 41.5 Pour point, ° F, 5
Sulfur, percent 0.16 Color, dark green
Viscosity, Saybolt Universal at 100°F., 40 sec. Nitrogen, percent, 0.037

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	3.3	3.3	0.636	91.0					
2	167	2.8	6.1	.665	81.3	5.1	1.37897	126.5		
3	212	4.7	10.8	.702	70.1	13	1.39296	127.8		
4	257	5.5	16.3	.725	63.7	15	1.40502	129.4		
5	302	4.5	20.8	.742	59.2	15	1.41493	132.8		
6	347	5.4	26.2	.758	55.2	16	1.42359	133.6		
7	392	5.0	31.2	.771	52.0	16	1.43127	135.5		
8	437	6.5	37.7	.788	48.1	18	1.44053	138.4		
9	482	4.7	42.4	.805	44.3	21	1.44847	141.0		
10	527	6.4	48.8	.816	41.9	22	1.45481	143.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.3	53.1	0.840	37.0	29	1.46363	146.3	41	25
12	437	5.1	58.2	.845	36.0	27	1.46883	153.0	46	40
13	482	4.9	63.1	.858	33.4	30	1.47633	158.9	56	65
14	527	4.0	67.1	.869	31.3	32			74	90
15	572	5.1	72.2	.879	29.5	34			120	110
Residuum		25.1	92.3	.927	21.1					

Carbon residue, Conradson Residuum 4.2 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.8	0.672	79.0	
Total gasoline and naphtha	31.2	0.722	64.4	
Kerosene distillate	17.6	.803	44.8	
Gas oil	8.9	.843	36.4	
Nonviscous lubricating distillate	10.0	.850-.875	34.9-30.3	50-100
Medium lubricating distillate	4.5	.875-.885	30.3-28.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.1	.927	21.1	
Distillation loss	2.7			

Bureau of Mines
Sample
Item 244
Bartlesville
58021
Laboratory

IDENTIFICATION

Baxterville field
Lower Tuscaloosa, Upper Cretaceous
8,734-8,744 feet

Mississippi
Lamar and Marion Counties

GENERAL CHARACTERISTICS

Gravity, specific 0.952 Gravity, ° API, 17.1 Pour point, ° F, 20
Sulfur percent, 2.71 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 1,480 sec. Nitrogen, percent, 0.111
at 130°F., 590 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 171 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.8	0.8	0.711	67.5	-				
4	257	1.2	2.0	.735	61.0	19				
5	302	.7	2.7	.736	60.8	12				
6	347	1.1	3.8	.779	50.1	26				
7	392	1.4	5.2	.796	46.3	35				
8	437	2.1	7.3	.823	40.4	35	1.42962	132.9		
9	482	3.1	10.4	.841	36.8	38	1.46249	137.3		
10	527	5.5	15.9	.857	33.6	41	1.47127	145.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.0	17.9	0.866	31.9	41	1.47993	157.1	42	Below 5
12	437	6.5	24.4	.879	29.5	44	1.48509	156.7	49	20
13	482	6.9	31.3	.897	26.3	49	1.49421	163.6	65	34
14	527	6.9	38.2	.912	23.7	53	1.50358	173.8	100	50
15	572	7.8	46.0	.928	21.0	-	1.51058	175.6	210	66
Residuum		52.8	98.8	1.022	7.0					

Carbon residue, Conradson Residuum 16.6 percent crude 9.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.8	0.711	67.5	
Total gasoline and naphtha	5.2	0.757	55.4	
Kerosene distillate	2.1	.823	40.4	
Gas oil	14.4	.859	33.2	
Nonviscous lubricating distillate	13.1	.880-.912	29.3-23.7	50-100
Medium lubricating distillate	6.9	.912-.927	23.7-21.1	100-200
Viscous lubricating distillate	4.3	.922-.936	21.1-19.7	Above 200
Residuum	52.8	1.022	7.0	
Distillation loss	1.2			

1/ Distillation discontinued 568°F.

Bureau of Mines Item 245
Bartlesville Laboratory
Sample 64092

IDENTIFICATION

Bolton field
8,124', Washita and Fredericksburg, Lower Cretaceous
8,359 - 8,450 feet

Mississippi
Hinds County

GENERAL CHARACTERISTICS

Gravity, specific 0.977 Gravity, ° API, 13.3 Pour point, ° F, 60
Sulfur, percent, 1.77 Color, brownish black
Viscosity, Saybolt Universal at 100°F., over 6,000 sec. Nitrogen, percent, 0.176

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 145 mm. Hg
First drop 127 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347	2.1	2.1	0.742	59.2	-	1.41362	132.6		
7	392	.7	2.8	.792	47.2	26	1.43366	133.5		
8	437	1.1	3.2	.812	42.8	30	1.44607	135.2		
9	482	2.0	5.2	.832	38.6	34	1.45795	137.6		
10	527	3.0	8.2	.846	35.4	37	1.46724	145.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.4	11.3	0.883	28.7	49	1.48223	151.0	44	Below 5
12	437	5.4	16.7	.891	27.3	49	1.48778	156.4	54	5
13	482	5.9	22.6	.900	25.7	50	1.49634	-	79	15
14	527	6.5	29.1	.915	23.1	54	1.50517	-	155	30
15	572	8.8	37.9	.927	21.1	57	1.51283	-	315	50
Residuum		61.8	99.7	1.031	5.7					

Carbon residue, Conradson Residuum 11.8 percent, crude 7.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	2.8	0.755	56.0	
Kerosene distillate	1.1	.812	42.8	
Gas oil	8.6	.859	33.2	
Nonviscous lubricating distillate	8.9	.888-.904	27.9-25.0	50-100
Medium lubricating distillate	6.6	.904-.918	25.0-22.6	100-200
Viscous lubricating distillate	9.9	.918-.934	22.6-20.0	Above 200
Residuum	61.8	1.031	5.7	
Distillation loss	.3			

1/ Distillation discontinued at 133°F.

Bureau of Mines Item 246
Bartlesville Laboratory
Sample 57090

IDENTIFICATION

Brookhaven field
Pilot, Case, and Smith, Tuscaloosa, Upper Cretaceous
10,152-10,312 feet

Mississippi
Lincoln County

GENERAL CHARACTERISTICS

Gravity, specific 0.850 Gravity, ° API, 35.0 Pour point, ° F, below 5
Sulfur, percent, 0.43 Color, brownish green
Viscosity, Saybolt Universal at 11°F., 59 sec., 100°F., 50 sec. Nitrogen, percent 0.055

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 751 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	1.8	1.8	0.642	88.9					
2	167	2.8	4.6	.673	78.8	8,9	1.37263	128.8		
3	212	4.2	8.8	.716	66.1	19	1.39899	127.2		
4	257	4.8	13.6	.739	60.0	21	1.41091	127.9		
5	302	4.0	17.6	.758	55.2	23	1.42148	129.4		
6	347	4.8	21.4	.776	50.9	24	1.43133	131.6		
7	392	4.3	25.7	.793	46.9	26	1.43986	134.1		
8	437	5.1	30.8	.809	43.4	28	1.44784	138.0		
9	482	5.7	36.5	.823	40.4	30	1.45533	141.0		
10	527	6.4	42.9	.834	38.2	30	1.46169	146.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.7	47.6	0.844	36.2	31	1.46924	143.2	40	10
12	437	6.6	54.2	.858	33.4	34	1.47295	147.9	46	30
13	482	5.3	59.5	.865	32.1	34	1.47944	145.6	57	50
14	527	5.3	64.8	.880	29.3	38	1.48520	-	79	64
15	572	6.2	71.0	.891	27.3	40			140	84
Residuum		28.0	99.0	.965	15.1					

Carbon residue, Conradson Residuum 8.5 percent crude 2.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.8	0.687	74.5	
Total gasoline and naphtha	25.7	0.739	60.0	
Kerosene distillate	10.8	.816	41.9	
Gas oil	16.7	.862	32.7	
Nonviscous lubricating distillate	11.0	.861-.884	32.8-28.6	50-100
Medium lubricating distillate	6.8	.884-.897	28.6-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	28.0	.965	15.1	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 247
Bartlesville
61128
Laboratory

IDENTIFICATION

Bryan field
Rodessa, Lower Cretaceous
10,302 - 10,312 feet

Mississippi
Jones County

GENERAL CHARACTERISTICS

Gravity, specific 0.839 Gravity, ° API 37.2 --- Pour point, ° F, 35
Sulfur, percent, 1.47 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 47 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.8	2.8	0.660	82.9					
2	167	3.6	6.4	.667	80.6	6.1	1.37926	133.5		
3	212	4.6	11.0	.685	75.1	4.7	1.38593	127.1		
4	257	5.6	16.6	.706	68.9	5.6	1.39699	126.4		
5	302	5.2	21.8	.727	63.1	8.0	1.40773	126.3		
6	347	5.6	27.4	.745	58.4	9.7	1.41804	128.9		
7	392	4.9	32.3	.762	54.2	12	1.42730	134.0		
8	437	4.3	36.6	.776	50.9	13	1.43413	136.0		
9	482	5.0	41.6	.790	47.6	14	1.44088	137.0		
10	527	6.0	47.6	.806	44.1	17	1.44941	137.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.9	50.5	0.833	38.4	26	1.46144	146.1	39	25
12	437	7.2	57.7	.845	36.0	28	1.46872	153.6	44	55
13	482	4.1	61.8	.861	32.8	32	1.47871	163.4	54	65
14	527	4.4	66.2	.878	29.7	37	1.48577	174.3	70	73
15	572	5.1	71.3	.887	28.0	38			110	105
Residuum		27.5	98.8	.995	10.7					

Carbon residue, Conradson Residuum 6.3 percent, crude 2.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.0	0.673	78.8	
Total gasoline and naphtha	32.3	0.713	67.0	
Kerosene distillate	15.3	.792	47.2	
Gas oil	10.0	.843	36.4	
Nonviscous lubricating distillate	10.0	.855-.885	34.0-28.4	50-100
Medium lubricating distillate	3.7	.885-.892	28.4-27.1	100-200
Viscous lubricating distillate		-	-	Above 200
Residuum	27.5	.995	10.7	
Distillation loss	1.2			

Bureau of Mines
Sample
Item 248
Bartlesville
61127
Laboratory

IDENTIFICATION

Bryan field
Sligo, Lower Cretaceous
10,760 - 10,770 feet

Mississippi
Jones County

GENERAL CHARACTERISTICS

Gravity, specific 0.834 --- Gravity, ° API, 38.2 Pour point, ° F, 35
Sulfur percent, 1.28 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 45 sec. Nitrogen, percent, 0.04 ---

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.660	82.9					
2	167	3.7	6.9	.663	81.9	3.2	1.37597	126.7		
3	212	4.8	11.7	.690	73.6	7.1	1.38905	125.8		
4	257	5.7	17.4	.710	67.8	7.5	1.39978	128.8		
5	302	5.3	22.7	.729	62.6	8.9	1.40871	129.8		
6	347	5.1	27.8	.746	58.2	10	1.41821	130.7		
7	392	5.6	33.4	.763	54.0	12	1.42733	134.3		
8	437	5.1	38.5	.779	50.1	14	1.43534	135.9		
9	482	5.3	43.8	.792	47.2	15	1.44231	136.5		
10	527	6.0	49.8	.806	44.1	17	1.45002	142.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	52.4	0.837	37.6	28	1.46286	146.5	39	30
12	437	5.8	58.2	.848	35.4	29	1.46867	152.4	43	40
13	482	4.8	63.0	.861	32.8	32	1.47736	163.1	52	60
14	527	4.7	67.7	.878	29.7	37	1.48640	160.3	68	80
15	572	5.1	72.8	.888	29.9	38			105	105
Residuum		26.3	99.1	.987	11.9					

Carbon residue, Conradson Residuum 7.4 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.7	0.673	78.8	
Total gasoline and naphtha	33.4	0.714	66.7	
Kerosene distillate	16.4	.793	46.9	
Gas oil	9.7	.846	35.8	
Nonviscous lubricating distillate	10.1	.858-.887	33.4-28.0	50-100
Medium lubricating distillate	3.2	.887-.893	28.0-27.0	100-200
Viscous lubricating distillate		-	-	Above 200
Residuum	26.3	.987	11.9	
Distillation loss	.9			

Item 249
Bureau of Mines Bartlesville Laboratory
Sample 64084

IDENTIFICATION

Dexter field
Pittman, Lower Tuscaloosa, Upper Cretaceous
9,668 - 9,674 feet

Mississippi
Walthall County

GENERAL CHARACTERISTICS

Gravity, specific, 0.863 Gravity, ° API, 32.2 Pour point, ° F, 55
Sulfur, percent, 0.18 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 118 sec., 100°F., 56 sec. Nitrogen, percent, 0.076

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 72 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.6	0.6	0.657	83.9					
2	167	1.6	2.2	0.677	77.5	11	1.37793	129.5		
3	212	3.0	5.2	0.726	63.4	24	1.40369	130.9		
4	257	3.8	9.0	0.745	58.4	24	1.41338	134.2		
5	287	4.0	13.0	0.763	54.0	25	1.42382	136.6		
6	302	4.1	17.1	0.782	49.4	27	1.43400	140.1		
7	392	3.6	20.7	0.796	46.3	28	1.44220	142.6		
8	437	5.0	25.7	0.811	43.0	29	1.45066	145.4		
9	482	5.4	31.1	0.825	40.0	31	1.45900	151.8		
1/10	527	5.9	37.0	0.836	37.8	31	1.46523	156.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	4.7	41.7	0.847	35.6	32	1.47077	156.0	41	25
12	437	7.5	49.2	0.853	34.4	31	1.47493	-	48	55
13	482	6.2	55.4	0.867	31.7	35	1.48231	-	62	75
2/14	527	7.9	63.3	0.881	29.1	38	-	-	99	95
15	572									
Residuum		35.8	99.1	0.951	17.3					

Carbon residue, Conradson Residuum 7.1 percent crude 2.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.2	0.703	69.8	
Total gasoline and naphtha	20.7	0.754	56.2	
Kerosene distillate	10.4	0.818	41.5	
Gas oil	15.3	0.845	36.0	
Nonviscous lubricating distillate	16.9	0.855-0.891	34.0-27.3	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	35.8	0.951	17.3	
Distillation loss	.9			

1/ Distillation discontinued at 522°F.

2/ Distillation discontinued at 527°F.

Item 250
Bureau of Mines Bartlesville Laboratory
Sample 45066

IDENTIFICATION

Eucutta field
Eutaw, Upper Cretaceous
5,141-5,190 feet

Mississippi
Wayne County

GENERAL CHARACTERISTICS

Gravity, specific, 0.915 Gravity, ° API, 23.1 Pour point, ° F, 38
Sulfur, percent, 3.89 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 360 sec., 130°F., 230 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	2.6	2.6							
2	167	1.9	4.5							
3	212	2.4	6.9	0.656	84.2	-	1.37126	135.6		
4	257	2.9	9.8	0.717	65.9	11	1.40158	129.5		
5	302	2.5	12.3	0.741	59.5	15	1.41477	133.1		
6	347	3.1	15.4	0.763	54.0	18				
7	392	3.2	18.6	0.781	49.7	21				
8	437	3.5	22.1	0.801	45.2	24				
9	482	2.7	24.8	0.817	41.7	27				
1/10	527	4.1	28.9	0.832	38.6	-				

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	2.9	31.8	0.851	34.8	-			40	5
12	437	5.2	37.0	0.868	31.5	38			45	20
13	482	4.6	41.6	0.894	26.8	47			57	40
14	527	4.9	46.5	0.914	23.3	54			85	60
2/15	572	8.1	54.6	0.921	22.1	-			135	75
Residuum		43.5	98.1	1.039	4.7					

Carbon residue, Conradson Residuum 22.2 percent crude 9.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.9	0.656	84.2	
Total gasoline and naphtha	18.6	0.716	66.1	
Kerosene distillate	6.2	0.808	43.6	
Gas oil	11.7	0.851	34.8	
Nonviscous lubricating distillate	9.5	0.879-0.916	29.5-23.0	50-100
Medium lubricating distillate	8.6	0.916-0.926	23.0-21.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	43.5	1.039	4.7	
Distillation loss	1.9			

1/ Distillation discontinued at 507°F

2/ Distillation discontinued at 565°F.

Item 251
Bureau of Mines Bartlesville Laboratory
Sample 57094

IDENTIFICATION

Heidelberg field
Upper Tuscaloosa, Upper Cretaceous
4,500-5,100 feet

Mississippi
Jasper County

GENERAL CHARACTERISTICS

Gravity specific 0.914 Gravity, ° API 23.3 Pour point, ° F, below 5
Sulfur percent 3.75 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 370 sec. 130°F., 170 sec. Nitrogen, percent, 0.112

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	2.2	2.2	0.639	89.9					
2	167	2.2	4.4	.656	84.2	0.8	1.32030	113.8		
3	212	2.6	7.0	.692	73.0	8.0	1.38692	126.1		
4	257	2.8	9.8	.719	65.3	12	1.39995	130.6		
5	302	3.2	13.0	.745	58.4	17	1.41540	127.5		
6	347	3.2	16.2	.769	52.5	21	1.42876	129.8		
7	392	3.0	19.2	.787	48.3	23	1.43852	141.3		
8	437	3.0	22.2	.802	44.9	25	1.44554	143.9		
9	482	3.3	25.5	.817	41.7	32	1.45329	145.3		
10	527	5.3	30.8	.837	37.6	36	1.46444	152.1		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	1.3	32.1	0.854	34.2	36	1.47705	158.0	41	20
12	437	5.1	37.2	.867	31.7	38	1.48344	140.3	45	32
13	482	4.7	41.9	.888	27.9	45	1.49414	177.4	58	50
14	527	4.6	46.5	.911	23.8	52	1.50365	-	85	65
15	572	6.2	52.7	.925	21.5	56			155	82
Residuum		45.4	98.1	1.037	5.0					

Carbon residue, Conradson Residuum 10.0 percent crude 5.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.664	81.6	
Total gasoline and naphtha	19.2	0.722	64.5	
Kerosine distillate	6.3	.810	43.2	
Gas oil	11.1	.850	35.0	
Nonviscous lubricating distillate	9.8	.873-.914	30.6-23.3	50 100
Medium lubricating distillate	6.3	.914-.933	23.3-20.2	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	45.4	1.037	5.0	
Distillation loss	1.9			

Item 252
Bureau of Mines Bartlesville Laboratory
Sample 48087

IDENTIFICATION

La Grange field
Baker, Lower Cretaceous
6,222-6,226 feet

Mississippi
Adams County

GENERAL CHARACTERISTICS

Gravity, specific 0.832 Gravity, ° API, 38.6 Pour point, ° F, 15
Sulfur, percent 0.17 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 250 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.3	1.3	0.643	88.6					
2	167	1.9	3.2	.658	83.6	1.8	1.36845	126.9		
3	212	3.7	6.9	.700	70.6	12	1.39027	138.6		
4	257	6.0	12.9	.725	63.4	15	1.40340	124.9		
5	302	7.5	20.4	.747	57.9	18	1.41457	126.4		
6	347	4.1	24.5	.764	53.7	19	1.42401	128.0		
7	392	5.6	30.1	.779	50.1	20	1.43149	129.9		
8	437	4.9	35.0	.793	46.9	21	1.43892	129.9		
9	482	6.3	41.3	.807	43.8	22	1.44622	132.5		
10	527	7.1	48.4	.822	40.6	24	1.45466	135.9		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
11	392	3.2	51.6	0.838	37.4	28			40	20
12	437	7.0	58.6	.844	36.2	27			44	35
13	482	5.9	64.5	.858	33.4	30			55	55
14	527	5.4	69.9	.870	31.1	33			76	70
15	572	6.1	76.0	.884	28.6	37			135	90
Residuum		22.9	98.9	.947	17.9					

Carbon residue, Conradson Residuum 7.8 percent crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.9	0.678	77.2	
Total gasoline and naphtha	30.1	0.735	61.0	
Kerosene distillate	18.3	.809	43.4	
Gas oil	10.2	.844	36.2	
Nonviscous lubricating distillate	11.0	.851-.876	34.8-30.0	50 100
Medium lubricating distillate	6.4	.876-.891	30.0-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.9	.947	17.9	
Distillation loss	1.1			

Bureau of Mines
Sample

Item 253
Bartlesville
61036

Laboratory

IDENTIFICATION

Little Creek field
Lower Tuscaloosa, Upper Cretaceous
10,700 - 10,800 feet

Mississippi
Pike County

GENERAL CHARACTERISTICS

Gravity, specific 0.825 Gravity, ° API, 38.0 -- Pour point, ° F, 15
Sulfur, percent, 0.16 -- Color, dark green --
Viscosity, Saybolt Universal at 100°F., 43 sec., Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.670	79.7					
2	167	3.2	4.5	.677	77.5	11	1.38125	127.5		
3	212	5.9	10.4	.716	66.1	19	1.39965	128.2		
4	257	6.6	17.0	.741	59.5	22	1.41259	127.5		
5	302	5.9	22.9	.750	57.2	19	1.42273	129.9		
6	347	5.6	28.5	.777	50.6	25	1.43247	134.5		
7	392	4.9	33.4	.792	47.2	26	1.44070	137.7		
8	437	4.9	38.3	.805	44.3	26	1.44803	140.8		
9	482	6.0	44.3	.818	41.5	27	1.45535	148.4		
10	527	7.1	51.4	.831	38.8	29	1.46255	149.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	54.0	0.846	35.8	32	1.46935	146.7	39	20
12	437	6.0	60.0	.850	35.0	30	1.47124	155.2	44	45
13	482	5.9	65.9	.863	32.5	33	1.47803	159.0	54	70
14	527	6.0	71.9	.875	30.2	35			76	80
15	572	5.8	77.7	.884	28.6	37			125	95
Residuum		21.6	99.3	.949	17.6					

Carbon residue, Conradson Residuum 5.4 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.4	0.698	71.2	
Total gasoline and naphtha	33.4	0.743	58.9	
Kerosene distillate	10.9	.812	42.8	
Gas oil	16.3	.843	36.4	
Nonviscous lubricating distillate	11.2	.858-.879	33.4-29.5	50-100
Medium lubricating distillate	5.5	.879-.888	29.5-27.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.6	.949	17.6	
Distillation loss	.7			

Bureau of Mines
Sample

Item 254
Bartlesville
64098

Laboratory

IDENTIFICATION

McComb field
Lower Tuscaloosa, Upper Cretaceous
10,493 - 10,575 feet

Mississippi
Pike County

GENERAL CHARACTERISTICS

Gravity, specific 0.827 -- Gravity, ° API, 39.6 -- Pour point, ° F, 40
Sulfur, percent, 0.09 -- Color, -- dark green --
Viscosity, Saybolt Universal at 100°F., 40 sec., -- Nitrogen, percent, 0.050 --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.656	84.2					
2	167	2.1	4.0	.674	78.4	9 4	1.37965	131.4		
3	212	5.3	9.3	.719	65.3	21	1.40114	132.3		
4	257	7.3	16.6	.744	58.7	24	1.41411	135.4		
5	302	6.0	22.6	.762	54.2	25	1.42446	140.6		
6	347	5.3	27.9	.777	50.6	25	1.43299	142.6		
7	392	5.3	33.2	.790	47.6	25	1.43964	142.1		
8	437	5.4	38.6	.802	44.9	25	1.44670	145.4		
9	482	6.0	44.6	.816	41.9	26	1.45454	148.8		
1/10	527	5.7	50.3	.828	39.4	27	1.46112	153.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.6	56.9	0.843	36.4	30	1.46603	155.2	40	25
12	437	6.7	63.6	.852	34.6	31	1.47402	157.3	47	55
13	482	6.2	69.8	.860	33.0	31	1.47603	157.3	5	70
14	527	5.7	75.5	.873	30.6	34			84	85
15	572	5.5	81.0	.881	29.1	35			140	100
Residuum		18.6	99.6	.942	18.7					

Carbon residue, Conradson Residuum 7.9 percent crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.3	0.696	74.8	
Total gasoline and naphtha	33.2	0.746	58.1	
Kerosene distillate	11.4	.809	43.3	
Gas oil	17.3	.840	36.9	
Nonviscous lubricating distillate	12.4	.854-.875	34.2-30.2	50-100
Medium lubricating distillate	6.7	.875-.885	30.2-28.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.6	.942	18.7	
Distillation loss	.4			

1/ Distillation discontinued at 516°F

Bureau of Mines Item 255
Sample Bartlesville Laboratory
64038

IDENTIFICATION

Pool Creek field
Sligo, Lower Cretaceous
11,200 feet

Mississippi
Jones County

GENERAL CHARACTERISTICS

Gravity, specific, 0.894 Gravity, ° API, 26.8 Pour point, ° F, below 5
Sulfur, percent 2.74 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 125 sec., 130°F, 95 sec. Nitrogen, percent, 0.061

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE I—Distillation at atmospheric pressure 749 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.652	85.5					
2	167	2.6	3.6	.674	76.4	9.4	1.37975	133.2		
3	212	2.6	6.2	.702	70.1	13	1.39411	134.1		
4	257	3.5	9.7	.717	65.9	11	1.40156	132.0		
5	302	3.6	13.5	.736	60.8	12	1.41168	131.8		
6	347	4.0	17.5	.756	55.2	16	1.42291	135.9		
7	392	3.7	21.2	.777	50.6	19	1.43338	137.8		
8	437	3.9	25.1	.793	46.9	21	1.44146	140.6		
9	482	4.3	29.4	.810	43.2	23	1.45026	145.8		
10	527	4.8	34.2	.830	39.0	26	1.46123	152.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	37.3	0.863	32.5	40	1.47545	162.1	41	20
12	437	5.9	43.2	.877	29.8	43	1.48289	170.1	48	45
13	482	5.1	48.3	.889	27.7	45	1.49456	163.5	72	55
14	527	5.3	53.6	.908	24.3	51	1.50427	-	100	60
15	572	6.0	59.6	.919	22.5	53			180	100
Residuum		36.7	96.3	1.028	6.1					

Carbon residue, Conradson Residuum 10.9 percent crude 4.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.2	0.662	75.9	
Total gasoline and naphtha	21.2	0.728	62.8	
Kerosene distillate	8.2	.802	45.0	
Gas oil	11.3	.852	34.6	
Nonviscous lubricating distillate	10.2	.878-.908	29.7-24.3	50-100
Medium lubricating distillate	7.1	.908-.922	24.3-22.0	100-200
Viscous lubricating distillate	1.6	.922-.925	22.0-21.5	Above 200
Residuum	36.7	1.028	6.1	
Distillation loss	1.7			

1/ Distillation discontinued at 516°F.

Bureau of Mines Item 256
Sample Bartlesville Laboratory
61078

IDENTIFICATION

Raleigh field
Hosston, Lower Cretaceous
12,084-12,150 feet

Mississippi
Smith County

GENERAL CHARACTERISTICS

Gravity, specific, 0.798 Gravity, ° API, 45.8 Pour point, ° F, below 5
Sulfur, percent 0.43 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 69 sec., 100°F, 58 sec. Nitrogen, percent, 0.27

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE I—Distillation at atmospheric pressure 746 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.9	3.9	0.647	87.2					
2	167	4.6	8.5	.671	79.4	8.0	1.37938	135.6		
3	212	6.1	14.6	.699	70.9	11	1.39750	130.0		
4	257	6.2	20.8	.720	65.0	12	1.40524	127.8		
5	302	6.7	27.5	.739	60.0	14	1.41360	132.2		
6	347	7.1	34.6	.760	54.7	17	1.42458	136.4		
7	392	6.3	40.9	.776	50.9	18	1.43342	136.9		
8	437	6.0	46.9	.788	48.1	18	1.44018	133.5		
9	482	5.4	52.3	.800	45.4	19	1.44575	138.2		
10	527	6.7	59.0	.814	42.3	21	1.45338	141.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.4	63.4	0.831	38.8	25	1.46395	148.5	39	25
12	437	6.8	70.2	.844	36.2	27	1.47070	155.7	45	45
13	482	4.2	74.4	.861	32.8	32	1.48001	161.5	55	60
14	527	4.8	79.2	.875	30.2	35	1.48647	171.3	74	70
15	572	4.3	83.5	.880	29.3	35			120	85
Residuum		14.7	98.2	.935	19.8					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.6	0.676	77.8	
Total gasoline and naphtha	40.9	0.723	64.2	
Kerosene distillate	18.1	.801	45.2	
Gas oil	10.6	.840	37.0	
Nonviscous lubricating distillate	9.8	.853-.878	34.4-29.7	50-100
Medium lubricating distillate	4.1	.878-.882	29.7-28.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	14.7	.935	19.8	
Distillation loss	1.8			

Bureau of Mines Item 257
Bartlesville Laboratory
Sample 61100

IDENTIFICATION

Soso field
11,701 ,Bailey, Rodessa, Lower Cretaceous
12,041-12,055 feet

Mississippi
Jasper County

GENERAL CHARACTERISTICS

Gravity, specific, 0.820 Gravity, ° API, 41.1 Pour point, ° F, 5
Sulfur, percent, 0.89 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 41 sec. Nitrogen percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 738 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122	2.5	2.5	0.663	81.9					
2	167	4.0	6.5	0.674	78.4	9.4	1.38060	129.3		
3	212	5.5	12.0	0.698	71.2	11	1.39184	127.6		
4	257	5.8	17.8	0.717	65.9	11	1.40146	127.8		
5	302	6.2	24.0	0.736	60.8	12	1.41148	129.2		
6	347	6.6	30.6	0.755	55.9	14	1.42198	131.6		
7	392	5.9	36.5	0.772	51.8	16	1.43064	135.3		
8	437	5.9	42.4	0.786	48.5	17	1.43822	134.9		
9	482	5.7	48.1	0.800	45.4	19	1.44503	138.3		
10	527	6.5	54.6	0.816	41.9	22	1.45327	143.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.9	58.5	0.832	38.6	25	1.46471	149.6	39	25
12	437	7.4	65.9	0.846	35.8	28	1.47229	155.9	45	40
13	482	4.8	70.7	0.868	31.5	35	1.48187	164.6	58	70
14	527	4.7	75.4	0.879	29.5	37			79	80
15	572	4.6	80.0	0.890	27.5	39			125	90
Residuum		19.4	99.4	0.964	15.3					

Carbon residue, Conradson Residuum 9.9 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.0	0.683	75.7	
Total gasoline and naphtha	36.5	0.725	63.7	
Kerosene distillate	18.1	0.801	45.2	
Gas oil	10.0	0.841	36.8	
Nonviscous lubricating distillate	10.6	0.855-0.884	34.0-28.6	50-100
Medium lubricating distillate	4.8	0.884-0.895	28.6-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.4	0.964	15.3	
Distillation loss	.6			

Bureau of Mines Item 258
Bartlesville Laboratory
Sample 61054

IDENTIFICATION

Tinsley field
Selma, Upper Cretaceous
4,678-4,712 feet

Mississippi
Yazoo County

GENERAL CHARACTERISTICS

Gravity, specific 0.874 Gravity, ° API 30.4 Pour point, ° F, below 5
Sulfur percent 1.02 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 107 sec., at 100°F., 79 sec. Nitrogen percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.9	2.9	0.682	76.0	-	1.38523	130.9		
3	212	2.8	5.7	0.689	73.9	6.6	1.38756	124.6		
4	257	3.7	9.4	0.712	67.2	8.5	1.39938	125.8		
5	302	3.7	13.1	0.732	61.8	10	1.40988	126.0		
6	347	3.8	16.9	0.752	56.7	13	1.42058	132.4		
7	392	4.0	20.9	0.773	51.6	17	1.43127	135.9		
8	437	4.7	25.6	0.790	47.6	19	1.44031	138.7		
9	482	6.4	32.0	0.813	42.6	25	1.45149	140.3		
1/10	527	3.0	35.0	0.826	39.8	26	1.45889	146.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	38.1	0.852	34.6	35	1.47024	150.9	41	15
12	437	6.3	44.4	0.861	32.8	35	1.47558	150.4	46	30
13	482	6.0	50.4	0.878	29.7	40	1.48451	162.4	59	50
14	527	5.7	56.1	0.891	27.3	43	1.49231	163.4	86	65
2/15	572	5.9	62.0	0.912	23.7	50			140	80
Residuum		37.8	99.8	0.974	13.8					

Carbon residue, Conradson Residuum 8.5 percent crude 3.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.7	0.685	75.1	
Total gasoline and naphtha	20.9	0.727	63.1	
Kerosene distillate	11.1	0.803	44.7	
Gas oil	11.4	0.850	35.0	
Nonviscous lubricating distillate	11.4	0.867-0.895	31.7-26.6	50-100
Medium lubricating distillate	7.2	0.895-0.922	26.6-22.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	37.8	0.974	13.8	
Distillation loss	.2			

1/ Distillation discontinued at 500°F

2/ Distillation discontinued at 554°F.

Bureau of Mines
Sample
Item 259
Bartlesville
54034
Laboratory

IDENTIFICATION

Yellow Creek field
Stanley, Eutaw, Upper Cretaceous
5,144-5,219 feet

Mississippi
Wayne County

GENERAL CHARACTERISTICS

Gravity, specific 0.933 Gravity, ° API, 20.2 Pour point, ° F, below 5
Sulfur percent 3.98 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 960 sec., 130°F., 350 sec. Nitrogen, percent, 0.147

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 21 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8							
2	167	1.6	3.4	0.647	87.2	-	1.36674	120.1		
3	212	1.9	5.3	.689	73.9	6.6	-	-		
4	257	2.2	7.5	.713	67.0	8.9	1.39401	126.1		
5	302	2.5	10.0	.739	60.0	14	1.41401	131.7		
6	347	2.5	12.5	.764	53.7	19	1.42770	138.8		
7	392	2.7	15.2	.785	48.8	23	1.43870	142.5		
8	437	2.7	17.9	.798	45.8	23	1.44666	142.3		
9	482	3.0	20.9	.815	42.1	26	1.45414	146.7		
1/10	527	4.6	25.5	.834	38.2	30	1.46445	152.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.5	28.0	0.859	33.2	38			40	10
12	437	3.9	31.9	.871	31.0	40			45	20
13	482	4.7	36.6	.888	27.9	45			56	35
14	527	5.4	42.0	.909	24.2	51			81	55
15	572	5.6	47.6	.925	21.5	56			145	70
Residuum		51.6	99.2	1.036	5.1					

Carbon residue, Conradson Residuum 18.0 percent crude 10.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.662	82.2	
Total gasoline and naphtha	15.2	0.721	69.8	
Kerosene distillate	5.7	.807	43.8	
Gas oil	11.6	.855	34.0	
Nonviscous lubricating distillate	8.5	.881-.914	29.1-23.3	50-100
Medium lubricating distillate	6.6	.914-.933	23.3-20.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	51.6	1.036	5.1	
Distillation loss	.8			

1/ Distillation discontinued at 518°F.

Bureau of Mines
Sample
Item 260
Laramie
EC-58-177
Laboratory

IDENTIFICATION

Cabin Creek field
Siluro-Ordovician
8,219-8,951 feet

Montana
Fallon County

GENERAL CHARACTERISTICS

Gravity, specific, 0.863 Gravity, ° API, 32.5 Pour point, ° F, below 5
Sulfur, percent .47 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 56 sec., 77°F., 74 sec. Nitrogen, percent, 0.134

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.642	88.9					
2	167	1.8	3.4	.661	82.6	3.2	1.37511	125.9		
3	212	2.9	6.3	.694	72.4	8.9	1.39039	127.7		
4	257	3.4	9.7	.720	65.0	12	1.40307	129.3		
5	302	3.7	13.4	.734	61.3	11	1.41107	131.9		
6	347	4.8	18.2	.750	57.2	12	1.41931	134.3		
7	392	4.4	22.6	.764	53.7	13	1.42710	132.1		
8	437	5.4	28.0	.777	50.6	13	1.43461	136.2		
9	482	6.1	34.1	.794	46.7	16	1.44398	143.4		
10	527	7.1	41.2	.807	43.8	17	1.45163	146.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	44.8	0.826	39.8	22	1.46163	151.1	37	20
12	437	5.8	50.6	.837	37.6	24	1.46694	152.5	41	25
13	482	4.9	55.5	.858	33.4	30	1.48075	171.7	49	35
14	527	4.6	60.1	.881	29.1	38			67	50
15	572	4.2	64.3	.909	24.2	48			125	65
Residuum		33.3	97.6	1.004	9.4					

Carbon residue, Conradson Residuum 22.5 percent, crude 8.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.3	0.671	79.4	
Total gasoline and naphtha	22.6	0.724	63.9	
Kerosene distillate	18.6	.794	46.7	
Gas oil	12.1	.841	36.8	
Nonviscous lubricating distillate	7.0	.860-.897	33.0-26.3	50-100
Medium lubricating distillate	4.0	.897-.922	26.3-22.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	33.3	1.004	9.4	
Distillation loss	2.4			

Bureau of Mines Item 261
Laramie Laboratory
Sample PC-50-297

IDENTIFICATION

Cut Bank field
Madison, Mississippian
3,244-3,247 feet

Montana
Glacier County

GENERAL CHARACTERISTICS

Gravity, specific, 0.838 Gravity, ° API, 37.3 Pour point, ° F, - 2
Sulfur, percent, 0.80 Color, - brownish-green
Viscosity, Saybolt Universal at 100°F., 39 sec Nitrogen, percent, 0.055

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.660	82.9					
2	167	4.2	6.3	.675	78.1	9.8	1.3800	-		
3	212	4.5	10.8	.718	65.6	20	1.4010	-		
4	257	4.3	15.1	.739	60.0	21	1.4126	-		
5	302	6.1	21.2	.759	54.9	23	1.4255	-		
6	347	6.0	27.2	.778	50.4	25	1.4345	-		
7	392	5.6	32.8	.792	47.2	26	1.4422	-		
8	437	5.7	38.5	.805	44.3	26	1.4485	-		
9	482	6.0	44.5	.820	41.1	28	1.4561	-		
10	527	7.3	51.8	.837	37.6	32	1.4658	-		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.4	54.2	0.860	33.0	38			41	20
12	437	7.6	61.8	.867	31.7	38			45	35
13	482	5.7	67.5	.880	29.3	41			56	50
14	527	4.8	72.3	.896	26.4	45			80	75
15	572	6.7	79.0	.904	25.0	46			140	90
Residuum		19.8	98.8	.953	17.0					

Carbon residue, Conradson Residuum 5.8 percent, crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.8	0.690	73.6	
Total gasoline and naphtha	32.8	0.743	58.2	
Kerosene distillate	11.7	.813	42.5	
Gas oil	16.5	.853	34.4	
Nonviscous lubricating distillate	10.8	.873-.899	30.6-25.2	50-100
Medium lubricating distillate	7.2	.899-.909	25.2-24.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.8	.953	17.0	
Distillation loss	1.2			

Bureau of Mines Item 262
Laramie Laboratory
Sample 45L-2

IDENTIFICATION

Cut Bank field
Cut Bank, Lower Cretaceous
2,995-3,007 feet

Montana
Glacier County

GENERAL CHARACTERISTICS

Gravity, specific 0.839 Gravity, ° API, 37.2 Pour point, ° F, -
Sulfur, percent, 1.05 Color, black
Viscosity, Saybolt Universal at 100°F., 38 sec., 77°F., 43 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 584 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.0	4.0	0.646	87.5					
2	167	3.3	7.3	.675	78.1	6 6				
3	212	5.6	12.9	.717	65.9	17				
4	257	5.6	18.5	.747	57.9	22				
5	302	5.8	24.3	.769	52.5	25				
6	347	5.6	29.9	.787	48.3	27				
7	392	5.3	35.2	.801	45.2	28				
8	437	5.2	40.4	.816	41.9	29				
9	482	6.2	46.6	.833	38.4	32				
10	527	8.0	54.6	.851	34.8	36				

Stage 2—Distillation continued at 40 mm Hg

11	392	1.8	56.4	0.869	31.3	-			44	25
12	437	5.3	61.7	.877	29.9	41			49	35
13	482	5.6	67.3	.891	27.3	44			61	55
14	527	5.6	72.9	.903	25.2	47			94	70
15	572	6.7	79.6	.917	22.8	51			195	90
Residuum		18.9	98.5	.975	13.6					

Carbon residue, Conradson Residuum 10.4 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.9	0.684	75.4	
Total gasoline and naphtha	35.2	0.742	59.2	
Kerosene distillate	5.2	.816	41.9	
Gas oil	19.0	.851	34.8	
Nonviscous lubricating distillate	11.0	.880-.904	29.3-25.0	50-100
Medium lubricating distillate	6.3	.904-.918	25.0-22.6	100-200
Viscous lubricating distillate	2.9	.918-.924	22.6-21.6	Above 200
Residuum	18.9	.975	13.6	
Distillation loss	1.3			

Bureau of Mines
Sample
Item 263
Laramie
PC-64-170
Laboratory

IDENTIFICATION

Fred and George Creek field
Sunburst, Lower Cretaceous
2,572-2,597 feet

Montana
Toole County

GENERAL CHARACTERISTICS

Gravity, specific, 0.831 Gravity, ° API, 38.8 Pour point, ° F, below 5
Sulfur, percent, .67 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.042

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 87 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.0	3.0	0.661	82.6					
2	167	3.5	6.5	.663	81.9	4.2	1.37225	129.7		
3	212	4.7	11.2	.706	68.9	15	1.39464	127.4		
4	257	6.4	17.6	.733	61.5	18	1.41042	134.4		
5	302	6.5	24.1	.759	54.9	23	1.42406	143.0		
6	347	6.7	30.8	.779	50.1	26	1.43523	148.8		
7	392	5.8	36.6	.793	46.9	26	1.44264	149.8		
8	437	5.2	41.8	.805	44.3	26	1.44845	148.2		
9	482	5.5	47.3	.819	41.3	28	1.45538	148.0		
10	527	7.0	54.3	.835	38.0	31	1.46455	156.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.6	56.9	0.854	34.2	36	1.47504	164.5	37	5
12	437	5.9	62.8	.861	32.8	35	1.47956	167.9	41	15
13	482	5.4	68.2	.876	30.0	39	1.48777	174.5	50	40
14	527	5.1	73.3	.890	27.5	42			64	55
15	572	7.7	81.0	.904	25.0	46			115	80
Residuum		17.0	98.0	.966	15.0					

Carbon residue, Conradson Residuum 10.1 percent, crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.2	0.680	76.6	
Total gasoline and naphtha	36.6	0.749	57.4	
Kerosene distillate	10.7	.812	42.8	
Gas oil	18.2	.853	34.4	
Nonviscous lubricating distillate	9.7	.876-.900	30.0-25.7	50-100
Medium lubricating distillate	5.8	.900-.913	25.7-23.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.0	.966	15.0	
Distillation loss	2.0			

Bureau of Mines
Sample
Item 264
Laramie
PC-63-95
Laboratory

IDENTIFICATION

Lookout Butte field
Red River, Ordovician
8,721-8,723 feet

Montana
Fallon County

GENERAL CHARACTERISTICS

Gravity, specific, 0.872 Gravity, ° API, 30.8 Pour point, ° F, below 5
Sulfur, percent, .42 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 62 sec. 77°F., 83 sec. Nitrogen, percent, 0.129

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 92 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.3	0.3							
2	167	1.5	1.8	0.671	79.4	-	1.38269	122.4		
3	212	1.7	3.5	.695	72.1	9.4	1.39250	122.9		
4	257	3.7	7.2	.720	65.0	12	1.40278	124.9		
5	302	3.8	11.0	.742	59.2	15	1.41494	130.6		
6	347	3.1	14.1	.757	55.4	15	1.42308	136.1		
7	392	4.9	19.0	.771	52.0	16	1.43681	137.0		
8	437	5.1	24.1	.788	48.1	18	1.44091	143.9		
9	482	7.2	31.3	.808	43.6	22	1.45201	154.7		
10	527	8.7	40.0	.824	40.2	25	1.46179	160.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	42.9	0.840	37.0	29	1.46877	162.2	37	20
12	437	7.4	50.3	.846	35.8	28	1.47229	159.7	40	25
13	482	5.0	55.3	.862	32.7	32	1.48141	168.0	47	35
14	527	5.2	60.5	.884	28.6	40			64	50
15	572	3.6	64.1	.910	24.0	49			105	70
Residuum		33.6	97.7	1.006	9.2					

Carbon residue, Conradson Residuum 23.7 percent, crude 9.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.5	0.683	75.7	
Total gasoline and naphtha	19.0	0.737	60.5	
Kerosene distillate	21.0	.810	43.2	
Gas oil	13.7	.852	34.6	
Nonviscous lubricating distillate	8.1	.866-.907	31.9-24.5	50-100
Medium lubricating distillate	2.3	.907-.921	24.5-22.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	33.6	1.006	9.2	
Distillation loss	2.3			

Bureau of Mines
Sample
Item 265
Laramie
PC-58-175
Laboratory

IDENTIFICATION

Pennel field
Red River, Ordovician
8,640 - 8,690 feet

Montana
Fallon County

GENERAL CHARACTERISTICS

Gravity, specific 0.868 Gravity, ° API, 31.5 Pour point, ° F, below 5
Sulfur, percent, .48 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 67 sec., 77°F., 78 sec. Nitrogen, percent, 0.145

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 73 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.9	1.9	0.653	85.2					
2	167	1.8	3.7	.673	78.8	8.9	1.38325	128.5		
3	212	2.6	6.3	.692	73.0	8.0	1.40206	136.9		
4	257	3.6	9.9	.714	66.7	9.4	1.41588	146.1		
5	302	3.3	13.2	.733	61.5	11	1.41048	129.5		
6	347	4.0	17.2	.746	58.2	10	1.41769	131.4		
7	392	5.8	23.0	.763	54.0	12	1.42682	134.4		
8	437	4.7	27.7	.781	49.7	15	1.43703	139.2		
9	482	5.8	33.5	.797	46.0	17	1.44553	145.4		
10	527	6.7	40.2	.807	43.8	17	1.45338	147.6		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	2.6	42.8	0.835	38.0	27	1.46259	150.3	38	20
12	437	4.9	47.7	.836	37.8	23	1.46715	155.3	40	20
13	482	4.1	51.8	.853	34.4	28	1.47736	162.9	45	25
14	527	4.2	56.0	.877	29.9	36			58	45
15	572	4.5	60.5	.901	25.6	45			90	55
Residuum		36.6	97.1	.996	10.6					

Carbon residue, Conradson Residuum 19.9 percent, crude 8.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.3	0.675	78.1	
Total gasoline and naphtha	23.0	0.724	63.9	
Kerosene distillate	17.2	.796	46.3	
Gas oil	11.1	.843	36.4	
Nonviscous lubricating distillate	8.2	.862-.908	32.7-24.3	50-100
Medium lubricating distillate	1.0	.908-.913	24.3-23.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	36.6	.996	10.6	
Distillation loss	2.9			

Bureau of Mines
Sample
Item 266
Laramie
PC-58-178
Laboratory

IDENTIFICATION

Pine field
Silurian
8,456 - 8,516 feet

Montana
Wibaux County

GENERAL CHARACTERISTICS

Gravity, specific 0.874 Gravity, ° API, 30.4 Pour point, ° F, below 5
Sulfur, percent, .54 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 71 sec., 77°F., 100 sec. Nitrogen, percent, 0.160

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 131 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	1.6	1.6	0.661	82.6	-	1.37312	123.6		
3	212	2.2	3.8	.697	71.5	10	1.39039	128.1		
4	257	2.8	6.6	.722	64.5	13	1.40284	130.5		
5	302	3.1	9.7	.735	61.0	12	1.41177	132.8		
6	347	3.9	13.6	.749	57.4	12	1.41931	133.7		
7	392	5.3	18.9	.764	53.7	13	1.42745	131.3		
8	437	5.2	24.1	.782	49.5	15	1.43715	138.3		
9	482	5.8	29.9	.797	46.0	17	1.44553	142.5		
10	527	6.4	36.3	.809	43.4	18	1.45223	146.9		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	4.8	41.1	0.826	39.8	22	1.46216	151.9	38	20
12	437	5.3	46.4	.838	37.4	24	1.46757	156.7	41	25
13	482	6.0	52.4	.858	33.4	30	1.48019	169.7	49	30
14	527	4.1	56.5	.885	28.4	40			70	50
15	572	4.2	60.7	.908	24.3	48			125	65
Residuum		37.2	97.9	1.015	7.9					

Carbon residue, Conradson Residuum 21.8 percent, crude 9.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.8	0.682	76.0	
Total gasoline and naphtha	18.9	0.733	61.5	
Kerosene distillate	17.4	.797	46.0	
Gas oil	13.3	.839	37.2	
Nonviscous lubricating distillate	7.1	.859-.898	33.2-26.1	50-100
Medium lubricating distillate	4.0	.898-.920	26.1-22.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	37.2	1.015	7.9	
Distillation loss	2.1			

Bureau of Mines
Sample
Item 267
Laramie
PC-52-245

Laboratory

IDENTIFICATION

Pine field
Red River, Ordovician
8,910-8,970 feet

Montana
Wibaux County

GENERAL CHARACTERISTICS

Gravity, specific 0.856 Gravity, ° API, 33.8 Pour point, ° F, below 5
Sulfur, percent, 0.36 Color, black
Viscosity, Saybolt Universal at 100°F., 55 sec., 77°F., 67 sec. Nitrogen, percent, 0.123

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.648	86.9					
2	167	1.9	3.8	.660	82.9	2.7	1.37089	127.9		
3	212	2.9	6.7	.696	71.8	10	1.38984	125.6		
4	257	3.8	10.5	.713	67.0	8.9	1.39918	128.9		
5	302	4.0	14.5	.731	62.1	9.9	1.40865	130.1		
6	347	4.5	19.0	.748	57.7	11	1.41728	133.3		
7	392	5.7	24.7	.763	54.0	12	1.42538	131.8		
8	437	5.7	30.4	.780	49.9	15	1.43461	138.0		
9	482	6.6	37.0	.797	46.0	17	1.44475	142.4		
10	527	7.5	44.5	.810	43.2	19	1.45168	146.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	47.4	0.830	39.0	24			36	20.
12	437	5.9	53.3	.839	37.2	25			42	25.
13	482	4.9	58.2	.864	32.3	33			48	35.
14	527	3.9	62.1	.886	28.2	40			64	50.
15	572	4.9	67.0	.903	25.2	46			110.	70.
Residuum		31.2	98.2	1.002	9.7					

Carbon residue, Conradson Residuum 18.9 percent crude 6.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.7	0.672	79.1	
Total gasoline and naphtha	24.7	0.723	64.2	
Kerosene distillate	19.8	.797	46.0	
Gas oil	11.9	.844	36.2	
Nonviscous lubricating distillate	7.1	.868-.899	31.5-25.9	50-100
Medium lubricating distillate	3.5	.899-.913	25.9-23.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	31.2	1.002	9.7	
Distillation loss	1.8			

Bureau of Mines
Sample
Item 268
Laramie
PC-52-247

Laboratory

IDENTIFICATION

Poplar, East field
Charles, Mississippian
5,648 - 5,680 feet

Montana
Roosevelt County

GENERAL CHARACTERISTICS

Gravity, specific 0.824 Gravity, ° API, 40.2 Pour point, ° F, 15
Sulfur, percent, 0.33 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 37 sec. Nitrogen, percent, 0.028

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.642	88.9					
2	167	2.7	4.0	.660	82.9	2.7	1.37058	119.2		
3	212	5.1	9.1	.703	69.8	13	1.39148	120.2		
4	257	7.0	16.1	.730	62.3	17	1.40485	126.4		
5	302	6.0	22.1	.748	57.7	18	1.41518	128.8		
6	347	6.0	28.1	.766	53.2	20	-	-		
7	392	6.0	34.1	.784	49.0	22	1.43433	137.8		
8	437	5.6	39.7	.799	45.6	24	1.44275	138.1		
9	482	6.2	45.9	.814	42.3	25	1.45092	141.6		
10	527	7.1	53.0	.830	39.0	28	1.46018	146.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.1	57.1	0.849	35.2	33			40	15
12	437	6.9	64.0	.856	33.8	33			45	30
13	482	5.7	69.7	.873	30.6	37			55	55
14	527	5.3	75.0	.884	28.6	40			77	70
15	572	6.1	81.1	.893	27.0	41			130	85
Residuum		17.7	98.8	.939	19.2					

Carbon residue, Conradson Residuum 3.3 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.1	0.682	76.0	
Total gasoline and naphtha	34.1	0.736	60.8	
Kerosene distillate	11.8	.807	43.8	
Gas oil	17.6	.844	36.2	
Nonviscous lubricating distillate	11.3	.864-.888	32.3-27.9	50-100
Medium lubricating distillate	6.3	.888-.898	27.9-26.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.7	.939	19.2	
Distillation loss	1.2			

Bureau of Mines Item 269
Sample Laramie Laboratory
PC-50-283

IDENTIFICATION

Sumatra field
Amsden, Pennsylvanian
4,385 - 4,415 feet

Montana
Rosebud County

GENERAL CHARACTERISTICS

Gravity, specific, 0.879 Gravity, ° API, 29.5 Pour point, ° F, 15
Sulfur, percent, 0.65 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 72 sec., 77°F, 105 sec. Nitrogen, percent, 0.122

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 154 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	0.7	0.7	0.708	68.4	-	1.3971	-		
3	212	4.7	5.4	.739	60.0	30	1.4112	-		
4	257	1.4	6.8	.759	54.9	31	1.4215	-		
5	302	1.7	8.5	.767	53.0	27	1.4262	-		
6	347	3.8	12.3	.780	49.9	26	1.4325	-		
7	392	3.9	16.2	.794	46.7	27	1.4401	-		
8	437	5.2	21.4	.809	43.4	28	1.4485	-		
9	482	5.7	27.1	.823	40.4	30	1.4564	-		
10	527	6.8	33.9	.837	37.6	32	1.4640	-		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.1	37.0	0.853	34.4	35			41	10
12	437	7.9	44.9	.858	33.4	34			45	35
13	482	7.5	52.4	.870	31.1	36			58	55
14	527	5.9	58.3	.887	28.0	41			87	70
15	572	8.1	66.4	.899	25.9	44			165	85
Residuum		32.5	98.9	.920	14.4					

Carbon residue, Conradson Residuum 11.2 percent, crude 4.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.4	0.735	61.0	
Total gasoline and naphtha	16.2	0.765	53.5	
Kerosene distillate	10.9	.816	41.9	
Gas oil	16.8	.849	35.2	
Nonviscous lubricating distillate	12.5	.863-.889	32.5-27.7	50-100
Medium lubricating distillate	9.0	.889-.904	27.7-25.0	100-200
Viscous lubricating distillate	1.0	.904-.906	25.0-24.7	Above 200
Residuum	32.5	.970	14.4	
Distillation loss	1.1			

Bureau of Mines Item 270
Sample Laramie Laboratory
PC-64-157

IDENTIFICATION

Singleton field
J sand, Middle Cretaceous

Nebraska
Banner County

GENERAL CHARACTERISTICS

Gravity, specific, 0.844 Gravity, ° API, 36.2 Pour point, ° F, 50
Sulfur, percent, .14 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 48 sec. Nitrogen, percent, 0.108

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 89 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.8	1.8	0.648	86.9					
2	167	1.9	3.7	.678	77.2	11	1.38496	122.3		
3	212	4.1	7.8	.711	67.5	17	1.39576	121.6		
4	257	5.7	13.5	.738	60.2	21	1.40841	127.4		
5	302	4.7	18.2	.756	55.7	22	1.41995	131.0		
6	347	5.0	23.2	.776	50.9	24	1.43109	136.3		
7	392	3.5	26.7	.793	46.9	26	1.44001	137.0		
8	437	4.5	31.2	.806	44.1	27	1.44762	140.1		
9	482	4.4	35.6	.820	41.1	28	1.45544	146.6		
10	527	6.3	41.9	.831	38.8	29	1.46210	153.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.8	45.7	0.844	36.2	31	1.47004	154.6	38	15
12	437	5.1	50.8	.849	35.2	29	1.47229	154.8	43	30
13	482	6.4	57.2	.858	33.4	30	1.47757	156.3	51	55
14	527	4.4	61.6	.872	30.8	34			67	70
15	572	5.4	67.0	.879	29.5	34			27	85
Residuum		30.6	97.6	.951	17.3					

Carbon residue, Conradson Residuum 7.5 percent, crude 2.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.8	0.688	74.2	
Total gasoline and naphtha	26.7	0.741	59.5	
Kerosene distillate	8.9	.813	42.6	
Gas oil	17.8	.843	36.4	
Nonviscous lubricating distillate	11.4	.857-.880	33.6-29.3	50-100
Medium lubricating distillate	2.2	.880-.883	29.3-28.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	30.6	.951	17.3	
Distillation loss	2.4			

Bureau of Mines
Sample
Item 271
Laramie
PC-56-171
Laboratory

IDENTIFICATION

Sloss-Hafeman field
J sand, Middle Cretaceous
6213-6229 feet

Nebraska
Kimball County

GENERAL CHARACTERISTICS

Gravity, specific 0.835 - Gravity, ° API, 38.0 - Pour point, ° F, 50
Sulfur, percent, 0.12 Color, dark green -
Viscosity, Saybolt Universal at 100°F., 40 sec. Nitrogen percent, 0.085 -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	2.5	2.5	0.642	88.9					
2	167	3.2	5.7	.675	78.1	9.8	1.37876	121.2		
3	212	5.2	10.9	.724	63.9	23	1.40194	131.0		
4	257	5.8	16.7	.743	58.9	23	1.41242	132.5		
5	302	3.8	20.5	.759	54.9	23	1.42221	135.8		
6	347	5.6	26.1	.779	50.1	26	1.43285	135.7		
7	392	3.8	29.9	.792	47.2	26	1.44091	143.3		
8	437	5.3	35.2	.805	44.3	26	1.44878	147.8		
9	482	4.5	39.7	.821	40.9	29	1.45711	152.5		
10	527	6.5	46.2	.831	38.8	29	1.46328	158.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.7	49.9	0.846	35.8	32			40	20
12	437	6.6	56.5	.851	34.8	30			45	40
13	482	4.8	61.3	.869	31.3	36			56	65
14	527	5.1	66.4	.877	29.9	36			75	80
15	572	6.6	73.0	.889	27.7	39			125	95
Residuum		24.5	97.5	.948	17.8					

Carbon residue, Conradson Residuum 4.7 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.9	0.691	73.3	
Total gasoline and naphtha	29.9	0.739	60.0	
Kerosene distillate	9.8	.812	42.8	
Gas oil	16.2	.843	36.4	
Nonviscous lubricating distillate	10.8	.859-.883	33.2-28.8	50-100
Medium lubricating distillate	6.3	.883-.895	28.8-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.5	.948	17.8	
Distillation loss	2.5			

Bureau of Mines
Sample
Item 272
Bagleyville
54078
Laboratory

IDENTIFICATION

Bagley field
Siluro-Devonian
10,762-10,960 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific, 0.797 Gravity, ° API, 46.0 - Pour point, ° F, below 5
Sulfur, percent, 0.34 Color, NPA 7 -
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.008 -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 104 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.8	2.8	0.674	78.4	-	1.38465	124.7		
4	257	5.5	8.3	.708	68.4	6.6	1.39753	121.5		
5	302	8.8	17.1	.727	63.1	8.0	1.40694	121.4		
6	347	9.6	26.7	.746	58.2	10	1.41667	124.7		
7	392	9.7	36.4	.765	53.5	13	1.42596	125.0		
8	437	8.7	45.1	.783	49.2	16	1.43449	127.2		
9	482	9.9	55.0	.798	45.8	18	1.44264	128.2		
10	527	10.5	65.5	.814	42.3	21	1.45101	131.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.2	68.7	0.831	38.8	25	1.45983	135.8	40	20
12	437	6.9	75.6	.837	37.6	24	1.46273	137.8	43	40
13	482	6.5	82.1	.844	36.2	24	1.46781	140.1	51	55
14	527	5.4	87.5	.855	34.0	26			64	75
15	572	4.8	92.3	.867	31.7	28			94	90
Residuum		7.6	99.9	.919	22.5					

Carbon residue, Conradson Residuum 2.6 percent crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.8	0.674	78.4	
Total gasoline and naphtha	36.4	0.735	61.0	
Kerosene distillate	29.1	.799	45.6	
Gas oil	12.6	.836	37.8	
Nonviscous lubricating distillate	12.9	.843-.870	36.4-31.1	50-100
Medium lubricating distillate	1.3	.870-.873	31.1-30.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	7.6	.919	22.5	
Distillation loss	.1			

Bureau of Mines
Sample
Item 273
Laramie
PC-57-14
Laboratory

IDENTIFICATION

Bisti field
Gallup, Upper Cretaceous
5,000 feet

New Mexico
San Juan County

GENERAL CHARACTERISTICS

Gravity, specific 0.839 Gravity, ° API, 37.2 Pour point, ° F, 25
Sulfur, percent 0.11 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 32 sec. Nitrogen, percent, 0.062

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.8	1.8	0.657	83.9					
2	167	3.6	5.4	.688	74.2	16	1.38545	131.6		
3	212	6.2	11.6	.723	64.2	23	1.40086	131.1		
4	257	4.9	16.5	.745	58.4	24	1.41307	132.3		
5	302	4.9	21.4	.760	54.7	24	1.42186	136.4		
6	347	4.8	26.2	.778	50.4	25	1.43195	137.8		
7	392	4.7	30.9	.793	46.9	26	1.44063	138.7		
8	437	4.4	35.3	.808	43.6	28	1.44894	140.2		
9	482	7.4	42.7	.823	40.4	30	1.45825	147.6		
10	527	3.8	46.5	.835	38.0	31	1.46455	153.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	10.2	56.7	0.847	35.6	32			42	30
12	437	3.7	60.4	.859	33.2	34			52	45
13	482	4.2	64.6	.873	30.6	37			64	70
14	527	5.8	70.4	.881	29.1	38			93	85
15	572	6.0	76.4	.897	26.3	43			175	95
Residuum		23.0	99.4	.942	18.7					

Carbon residue, Conradson Residuum 3.9 percent, crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.6	0.702	70.1	
Total gasoline and naphtha	30.9	0.744	58.7	
Kerosene distillate	11.8	.817	41.7	
Gas oil	14.1	.844	36.2	
Nonviscous lubricating distillate	11.2	.856-.883	33.8-28.8	50-100
Medium lubricating distillate	7.2	.883-.902	28.8-25.4	100-200
Viscous lubricating distillate	1.2	.902-.905	25.4-24.9	Above 200
Residuum	23.0	.942	18.7	
Distillation loss	.6			

Bureau of Mines
Sample
Item 274
Bartlesville
54089
Laboratory

IDENTIFICATION

Caprock, East field
Wolfcamp, Permian
8,384-8,467 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.810 Gravity, ° API 43.2 Pour point, ° F, below 5
Sulfur, percent, 0.17 Color, green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.034

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.5	1.5	0.643	88.6					
2	167	2.6	4.1	.676	77.8	10	1.37430	130.0		
3	212	7.3	11.4	.721	64.8	22	1.40140	130.8		
4	257	10.7	22.1	.746	58.2	25	1.41527	137.1		
5	302	9.5	31.6	.765	53.5	26	1.42636	142.0		
6	347	7.5	39.1	.782	49.5	27	1.43560	143.8		
7	392	6.9	46.0	.794	46.7	27	1.44248	143.2		
8	437	6.2	52.2	.807	43.8	27	1.44960	147.9		
9	482	6.0	58.2	.821	40.9	29	1.45730	154.9		
10	527	6.8	65.0	.834	38.2	30	1.46548	160.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.3	69.3	0.849	35.2	33	1.47307	159.8	39	15
12	437	6.5	75.8	.857	33.6	33	1.47701	169.0	44	40
13	482	4.2	80.0	.866	31.9	34	1.48248	157.0	55	55
14	527	3.5	83.5	.874	30.4	35			72	70
15	572	4.4	87.9	.885	28.4	37			110	85
Residuum		11.7	99.6	.926	21.3					

Carbon residue, Conradson Residuum 3.3 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.4	0.700	70.6	
Total gasoline and naphtha	46.0	0.752	56.7	
Kerosene distillate	12.2	.814	42.3	
Gas oil	17.3	.846	35.8	
Nonviscous lubricating distillate	9.2	.862-.882	32.7-28.9	50-100
Medium lubricating distillate	3.2	.882-.891	28.9-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	11.7	.926	21.3	
Distillation loss	.4			

Bureau of Mines Item 275
Bartlesville Laboratory
Sample 64058

IDENTIFICATION

Corbin field
Yates, Permian
3,443 - 3,459 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific, 0.840 Gravity, ° API, 37.0 Four point, ° F, below 5
Sulfur, percent 0.59 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 47 sec. Nitrogen, percent, 0.049

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.646	87.5					
2	167	2.4	4.1	.668	80.3	6.5	1.37588	130.0		
3	212	4.6	8.7	.707	68.6	15	1.39568	132.8		
4	257	6.2	14.9	.733	61.5	18	1.40670	132.1		
5	302	5.5	20.4	.752	56.7	20	1.41925	134.4		
6	347	5.5	25.9	.768	52.7	21	1.42754	136.0		
7	392	4.9	30.8	.782	49.4	21	1.43468	137.2		
8	437	5.1	35.9	.795	46.5	22	1.44212	136.5		
9	482	5.5	41.4	.810	43.2	23	1.44952	137.5		
10	527	6.0	47.4	.823	40.4	25	1.45684	143.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.7	50.1	0.843	36.4	30	1.46550	147.4	40	20
12	437	5.8	55.9	.855	34.0	32	1.46882	158.2	48	40
13	482	5.1	61.0	.861	32.6	32	1.47700	152.6	62	60
14	527	5.3	66.3	.877	29.8	36			94	80
15	572	5.9	72.2	.886	27.8	38			180	105
Residuum		26.4	98.6	.969	14.5					

Carbon residue, Conradson Residuum 7.7 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.7	0.684	75.3	
Total gasoline and naphtha	30.8	0.737	60.6	
Kerosene distillate	16.6	.810	43.2	
Gas oil	6.4	.848	35.3	
Nonviscous lubricating distillate	10.3	.856-.878	33.8-29.7	50-100
Medium lubricating distillate	6.5	.878-.891	29.7-27.4	100-200
Viscous lubricating distillate	1.6	.891-.894	27.4-26.8	Above 200
Residuum	26.4	.969	14.5	
Distillation loss	1.4			

1/ Distillation discontinued at 522°F

Bureau of Mines Item 276
Bartlesville Laboratory
Sample 54037

IDENTIFICATION

Crossroads field
Devonian
12,000-12,102 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific, 0.804 Gravity, ° API, 44.5 Four point, ° F, below 5
Sulfur percent, 0.35 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 36 sec. Nitrogen, percent, 0.008

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 153 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.7	2.7	0.675	78.1	-	1.33155	120.9		
4	257	5.2	7.9	.710	67.8	7.5	1.39849	122.6		
5	302	9.0	16.9	.730	62.3	9.4	1.40850	123.0		
6	347	8.6	25.5	.750	57.2	12	1.41818	124.1		
7	392	8.9	34.4	.767	53.0	14	1.42708	126.1		
8	437	9.3	43.7	.784	49.0	16	1.43597	129.5		
9	482	8.8	52.5	.799	45.6	18	1.44342	130.1		
10	527	9.7	62.2	.812	42.8	20	1.45123	133.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.8	67.0	0.834	38.2	26	1.46044	137.6	40	20
12	437	6.9	73.9	.837	37.6	24	1.46405	138.4	43	40
13	482	6.3	80.2	.850	35.0	27	1.46951	145.6	51	55
14	527	5.2	85.4	.861	32.8	29			65	70
15	572	5.3	90.7	.873	30.6	31			97	85
Residuum		9.1	99.8	.928	21.0					

Carbon residue, Conradson Residuum 4.9 percent crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.7	0.675	78.1	
Total gasoline and naphtha	34.4	0.737	60.5	
Kerosene distillate	27.8	.799	45.6	
Gas oil	14.1	.841	36.8	
Nonviscous lubricating distillate	12.3	.849-.874	35.2-30.4	50-100
Medium lubricating distillate	2.1	.874-.879	30.4-29.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	9.1	.928	21.0	
Distillation loss	.2			

Bureau of Mines
Sample

Item 277
Bartlesville
58017

Laboratory

IDENTIFICATION

Denton field
Devonian
11,267-13,983 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.797 Gravity, ° API, 46.0 Pour point ° F, below 5
Sulfur percent 0.12 Color, green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.014

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 752 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.5	3.5	0.637	90.6					
2	167	4.4	7.9	0.660	82.9	2.7	1.37250	128.1		
3	212	6.6	14.5	0.706	68.9	15	1.39360	125.4		
4	267	8.9	23.4	0.736	60.8	20	1.40911	127.6		
5	302	7.8	31.2	0.759	54.9	23	1.42114	135.0		
6	347	6.9	38.1	0.778	50.4	25	1.43264	137.1		
7	392	6.2	44.3	0.793	46.9	26	1.44081	137.3		
8	437	6.1	50.4	0.806	44.1	27	1.44798	140.9		
9	482	5.2	55.6	0.819	41.3	28	1.45535	147.9		
10	527	7.0	62.6	0.840	37.0	33	1.46321	145.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	66.4	0.843	36.4	30	1.47050	154.4	39	14
12	437	5.6	72.0	0.853	34.4	32	1.47431	-	45	44
13	482	4.7	76.7	0.865	32.1	34	1.48019	-	55	60
14	527	3.8	80.5	0.877	29.9	36	1.48565	-	74	74
15	572	4.7	85.2	0.883	28.8	36			115	84
Residuum		11.5	96.7	0.924	21.6					

Carbon residue, Conradson Residuum 4.0 percent crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.5	0.675	78.1	
Total gasoline and naphtha	44.3	0.735	61.0	
Kerosene distillate	11.3	0.812	42.8	
Gas oil	16.3	0.845	36.0	
Nonviscous lubricating distillate	9.4	0.860-0.881	33.0-29.1	50-100
Medium lubricating distillate	3.9	0.881-0.886	29.1-28.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	11.5	0.924	21.6	
Distillation loss	3.3			

Bureau of Mines
Sample

Item 278
Bartlesville
47035

Laboratory

IDENTIFICATION

Drinkard field
Drinkard, Clear Fork, Permian
6,360-6,417 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.820 Gravity, ° API, 41.1 Pour point ° F, -
Sulfur percent, 0.33 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 38 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 751 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.8	3.8	0.634	91.7					
2	167	3.1	6.9	0.673	78.8	8.9	1.37881	126.3		
3	212	6.1	13.0	0.714	66.7	18	1.39879	131.7		
4	267	7.2	20.2	0.742	59.2	22	1.41313	134.1		
5	302	5.9	26.1	0.761	54.4	24	1.42444	138.3		
6	347	5.9	32.0	0.777	50.6	25	1.43314	139.6		
7	392	5.0	37.0	0.795	46.5	27	1.44043	139.3		
8	437	5.3	42.3	0.804	44.5	26	1.44757	142.5		
9	482	5.5	47.8	0.818	41.5	27	1.45565	144.3		
10	527	6.2	54.0	0.833	38.4	30	1.46386	149.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.2	56.2	0.846	35.8	32			41	10
12	437	5.7	61.9	0.856	33.8	33			46	30
13	482	5.6	67.5	0.869	31.3	36			58	50
14	527	4.3	71.8	0.881	29.1	38			88	65
15	572	5.5	77.3	0.891	27.3	40			165	80
Residuum		20.4	97.7	0.941	18.9					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.0	0.681	76.3	
Total gasoline and naphtha	37.0	0.736	60.8	
Kerosene distillate	10.8	0.811	43.0	
Gas oil	13.2	0.843	36.4	
Nonviscous lubricating distillate	9.4	0.861-0.883	32.8-28.8	50-100
Medium lubricating distillate	6.4	0.883-0.896	28.8-26.4	100-200
Viscous lubricating distillate	5	0.896-0.897	26.4-26.3	Above 200
Residuum	20.4	0.941	18.9	
Distillation loss	2.3			

Bureau of Mines Sample Item 279 Bartlesville 6212Q Laboratory

IDENTIFICATION

Empire-Abo field
Abo, Permian
6,269-6,334 feet

New Mexico
Eddy County

GENERAL CHARACTERISTICS

Gravity, specific, 0.820 Gravity, ° API, 41.1 Pour point, ° F, below 5
Sulfur, percent, 0.27 Color, green
Viscosity, Saybolt Universal at 100°F., 37 sec. Nitrogen, percent, 0.014

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7	0.667	80.6					
2	167	2.7	3.4	.696	71.8	20	1.38193	126.6		
3	212	6.6	10.0	.713	67.0	18	1.39800	128.4		
4	257	8.5	18.5	.742	59.2	23	1.41247	135.0		
5	302	5.4	23.9	.762	54.2	25	1.42437	142.0		
6	347	6.2	30.1	.780	49.9	26	1.43530	147.7		
7	392	4.9	35.0	.793	46.9	26	1.44173	144.7		
8	437	5.5	40.5	.807	43.8	27	1.44778	145.0		
9	482	6.1	46.6	.820	41.1	28	1.45549	148.7		
10	527	6.6	53.2	.835	38.0	31	1.46347	154.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.0	57.2	0.858	33.4	37	1.47340	156.7	40	20
12	437	5.8	63.0	.865	32.1	37	1.47597	159.9	45	40
13	482	5.6	68.6	.869	31.3	36	1.48070	160.9	57	65
14	527	4.8	73.4	.883	28.7	39	1.48484	161.2	79	75
15	572	5.7	79.1	.888	27.8	38		135		100
Residuum		16.3	95.4	.920	22.3					

Carbon residue, Conradson Residuum 3.0 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.0	0.705	69.2	
Total gasoline and naphtha	35.0	0.748	57.6	
Kerosene distillate	11.6	.814	42.4	
Gas oil	15.9	.851	34.9	
Nonviscous lubricating distillate	10.5	.867-.885	31.8-28.4	50-100
Medium lubricating distillate	6.1	.885-.891	28.4-27.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.3	.920	22.3	
Distillation loss	4.6			

Bureau of Mines Sample Item 280 Bartlesville 64033 Laboratory

IDENTIFICATION

Emont field
San Andres, Permian
3,850 - 3,950 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.856 Gravity, ° API, 33.8 Pour point, ° F, below 5
Sulfur, percent, 1.24 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, 0.061

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 732 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.8	2.8	0.633	92.0					
2	167	3.1	5.9	.671	79.4	8.0	1.37706	126.0		
3	212	5.3	11.2	.718	65.6	20	1.39929	125.2		
4	257	6.0	17.2	.742	59.2	23	1.41147	127.1		
5	302	5.2	22.4	.765	53.5	26	1.42365	132.3		
6	347	5.2	27.6	.787	48.3	30	1.43626	139.7		
7	392	4.9	32.5	.807	43.8	33	1.44736	144.0		
8	437	5.0	37.5	.824	40.2	35	1.45616	147.2		
9	482	5.7	43.2	.842	36.6	39	1.46634	153.0		
10	527	5.9	49.1	.858	33.4	41	1.47684	165.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.5	52.6	0.882	28.9	49	1.48527	169.0	42	Below 5
12	437	5.4	58.0	.888	27.8	48	1.49191	175.2	51	do.
13	482	5.6	63.6	.904	25.0	52	1.50149	182.0	73	do.
14	527	4.7	68.3	.916	23.0	55	1.50778	-	125	do.
15	572	2.9	71.2	.920	22.3	54		190		do.
Residuum		27.6	98.8	.966	15.0					

Carbon residue, Conradson Residuum 10.6 percent, crude 3.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.2	0.684	75.5	
Total gasoline and naphtha	32.5	0.743	59.0	
Kerosene distillate	5.0	.824	40.2	
Gas oil	17.3	.861	32.8	
Nonviscous lubricating distillate	8.6	.887-.910	28.0-24.0	50-100
Medium lubricating distillate	6.2	.910-.921	24.0-22.2	100-200
Viscous lubricating distillate	.9	.921-.922	22.2-22.1	Above 200
Residuum	27.6	.966	15.0	
Distillation loss	1.2			

1/ Distillation discontinued at 522°F.

2/ Distillation discontinued at 545°F.

Bureau of Mines
Sample

Item 281
Bartlesville
57127

Laboratory

IDENTIFICATION

Eunice-Monument field
(Eunice area)
Grayburg, Permian

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API, 34.0 Pour point, ° F, below 5
Sulfur, percent 1.32 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 42 sec. Nitrogen, percent, 0.070

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 751 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.9	1.9	0.653	85.2					
2	167	2.6	4.5	.662	82.2	3.7	1.37462	123.6		
3	212	4.6	9.1	.710	67.8	17	1.39541	123.3		
4	257	5.5	14.6	.742	59.2	23	1.41097	127.8		
5	302	6.0	20.6	.764	53.7	26	1.42351	129.7		
6	347	5.8	26.4	.784	49.0	28	1.43443	130.5		
7	392	6.4	32.8	.805	44.3	32	1.44529	131.3		
8	437	4.2	37.0	.817	41.7	32	1.45335	139.7		
9	482	4.8	41.8	.831	38.8	33	1.46192	147.2		
10	527	7.2	49.0	.855	34.0	40	1.47301	153.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	51.6	0.871	31.0	44	1.48486	-	37	Below 5
12	437	5.7	57.3	.884	28.6	46	1.48963	-	46	20
13	482	6.5	63.8	.898	26.1	49	1.49834	-	62	36
14	527	3.3	67.1	.910	24.0	52	1.50489	-	95	50
15	572	5.7	72.8	.916	23.0	52	1.50773	-	170	70
Residuum		25.9	98.7	.969	14.5					

Carbon residue, Conradson Residuum 6.3 percent crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.1	0.684	75.4	
Total gasoline and naphtha	32.8	0.749	57.4	
Kerosene distillate	4.2	.817	41.7	
Gas oil	19.0	.857	33.6	
Nonviscous lubricating distillate	9.8	.887-.911	28.0-23.8	50-100
Medium lubricating distillate	6.1	.911-.919	23.8-22.5	100-200
Viscous lubricating distillate	.9	.919-.920	22.5-22.3	Above 200
Residuum	25.9	.969	14.5	
Distillation loss	1.3			

Bureau of Mines
Sample

Item 282
Bartlesville
58005

Laboratory

IDENTIFICATION

Eunice-Monument field
(Monument area)
Grayburg, Permian
3,800 - 3,900 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.883 Gravity, ° API, 28.8 Pour point ° F, below 5
Sulfur percent 0.97 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 54 sec., 130°F., 47 sec. Nitrogen percent, 0.072

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 126 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167	4.0	4.0	0.673	78.8		1.37796	121.0		
3	212	4.1	8.1	.726	63.4	24	1.40240	122.9		
4	257	4.3	12.4	.744	58.7	24	1.41112	122.2		
5	302	5.5	17.9	.764	53.7	26	1.42247	127.1		
6	347	5.3	23.2	.786	48.5	29	1.43457	130.6		
7	392	4.7	27.9	.806	44.1	32	1.44543	139.7		
8	437	5.0	32.9	.824	40.2	35	1.45519	144.6		
9	482	5.1	38.0	.841	36.8	38	1.46478	149.2		
10	527	6.4	44.4	.860	33.0	42	1.47628	161.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.8	47.2	0.874	30.4	45	1.48771	-	42	Below 5
12	437	5.7	52.9	.886	28.2	47	1.49117	-	47	do.
13	482	4.4	57.3	.898	26.1	49	1.49898	-	61	do.
14	527	4.7	62.0	.912	23.7	53	1.50615	-	98	10
15	572	7.1	69.1	.920	22.3	54	1.51039	-	210	14
Residuum		27.6	96.7	.977	13.3					

Carbon residue, Conradson Residuum 10.9 percent crude 3.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.1	0.700	70.6	
Total gasoline and naphtha	27.9	0.754	56.2	
Kerosene distillate	5.0	.824	40.2	
Gas oil	18.3	.862	32.7	
Nonviscous lubricating distillate	8.6	.889-.912	27.7-23.7	50-100
Medium lubricating distillate	5.3	.912-.919	23.7-22.5	100-200
Viscous lubricating distillate	4.0	.919-.925	22.5-21.5	Above 200
Residuum	27.6	.977	13.3	
Distillation loss	3.3			

Bureau of Mines
Sample
Item 283
Bartlesville
54032
Laboratory

IDENTIFICATION

Gladiola field
Wolfcamp, Permian
9,040 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity specific 0.815 Gravity ° API 42.1 Pour point, ° F, below 5
Sulfur percent 0.10 Color brownish green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen percent 0.053

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.5	3.5	0.645	87.9					
2	167	4.1	7.6	.683	75.7	14	1.38343	127.3		
3	212	9.8	17.4	.729	62.6	26	1.40527	129.1		
4	257	11.0	28.4	.754	56.2	28	1.41940	135.1		
5	302	6.6	35.0	.775	51.1	31	1.43092	141.8		
6	347	6.1	41.1	.792	47.2	32	1.44083	144.9		
7	392	5.5	46.6	.806	44.1	32	1.44870	147.3		
8	437	5.7	52.3	.820	41.1	33	1.45695	150.7		
9	482	5.8	58.1	.835	38.0	35	1.46654	159.3		
10	527	6.3	64.4	.849	35.2	37	1.47533	168.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.0	67.4	0.860	33.0	38			39	15
12	437	5.4	72.8	.865	32.1	37			42	30
13	482	4.9	77.7	.874	30.4	38			54	45
14	527	4.2	81.9	.885	28.4	40			73	65
15	572	4.5	86.4	.895	26.6	42			120	85
Residuum		12.4	98.8	.946	18.1					

Carbon residue, Conradson Residuum 4.6 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	17.4	0.701	70.4	
Total gasoline and naphtha	46.6	0.748	57.7	
Kerosine distillate	5.7	.820	41.1	
Gas oil	21.3	.852	34.6	
Nonviscous lubricating distillate	8.8	.871-.891	31.0-27.3	50-100
Medium lubricating distillate	4.0	.891-.900	27.3-25.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	12.4	.946	18.1	
Distillation loss	1.2			

Bureau of Mines
Sample
Item 284
Bartlesville
57095
Laboratory

IDENTIFICATION

Grayburg-Jackson field
Grayburg, Permian
3,239-3,274 feet

New Mexico
Eddy County

GENERAL CHARACTERISTICS

Gravity specific 0.836 Gravity, ° API, 37.8 Pour point, ° F, below 5
Sulfur percent 0.89 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen percent, 0.077

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.3	2.3	0.646	87.5					
2	167	2.7	5.0	.680	76.6	12	1.38260	128.4		
3	212	6.1	11.1	.728	62.9	25	1.40475	131.8		
4	257	7.5	18.6	.758	55.2	30	1.42041	143.6		
5	302	6.1	24.7	.777	50.6	32	1.43173	149.7		
6	347	5.8	30.5	.791	47.4	32	1.43919	150.2		
7	392	5.1	35.6	.802	44.9	31	1.44543	151.4		
8	437	5.1	40.7	.813	42.6	30	1.45149	132.2		
9	482	4.5	45.2	.827	39.6	31	1.45865	148.6		
10	527	6.0	51.2	.842	36.6	34	1.46740	155.1		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.2	54.4	0.855	34.0	36	1.47731	161.9	41	20
12	437	6.0	60.4	.866	31.9	37	1.48009	-	46	32
13	482	5.8	66.2	.878	29.7	40	1.48836	-	59	50
14	527	4.7	70.9	.894	26.8	44	1.49492	-	90	70
15	572	5.8	76.7	.905	24.9	46			170	92
Residuum		20.8	97.5	.959	16.0					

Carbon residue, Conradson Residuum 7.6 percent crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.1	0.700	70.6	
Total gasoline and naphtha	35.6	0.755	55.9	
Kerosine distillate	5.1	.813	42.6	
Gas oil	18.6	.847	35.6	
Nonviscous lubricating distillate	10.0	.870-.895	31.1-26.6	50-100
Medium lubricating distillate	6.6	.895-.909	26.6-24.2	100-200
Viscous lubricating distillate	.8	.909-.911	24.2-23.8	Above 200
Residuum	20.8	.959	16.0	
Distillation loss	2.5			

Bureau of Mines Item 285
Sample Bartlesville
51016 Laboratory

IDENTIFICATION

Hobbs field
San Andres, Permian
4,144 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API, 32.4 Pour point, ° F, below 5
Sulfur, percent, 1.41 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 41 sec. Nitrogen, percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	4.0	4.0	0.650	86.2					
2	167	3.6	7.6	.672	79.1	8.4	1.37663	124.7		
3	212	6.1	13.7	.711	67.5	17	1.39610	122.3		
4	267	6.2	19.9	.739	60.0	21	1.40946	125.6		
5	302	5.7	25.6	.762	54.2	25	1.42354	137.1		
6	347	5.3	30.9	.786	48.5	29	1.43663	138.9		
7	392	4.6	35.5	.803	44.7	31	1.44648	139.0		
8	437	4.5	40.0	.819	41.3	33	1.45476	144.2		
9	482	5.4	45.4	.836	37.8	36	1.46385	154.7		
10	527	6.0	51.4	.853	34.4	39	1.47410	159.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.7	56.1	0.872	30.8	44	1.48560	166.0	43	Below 5
12	437	4.3	60.4	.889	27.7	48	1.49315	175.4	53	25
13	482	5.3	65.7	.903	25.2	52	1.50197	182.6	77	45
14	527	3.7	69.4	.918	22.6	56	1.50764	-	135	60
15	572	7.2	76.6	.925	21.5	56			295	85
Residuum		17.9	94.5	.922	11.1					

Carbon residue, Conradson Residuum 9.6 percent, crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	13.7	0.683	75.7	
Total gasoline and naphtha	35.5	0.736	60.8	
Kerosene distillate	4.5	.819	41.3	
Gas oil	17.0	.855	34.0	
Nonviscous lubricating distillate	7.9	.884-.909	28.6-24.2	50-100
Medium lubricating distillate	4.9	.909-.921	24.2-22.1	100-200
Viscous lubricating distillate	6.8	.921-.930	22.1-20.7	Above 200
Residuum	17.9	.922	11.1	
Distillation loss	5.5			

Bureau of Mines Item 286
Sample Laramie
PC-61-256 Laboratory

IDENTIFICATION

Horseshoe (Gallup) field
Gallup, Upper Cretaceous
1,110-1,126 feet

New Mexico
San Juan County

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API, 32.4 Pour point, ° F, 30
Sulfur, percent, .11 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 46 sec., 77°F., 57 sec. Nitrogen percent, 0.071

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.3	1.3	0.658	83.6					
2	167	1.1	2.4	.691	73.3	17	1.38202	122.3		
3	212	3.3	5.7	.708	68.4	16	1.38984	121.6		
4	257	4.3	10.0	.731	62.1	18	1.40158	125.8		
5	302	4.7	14.7	.748	57.7	18	1.41195	124.1		
6	347	4.5	19.2	.767	53.0	20	1.42181	125.6		
7	392	4.2	23.4	.781	49.7	21	1.42978	133.6		
8	437	5.0	28.4	.796	46.3	22	1.43800	133.1		
9	482	4.1	32.5	.808	43.6	22	1.44509	138.3		
10	527	6.3	38.8	.819	41.3	23	1.45141	138.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.9	41.7	0.839	37.2	28	1.46007	140.5	38	10
12	437	6.3	48.0	.841	36.8	26	1.46286	143.5	45	25
13	482	5.5	53.5	.850	35.0	27	1.46920	147.6	50	45
14	527	5.7	59.2	.870	31.1	33			64	65
15	572	5.9	65.1	.881	29.1	35			95	85
Residuum		32.0	97.1	.935	19.8					

Carbon residue, Conradson Residuum 5.6 percent, crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.7	0.693	72.7	
Total gasoline and naphtha	23.4	0.737	60.5	
Kerosene distillate	15.4	.809	43.4	
Gas oil	11.9	.844	36.2	
Nonviscous lubricating distillate	12.4	.850-.883	35.0-28.8	50-100
Medium lubricating distillate	2.0	.883-.886	28.8-28.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	32.0	.925	19.8	
Distillation loss	2.9			

Bureau of Mines
Sample

Item 287
Bartlesville
61086

Laboratory

IDENTIFICATION

Jalmit field
Yates, Permian
3,882-4,010 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity specific 0.844 Gravity ° API, 36.2 Pour point, ° F, below 5
Sulfur percent 1.22 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 48 sec., 100°F., 47 sec. Nitrogen, percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	2.6	2.6	0.688	74.2					
2	167	2.7	5.3	.678	77.2	11	1.38233	125.9		
3	212	5.2	10.5	.716	66.1	19	1.40032	128.5		
4	257	5.8	16.3	.743	58.9	23	1.41407	133.4		
5	302	5.8	22.1	.763	54.0	25	1.42504	141.0		
6	347	5.7	27.8	.780	49.9	26	1.43484	144.7		
7	392	5.0	32.8	.792	47.2	26	1.44214	143.4		
8	437	5.2	38.0	.805	44.3	26	1.44823	141.1		
9	482	5.3	43.3	.818	41.5	27	1.45511	144.8		
10	527	6.8	50.1	.831	38.8	29	1.46354	151.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	52.7	0.853	34.4	35	1.47354	156.2	41	25
12	437	5.4	58.1	.866	31.9	37	1.47809	157.4	47	35
13	482	5.1	63.2	.874	30.4	38	1.48582	164.9	59	60
14	527	5.6	68.8	.892	27.1	43			89	70
15	572	6.9	75.7	.904	25.0	46			180	100
Residuum		21.6	97.3	.982	12.6					

Carbon residue, Conradson Residuum 6.0 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.5	0.699	70.9	
Total gasoline and naphtha	32.8	0.746	58.2	
Kerosene distillate	10.5	.812	42.8	
Gas oil	13.4	.845	36.0	
Nonviscous lubricating distillate	10.1	.868-.894	31.5-26.8	50-100
Medium lubricating distillate	8.9	.894-.911	26.8-23.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.6	.982	12.6	
Distillation loss	2.7			

Bureau of Mines
Sample

Item 288
Bartlesville
64072

Laboratory

IDENTIFICATION

Justis field
Blaine, Permian
5,392 - 5,464 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific, 0.835 Gravity, ° API, 38.0 Pour point, ° F, below 5
Sulfur, percent 0.51 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	2.3	2.3	0.640	89.6					
2	167	2.4	4.7	.680	76.6	12	1.38273	128.9		
3	212	4.5	9.2	.717	65.9	20	1.39941	129.7		
4	257	6.3	15.5	.740	59.7	22	1.41171	135.6		
5	302	6.6	22.1	.761	54.4	24	1.42351	137.9		
6	347	5.2	27.3	.779	50.1	26	1.43258	140.3		
7	392	4.9	32.2	.792	47.2	26	1.43952	141.9		
8	437	5.2	37.7	.806	44.1	27	1.44750	142.0		
9	482	5.6	43.3	.822	40.6	29	1.45562	145.4		
10	527	6.2	49.5	.837	37.6	31	1.46374	151.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.9	54.4	0.855	34.0	36	1.47270	154.4	43	10
12	437	6.4	60.8	.867	31.7	38	1.47852	157.8	52	35
13	482	4.4	65.2	.873	30.6	37	1.48607	164.6	71	55
14	527	4.9	70.1	.885	28.4	40	1.49043	-	110	75
15	572	6.7	76.8	.895	26.6	42			255	90
Residuum		21.8	98.6	.944	18.4					

Carbon residue, Conradson Residuum 5.1 percent, crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.2	0.688	74.1	
Total gasoline and naphtha	32.2	0.744	58.8	
Kerosene distillate	11.1	.814	42.3	
Gas oil	13.0	.848	35.5	
Nonviscous lubricating distillate	10.1	.864-.882	32.2-28.9	50-100
Medium lubricating distillate	4.6	.882-.891	28.9-27.3	100-200
Viscous lubricating distillate	5.6	.891-.901	27.3-25.6	Above 200
Residuum	21.8	.944	18.4	
Distillation loss	1.4			

Item 289
Bureau of Mines Bartlesville Laboratory
Sample 64073

IDENTIFICATION

Justis field
Fusselman, Silurian
6,736 - 6,756 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific, 0.840 - Gravity, ° API, 37.0 - Pour point, ° F, below 5
Sulfur, percent, 0.43 - Color, dark green
Viscosity, Saybolt Universal at 100°F, 43 sec. - Nitrogen, percent, 0.078 -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.640	89.6					
2	167	2.6	3.9	.670	79.7	7.5	1.37582	125.0		
3	212	3.9	7.8	.711	67.5	17	1.39845	128.9		
4	257	4.7	12.5	.735	61.0	19	1.40964	132.0		
5	302	5.0	17.5	.757	55.4	22	1.42117	136.9		
6	347	5.5	23.0	.777	50.6	25	1.43144	139.3		
7	392	5.1	28.1	.793	46.9	26	1.43986	138.8		
8	437	4.9	33.0	.806	44.1	27	1.44706	140.2		
9	482	5.6	38.6	.821	40.9	29	1.45535	145.5		
10	527	6.1	44.7	.834	38.2	30	1.46318	149.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.7	49.4	0.854	34.2	36	1.47124	153.2	42	10
12	437	6.3	55.7	.864	32.3	36	1.47613	155.8	51	30
13	482	5.9	61.6	.870	31.1	36	1.48319	162.6	67	60
14	527	4.9	66.5	.887	28.0	41	1.48901	-	100	70
15	572	7.3	73.8	.893	27.0	41			202	95
Residuum	572	24.5	98.3	.939	19.2					

Carbon residue, Conradson Residuum 4.4 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.8	0.686	74.9	
Total gasoline and naphtha	28.1	0.744	58.7	
Kerosene distillate	10.5	.814	42.3	
Gas oil	13.3	.846	35.7	
Nonviscous lubricating distillate	12.1	.863-.887	32.5-28.0	50-100
Medium lubricating distillate	5.8	.887-.893	28.0-27.0	100-200
Viscous lubricating distillate	4.0	.893-.897	27.0-26.3	Above 200
Residuum	24.5	.939	19.2	
Distillation loss	1.7			

1/ Distillation discontinued at 523°F.

Item 290
Bureau of Mines Bartlesville Laboratory
Sample 64071

IDENTIFICATION

Justis field
Montoya, Ordovician
6,806 - 6,822 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.844 Gravity, ° API, 36.2 Pour point, ° F, below 5
Sulfur percent 0.42 Color, dark green
Viscosity, Saybolt Universal at 100°F, 47 sec. - Nitrogen, percent, 0.072 -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 66 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.3	2.3	0.662	82.2	-	1.37250	126.2		
3	212	3.7	6.0	.710	67.6	17	1.39710	129.4		
4	257	5.4	11.4	.735	61.0	19	1.40940	131.2		
5	302	5.7	17.1	.756	55.7	22	1.42102	137.5		
6	347	5.5	22.6	.775	51.1	24	1.43127	140.5		
7	392	5.1	27.7	.790	47.6	25	1.43924	140.7		
8	437	5.2	32.9	.804	44.5	26	1.44687	140.0		
9	482	5.9	38.8	.820	41.1	28	1.45519	145.6		
10	527	5.3	44.1	.833	38.4	30	1.46278	149.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.7	49.8	0.848	35.4	33	1.47058	153.7	42	5
12	437	6.5	56.3	.860	33.0	35	1.47597	155.4	49	30
13	482	6.3	62.6	.871	31.0	36	1.48314	161.6	67	50
14	527	5.6	68.2	.883	28.7	39	1.48948	-	105	75
15	572	7.5	75.7	.893	27.0	41			215	90
Residuum	572	23.9	96.6	.937	19.5					

Carbon residue, Conradson Residuum 4.2 percent, crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.0	0.692	73.1	
Total gasoline and naphtha	27.7	0.746	57.7	
Kerosene distillate	11.1	.813	42.7	
Gas oil	14.6	.845	36.0	
Nonviscous lubricating distillate	11.2	.861-.881	32.9-29.0	50-100
Medium lubricating distillate	6.4	.881-.892	29.0-27.2	100-200
Viscous lubricating distillate	4.7	.892-.899	27.2-25.9	Above 200
Residuum	23.9	.937	19.5	
Distillation loss	.4			

1/ Distillation discontinued at 518°F.

Item 291
Bureau of Mines Bartlesville Laboratory
Sample 61067

IDENTIFICATION

Kemnitz field
Wolfcamp, Permian
10,674-10,804 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 Gravity, ° API, 36.4 Pour point, ° F, 20
Sulfur, percent 0.12 Color, green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen percent, 0.06

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 21 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167	2.7	2.7	0.698	71.2	-	1.41407	152.5		
3	212	10.7	13.4	.761	54.4	41	1.42432	154.7		
4	257	13.7	27.1	.785	48.8	43	1.43737	158.4		
5	302	7.4	34.5	.797	46.0	41	1.44478	163.4		
6	347	6.1	40.6	.802	44.9	37	1.44809	158.1		
7	392	4.2	44.8	.808	43.6	33	1.45057	154.0		
8	437	4.9	49.7	.820	41.1	33	1.45682	152.3		
9	482	5.9	55.6	.841	36.8	38	1.46902	162.8		
10	527	6.0	61.6	.858	33.4	41	1.48029	174.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.8	67.4	0.884	28.6	50	1.49091	181.6	41	20
12	437	5.3	72.7	.894	26.8	51	1.49766	189.2	51	40
13	482	4.3	77.0	.901	25.6	51	1.50377	189.1	70	60
14	527	4.6	81.6	.912	23.7	53			125	80
15	572	4.3	85.9	.922	22.0	55			265	90
Residuum		13.1	99.0	.959	16.0					

Carbon residue, Conradson Residuum 5.8 percent crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.4	0.748	57.7	
Total gasoline and naphtha	44.8	0.780	49.9	
Kerosene distillate	4.9	.820	41.1	
Gas oil	19.9	.864	32.3	
Nonviscous lubricating distillate	7.7	.893-.907	27.0-24.5	50-100
Medium lubricating distillate	4.4	.907-.917	24.5-22.8	100-200
Viscous lubricating distillate	4.2	.917-.927	22.8-21.1	Above 200
Residuum	13.1	.959	16.0	
Distillation loss	1.0			

Item 292
Bureau of Mines Bartlesville Laboratory
Sample 57089

IDENTIFICATION

Langlie-Mattix field
Queen, Permian
3,325-3,362 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.882 Gravity, ° API, 28.9 Pour point, ° F, below 5
Sulfur percent, 1.65 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 83 sec., 100°F., 64 sec. Nitrogen percent, 0.074

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 133 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.5	1.5	0.712	67.2	-				
4	257	2.6	4.1	.745	58.4	24	1.40630	121.7		
5	302	4.9	9.0	.768	52.7	27	1.42547	127.6		
6	347	5.2	14.7	.788	48.1	30	1.43663	141.7		
7	392	5.2	20.4	.803	44.7	31	1.44488	141.8		
8	437	6.2	26.6	.819	41.3	33	1.45250	141.0		
9	482	6.0	32.6	.836	37.8	36	1.46142	143.6		
10	527	7.2	39.8	.855	34.0	40	1.47257	159.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.7	43.5	0.870	31.1	43	1.48349	169.1	40	16
12	437	6.7	50.2	.876	30.0	42	1.48778	166.7	45	32
13	482	6.4	56.6	.898	26.1	49	1.49717	-	60	46
14	527	5.6	62.2	.912	23.7	53	1.50520	-	92	60
15	572	7.4	69.6	.923	21.8	55	1.51006	-	185	74
Residuum		29.5	99.1	.975	13.6					

Carbon residue, Conradson Residuum 9.2 percent, crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.5	0.712	67.2	
Total gasoline and naphtha	20.4	0.776	50.9	
Kerosene distillate	6.2	.819	41.3	
Gas oil	22.6	.859	35.0	
Nonviscous lubricating distillate	10.8	.883-.913	28.8-23.5	50-100
Medium lubricating distillate	7.1	.913-.925	23.5-21.5	100-200
Viscous lubricating distillate	2.5	.925-.929	21.5-20.8	Above 200
Residuum	29.5	.975	13.6	
Distillation loss	.9			

Bureau of Mines Item 293
Sample Bartlesville Laboratory
64034

IDENTIFICATION

Lea field
Devonian
14,300-14,500 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.755 Gravity, ° API, 55.9 Pour point, ° F, below 5
Sulfur, percent, 0.31 Color, --- NPA 3
Viscosity, Saybolt Universal at 100°F, 32 sec. Nitrogen, percent, 0.006

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm. Hg
First drop 72 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	7.6	7.6	0.631	92.7					
2	167	8.3	15.9	.660	82.9	2.7	1.37865	127.2		
3	212	10.1	26.0	.696	71.8	9.9	1.39072	126.6		
4	257	11.3	37.3	.719	65.3	12	1.40372	131.8		
5	302	9.7	47.0	.743	56.9	16	1.41645	136.6		
6	347	8.6	55.6	.765	53.5	19	1.42596	139.7		
7	392	6.5	62.1	.779	50.1	20	1.43491	140.8		
8	437	6.0	68.1	.791	47.4	20	1.44061	139.4		
9	482	5.5	73.6	.807	43.0	22	1.44847	142.6		
10	527	5.3	78.9	.823	40.4	25	1.45711	147.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	82.4	0.840	37.0	29	1.46624	150.7	4.1	20
12	437	3.6	86.0	.848	35.4	29	1.46893	163.9	4.0	40
13	482	4.1	90.1	.857	33.6	30	1.47626	155.3	6.0	55
14	527									
15	572									
Residuum		7.2	97.3	.891	27.3					

Carbon residue, Conradson Residuum 0.5 percent crude 0.04 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	26.0	0.666	91.1	
Total gasoline and naphtha	62.1	0.713	67.0	
Kerosene distillate	16.6	.607	43.8	
Gas oil	6.4	—	—	
Nonviscous lubricating distillate	4.8	.637-.646	37.0-35.4	50-100
Medium lubricating distillate	—	.646-.663	35.4-32.5	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	7.2	.891	27.3	
Distillation loss	2.7			

1/ Distillation discontinued at 482°F

Bureau of Mines Item 294
Sample Bartlesville Laboratory
54055

IDENTIFICATION

Lovington field
Abo, Permian
8,380-8,442 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.828 Gravity ° API 39.4 Pour point ° F below 5
Sulfur percent 0.36 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 36 sec. Nitrogen percent, 0.058

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.1	3.1	0.648	86.9					
2	167	4.0	7.1	.690	73.6	17	1.38691	128.5		
3	212	8.1	15.2	.740	59.7	31	1.41160	140.4		
4	257	9.4	24.6	.767	53.0	35	1.42636	147.8		
5	302	6.4	31.0	.784	49.0	35	1.43639	152.4		
6	347	5.5	36.5	.795	46.5	33	1.44242	149.1		
7	392	4.5	41.0	.804	44.5	32	1.44721	148.8		
8	437	5.0	46.0	.818	41.5	33	1.45439	149.3		
9	482	5.2	51.2	.835	38.0	35	1.46423	159.4		
10	527	6.1	57.3	.851	34.8	38	1.47429	165.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	60.8	0.867	31.7	42	1.48202	172.4	40	10
12	437	4.8	65.6	.875	30.2	42	1.48587	177.8	45	30
13	482	4.1	69.7	.888	27.9	45	1.49237	—	58	50
14	527	4.2	73.9	.894	26.8	44			81	70
15	572	4.7	78.6	.905	24.9	46			175	85
Residuum		18.0	96.6	.947	17.9					

Carbon residue, Conradson Residuum 4.6 percent crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.2	0.708	68.4	
Total gasoline and naphtha	41.0	0.756	55.7	
Kerosene distillate	5.0	.818	41.5	
Gas oil	19.0	.855	34.0	
Nonviscous lubricating distillate	7.7	.880-.896	29.3-26.4	50-100
Medium lubricating distillate	4.8	.896-.907	26.4-24.5	100-200
Viscous lubricating distillate	1.1	.907-.910	24.5-24.0	Above 200
Residuum	18.0	.947	17.9	
Distillation loss	3.4			

Item 295
Bureau of Mines Bartlesville Laboratory
Sample 62115

IDENTIFICATION

Maljamar-Paddock field
Paddock, Permian
5,366-5,372 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity specific 0.833 Gravity, ° API, 38.4 Pour point, ° F, below 5
Sulfur, percent 0.55 Color, dark green
Viscosity, Saybolt Universal at 100°F., 39 sec. Nitrogen, percent, 0.062

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.4	1.4	0.652	85.5					
2	167	3.2	4.6	.698	71.2	21	1.38420	132.0		
3	212	8.3	12.9	.724	63.9	23	1.40490	142.6		
4	257	8.2	21.1	.762	54.2	32	1.42455	151.8		
5	302	6.5	27.6	.780	49.9	33	1.43465	155.4		
6	347	5.5	33.1	.791	47.4	31	1.44034	154.8		
7	392	4.6	37.7	.798	45.8	29	1.44410	150.4		
8	437	4.9	42.6	.810	43.2	29	1.45061	150.6		
9	482	5.7	48.3	.827	39.6	31	1.45938	154.4		
10	527	6.0	54.3	.843	36.4	34	1.46961	162.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.9	58.2	0.865	32.1	41	1.48141	170.0	41	25
12	437	4.7	62.9	.875	30.2	42	1.48527	170.4	46	55
13	482	4.6	67.5	.882	28.9	42	1.49152	175.5	57	65
14	527	4.6	72.1	.897	26.2	46	1.49654	180.4	80	80
15	572	5.0	77.1	.903	25.2	45		140		90
Residuum		18.9	96.0	.956	16.5					

Carbon residue, Conradson Residuum 6.8 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.9	0.710	67.9	
Total gasoline and naphtha	37.7	0.756	55.7	
Kerosene distillate	4.9	.810	43.2	
Gas oil	19.6	.849	35.1	
Nonviscous lubricating distillate	9.2	.878-.899	29.7-25.9	50-100
Medium lubricating distillate	5.7	.899-.906	25.9-24.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.9	.956	16.5	
Distillation loss	4.0			

Item 296
Bureau of Mines Bartlesville Laboratory
Sample 54036

IDENTIFICATION

Saunders field
Wolfcamp, Permian
9,812-9,912 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.817 Gravity, ° API, 41.7 Pour point, ° F, below 5
Sulfur, percent 0.11 Color, green
Viscosity, Saybolt Universal at 100°F., 34 sec. Nitrogen, percent, 0.052

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	2.8	2.8	0.639	89.9					
2	167	4.1	6.9	.684	75.4	14	1.38386	129.9		
3	212	10.2	17.1	.735	61.0	28	1.40927	136.3		
4	257	11.0	28.1	.763	54.0	33	1.42381	142.4		
5	302	7.7	35.8	.779	50.1	33	1.43436	148.9		
6	347	6.1	41.9	.792	47.2	32	1.44147	150.5		
7	392	5.0	46.9	.802	44.9	31	1.44716	147.7		
8	437	5.2	52.1	.816	41.9	32	1.45452	150.1		
9	482	5.6	57.7	.834	38.2	35	1.46469	157.0		
10	527	6.3	64.0	.850	35.0	38	1.47440	166.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.8	66.8	0.862	32.7	39			40	10
12	437	4.8	71.6	.868	31.5	38			44	35
13	482	4.8	76.4	.878	29.7	40			55	50
14	527	3.5	79.9	.888	27.9	41			74	65
15	572	4.8	84.7	.897	26.3	43			125	80
Residuum		13.6	98.3	.943	18.6					

Carbon residue, Conradson Residuum 4.0 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	17.1	0.707	68.6	
Total gasoline and naphtha	46.9	0.753	56.4	
Kerosene distillate	5.2	.816	41.9	
Gas oil	19.8	.852	34.6	
Nonviscous lubricating distillate	8.4	.873-.893	30.6-27.0	50-100
Medium lubricating distillate	4.4	.893-.902	27.0-25.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	13.6	.943	18.6	
Distillation loss	1.7			

Bureau of Mines Item 297
Bartlesville Laboratory
Sample 57091

IDENTIFICATION

Vacuum field
San Andres, Permian
4,580-4,625 feet

New Mexico
Lea County

GENERAL CHARACTERISTICS

Gravity, specific 0.850 Gravity, ° API, 35.0 Pour point, ° F, below 5
Sulfur, percent, 0.95 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 42 sec. Nitrogen, percent, 0.075

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 751 mm Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	3.3	3.3	0.671	79.4	-	1.38088	132.1		
3	212	4.6	7.9	.728	62.9	25	1.40644	126.4		
4	257	7.6	15.5	.759	54.9	31	1.42198	137.6		
5	302	7.6	23.1	.780	49.9	33	1.43462	149.1		
6	347	5.7	28.8	.793	46.9	32	1.44215	151.6		
7	392	4.7	33.5	.803	44.7	31	1.44695	143.4		
8	437	4.7	38.2	.813	42.6	30	1.45219	146.1		
9	482	5.2	43.4	.827	39.6	31	1.45984	151.9		
10	527	6.6	50.0	.845	36.0	35	1.46864	176.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	5.0	55.0	0.859	33.2	38	1.47991	175.6	40	16
12	437	5.9	60.9	.872	30.8	40	1.48522	-	46	34
13	482	5.0	65.9	.888	27.9	45	1.49613	-	60	60
14	527	4.9	70.8	.894	26.8	44			89	76
15	572	5.8	76.6	.912	23.7	50			170	94
Residuum		22.2	98.8	.970	14.4					

Carbon residue, Conradson Residuum 9.2 percent crude 2.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.9	0.704	69.5	
Total gasoline and naphtha	33.5	0.763	54.0	
Kerosene distillate	4.7	.813	42.6	
Gas oil	21.3	.850	35.0	
Nonviscous lubricating distillate	9.6	.876-.896	30.0-26.4	50-100
Medium lubricating distillate	6.6	.896-.918	26.4-22.6	100-200
Viscous lubricating distillate	.9	.918-.919	22.6-22.5	Above 200
Residuum	22.2	.970	14.4	
Distillation loss	1.2			

Bureau of Mines Item 298
Bartlesville Laboratory
Sample 57100

IDENTIFICATION

Allegany field
Caneadea and Richburg, Upper Devonian
1,288-1,334 feet

New York
Allegany County

GENERAL CHARACTERISTICS

Gravity, specific 0.816 Gravity, ° API, 41.9 Pour point, ° F below 5
Sulfur, percent, 0.12 Color, green
Viscosity, Saybolt Universal at 100°F., 42 sec. Nitrogen, percent, 0.028

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.637	90.6					
2	167	2.7	5.1	.666	81.0	5.6	1.37554	120.0		
3	212	5.0	10.1	.710	67.8	17	1.39713	126.8		
4	257	6.1	16.2	.738	60.2	21	1.41079	133.4		
5	302	5.4	21.6	.758	55.2	23	1.42256	126.9		
6	347	4.7	26.3	.773	51.6	23	1.43076	127.3		
7	392	4.7	31.0	.783	49.2	22	1.43643	136.5		
8	437	4.9	35.9	.795	46.5	22	1.44203	133.0		
9	482	5.2	41.1	.808	43.6	22	1.44889	142.2		
10	527	6.1	47.2	.821	40.9	24	1.45571	142.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.3	50.5	0.831	38.8	25	1.46377	143.3	40	14
12	437	4.8	55.3	.837	37.6	24	1.46616	144.2	44	36
13	482	5.3	60.6	.848	35.4	26	1.47040	145.3	53	50
14	527	4.5	65.1	.859	33.2	28			70	74
15	572	5.6	70.7	.868	31.5	29			110	90
Residuum		27.0	97.7	.904	25.0					

Carbon residue, Conradson Residuum 2.2 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.681	76.3	
Total gasoline and naphtha	31.0	0.735	61.0	
Kerosene distillate	16.2	.809	43.4	
Gas oil	9.2	.836	37.8	
Nonviscous lubricating distillate	10.3	.844-.865	36.2-32.1	50-100
Medium lubricating distillate	4.0	.865-.874	32.1-30.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.0	0.904	25.0	
Distillation loss	2.3			

Bureau of Mines
Sample
Item 299
Laramie
PC-58-136
Laboratory

IDENTIFICATION

Antelope Field
Madison, Mississippi
9,097-9,136 feet

North Dakota
McKenzie County

GENERAL CHARACTERISTICS

Gravity, specific 0.822 Gravity, ° API, 40.6 Pour point, ° F, below 5
Sulfur, percent .46 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 35 sec. Nitrogen, percent, 0.024

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.5	4.5	0.649	86.5					
2	167	3.5	8.0	.684	75.4	14	1.38687	127.5		
3	212	5.9	13.9	.730	62.3	26	1.40694	136.6		
4	257	6.9	20.8	.755	55.9	29	1.42088	145.4		
5	302	5.6	26.4	.772	51.8	29	1.43098	150.5		
6	347	5.5	31.9	.783	49.2	28	1.43754	150.1		
7	392	4.8	36.7	.794	46.7	27	1.44275	146.8		
8	437	4.8	41.5	.805	44.3	26	1.44839	145.4		
9	482	4.7	46.2	.819	41.3	28	1.45641	151.8		
10	527	7.0	53.2	.837	37.6	32	1.46651	158.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.0	57.2	0.865	32.1	41	1.47685	164.1	38	5
12	437	6.3	63.5	.863	32.5	36	1.48059	168.3	40	25
13	482	4.4	67.9	.875	30.2	38	1.48732	168.8	56	50
14	527	5.8	73.7	.895	26.6	45			78	75
15	572	3.9	77.6	.897	26.3	43			135	85
Residuum		17.4	95.0	.942	18.7					

Carbon residue, Conradson Residuum 3.5 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.9	0.692	73.0	
Total gasoline and naphtha	36.7	0.743	58.9	
Kerosene distillate	9.5	.812	42.8	
Gas oil	17.5	.854	34.2	
Nonviscous lubricating distillate	8.9	.871-.895	31.0-26.6	50-100
Medium lubricating distillate	5.0	.895-.897	26.6-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.4	.942	18.7	
Distillation loss	5.0			

Bureau of Mines
Sample
Item 300
Laramie
PC-52-240
Laboratory

IDENTIFICATION

Beaver Lodge field
Madison, Mississippian
8,490-8,512 feet

North Dakota
Williams County

GENERAL CHARACTERISTICS

Gravity, specific, 0.810 Gravity, ° API, 43.2 - Pour point, ° F, below 5
Sulfur, percent, 0.24 Color, NPA 7
Viscosity, Saybolt Universal at 100°F 35 sec. 77°F 43 sec. Nitrogen, percent, 0.019

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.6	3.6	0.641	89.3					
2	167	4.0	7.6	.668	80.3	6.5	1.37504	124.5		
3	212	7.4	15.0	.718	65.6	20	1.39960	129.0		
4	257	8.7	23.7	.748	57.7	26	1.41547	140.1		
5	302	6.6	30.3	.766	53.2	27	1.42659	146.9		
6	347	6.5	36.8	.779	50.1	26	1.43371	145.3		
7	392	5.4	42.2	.790	47.6	25	1.43928	145.4		
8	437	5.2	47.4	.803	44.7	25	1.44575	142.2		
9	482	5.5	52.9	.818	41.5	27	1.45392	148.5		
10	527	6.4	59.3	.834	38.2	30	1.46386	155.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.3	64.6	0.857	33.6	37			37	15
12	437	4.4	69.0	.865	32.1	37			48	35
13	482	4.8	73.8	.875	30.2	38			59	55
14	527	4.5	78.3	.888	27.9	41			84	70
15	572	5.4	83.7	.893	27.0	41			150	90
Residuum		13.7	97.4	.931	20.5					

Carbon residue, Conradson Residuum 2.7 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.0	0.686	74.8	
Total gasoline and naphtha	42.2	0.739	60.0	
Kerosene distillate	10.7	.811	43.0	
Gas oil	14.7	.849	35.2	
Nonviscous lubricating distillate	9.6	.868-.889	31.5-27.7	50-100
Medium lubricating distillate	6.5	.889-.895	27.7-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	13.7	.931	20.5	
Distillation loss	2.6			

Bureau of Mines Item 301
Laramie Laboratory
Sample PC-54-201

IDENTIFICATION

Beaver Lodge field
Three Forks and Jefferson, Devonian
10,390-10,445 feet

North Dakota
Williams County

GENERAL CHARACTERISTICS

Gravity, specific, 0.834 Gravity, ° API, 38.2 Pour point, ° F, 65
Sulfur, percent, 0.14 Color, green
Viscosity, Saybolt Universal at 100°F., 55 sec., 77°F., 140 sec. Nitrogen, percent, 0.024

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 117 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167	3.5	3.5	0.664	81.6	-	1.37405	127.2		
3	212	2.1	5.6	.710	67.8	17	1.39672	129.9		
4	257	4.5	10.1	.738	60.2	21	1.41189	144.7		
5	302	4.8	14.9	.758	55.2	23	1.42302	142.4		
6	347	4.9	19.8	.773	51.6	23	1.43104	142.8		
7	392	4.5	24.3	.784	49.0	22	1.43822	143.3		
8	437	4.5	28.8	.796	46.3	22	1.44492	123.4		
9	482	5.3	34.1	.812	42.8	24	1.45201	130.7		
10	527	6.9	41.0	.827	39.6	27	1.45964	147.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.9	44.9	0.842	36.6	30			40	30
12	437	6.4	51.3	.844	36.2	27			45	50
13	482	6.1	57.4	.859	33.2	31			56	70
14	527	6.7	64.1	.877	29.9	36			70	90
15	572	7.2	71.3	.889	27.7	39			105	105
Residuum		25.8	97.1	.914	23.3					

Carbon residue, Conradson Residuum 2.1 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.6	0.681	76.3	
Total gasoline and naphtha	24.3	0.744	58.7	
Kerosene distillate	9.8	.805	44.3	
Gas oil	16.9	.837	37.6	
Nonviscous lubricating distillate	15.7	.851-.887	34.8-28.0	50-100
Medium lubricating distillate	4.6	.887-.895	28.0-26.6	100-200
Viscous lubricating distillate				Above 200
Residuum	25.8	.914	23.3	
Distillation loss	2.9			

Bureau of Mines Item 302
Laramie Laboratory
Sample PC-58-139

IDENTIFICATION

Blue Buttes field
Madison, Mississippian
9,159 - 9,193 feet

North Dakota
McKenzie County

GENERAL CHARACTERISTICS

Gravity, specific 0.820 Gravity, ° API, 41.1 Pour point, ° F, below 5
Sulfur, percent, 0.52 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 34 sec. Nitrogen, percent, 0.019

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	2.9	2.9	0.666	81.0					
2	167	3.9	6.8	.683	75.7	14	1.38459	128.7		
3	212	6.9	13.7	.722	64.5	22	1.40260	138.0		
4	257	9.3	23.0	.755	55.9	29	1.42152	147.9		
5	302	5.7	28.7	.774	51.3	30	1.43149	154.8		
6	347	6.9	35.6	.785	48.8	29	1.43783	152.5		
7	392	5.4	41.0	.793	46.9	26	1.44225	149.8		
8	437	6.4	47.4	.807	43.8	27	1.44867	147.1		
9	482	3.6	51.0	.820	41.1	28	1.45663	150.9		
10	527	7.4	58.4	.837	37.6	32	1.46614	160.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	61.4	0.858	33.4	37	1.47695	166.0	39	15
12	437	5.3	66.7	.863	32.5	36	1.48014	167.5	43	20
13	482	5.0	71.7	.873	30.6	37	1.48582	172.8	52	45
14	527	5.2	76.9	.888	27.9	41			69	70
15	572	5.1	82.0	.893	27.0	41			115	85
Residuum		16.8	98.8	.938	19.4					

Carbon residue, Conradson Residuum 2.6 percent crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.7	0.699	70.9	
Total gasoline and naphtha	41.0	0.749	57.4	
Kerosene distillate	10.0	.812	42.8	
Gas oil	17.0	.852	34.6	
Nonviscous lubricating distillate	9.7	.870-.891	31.1-27.3	50 100
Medium lubricating distillate	4.3	.891-.896	27.3-26.4	100 200
Viscous lubricating distillate				Above 200
Residuum	16.8	.938	19.4	
Distillation loss	1.2			

Bureau of Mines Item 303
Sample Laramie Laboratory
PC-53-61

IDENTIFICATION

Charlson field
Madison, Mississippian
8,998-9,042 feet

North Dakota
McKenzie County

GENERAL CHARACTERISTICS

Gravity, specific 0.811 Gravity, ° API, 43.0 Pour point, ° F, below 5
Sulfur percent, 0.22 Color, NPA 6
Viscosity, Saybolt Universal at 100°F., 33 sec. Nitrogen percent, 0.024

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 73 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.1	3.1	0.645	87.9					
2	167	4.2	7.3	.672	79.1	8.4	1.37678	128.8		
3	212	7.6	14.9	.719	65.3	21	1.40056	132.3		
4	257	9.4	24.3	.748	57.7	26	1.41611	138.7		
5	302	6.8	31.1	.766	53.2	27	1.42688	145.4		
6	347	6.5	37.6	.779	50.1	26	1.43433	146.2		
7	392	5.5	43.1	.790	47.6	25	1.43934	143.9		
8	437	5.4	48.5	.801	45.2	24	1.44520	140.9		
9	482	5.5	54.0	.817	41.7	27	1.45419	146.0		
10	527	6.6	60.6	.833	38.4	30	1.46370	153.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.4	67.0	0.837	33.6	37			41	10
12	437	5.7	72.7	.867	31.7	38			51	35
13	482	5.0	77.7	.880	29.3	41			70	60
14	527	4.1	81.8	.887	28.0	41			115	80
15	572	4.3	86.1	.898	26.1	43			220	95
Residuum		12.3	98.4	.926	21.3					

Carbon residue, Conradson Residuum 2.5 percent crude 4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.9	0.690	73.6	
Total gasoline and naphtha	43.1	0.741	59.5	
Kerosene distillate	10.9	.809	43.4	
Gas oil	15.1	.848	35.4	
Nonviscous lubricating distillate	9.1	.866-.885	31.9-28.4	50-100
Medium lubricating distillate	4.9	.885-.896	28.4-26.4	100-200
Viscous lubricating distillate	3.0	.896-.904	26.4-25.0	Above 200
Residuum	12.3	.926	21.3	
Distillation loss	1.6			

Bureau of Mines Item 304
Sample Laramie Laboratory
PC-59-185

IDENTIFICATION

Glenburn field
Mission Canyon, Mississippian
4,513 - 4,518 feet

North Dakota
Renville County

GENERAL CHARACTERISTICS

Gravity, specific, 0.899 Gravity, ° API, 25.9 Pour point, ° F, 55
Sulfur percent 2.79 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 80 sec., 77°F., 220 sec. Nitrogen, percent, 0.169

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.8	0.8							
2	167	2.3	3.1	0.712	67.2	-	1.40551	145.0		
3	212	2.5	5.6	.735	61.0	28	1.41207	147.6		
4	257	3.2	8.8	.745	58.4	24	1.41652	145.7		
5	302	3.2	12.0	.756	55.7	22	1.42227	141.6		
6	347	3.4	15.4	.769	52.5	21	1.42887	140.8		
7	392	3.7	19.1	.782	49.5	21	1.43614	141.6		
8	437	4.6	23.7	.800	45.4	24	1.44492	144.5		
9	482	5.6	29.3	.820	41.1	28	1.45609	150.1		
10	527	4.6	33.9	.839	37.2	32	1.46672	159.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.4	36.3	0.863	32.5	40	1.47809	165.3	39	15
12	437	7.4	43.7	.870	31.1	39	1.48375	174.1	43	35
13	482	4.6	48.3	.884	28.6	43	1.49170	174.4	53	55
14	527	5.8	54.1	.902	25.4	48			72	75
15	572	6.2	60.3	.917	22.8	52			120	90
Residuum		38.5	98.8	1.017	7.6					

Carbon residue, Conradson Residuum 19.0 percent crude 8.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.6	0.722	64.5	
Total gasoline and naphtha	19.1	0.752	56.7	
Kerosene distillate	10.2	.811	43.0	
Gas oil	15.1	.861	32.8	
Nonviscous lubricating distillate	10.4	.881-.911	29.1-23.8	50-100
Medium lubricating distillate	5.5	.911-.925	23.8-21.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	38.5	1.017	7.6	
Distillation loss	1.2			

Bureau of Mines
Sample
Item 305
Laramie
PC-58-281
Laboratory

IDENTIFICATION

Rival field
Madison, Mississippian
6,076 - 6,109 feet

North Dakota
Burke County

GENERAL CHARACTERISTICS

Gravity, specific 0.832 Gravity, ° API 38.6 Pour point, ° F, below 5
Sulfur, percent, 0.60 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.038

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.9	3.9	0.639	89.9					
2	167	3.0	6.9	.629	76.9	12	1.38202	128.1		
3	212	7.4	14.3	.724	63.9	23	1.40361	134.6		
4	257	6.3	20.6	.751	56.9	27	1.41873	144.2		
5	302	5.7	26.3	.767	53.0	27	1.42881	148.1		
6	347	5.5	31.8	.783	49.2	28	1.43726	150.7		
7	392	6.4	38.2	.796	46.3	28	1.44392	148.7		
8	437	4.3	42.5	.810	43.2	29	1.45141	148.8		
9	482	5.5	48.0	.827	39.6	31	1.46087	156.1		
10	527	4.8	52.8	.842	36.6	34	1.47051	163.4		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.6	57.4	0.862	32.7	39	1.48039	168.4	39	5
12	437	6.2	63.6	.870	31.1	39	1.48532	172.0	46	25
13	482	5.7	69.3	.883	28.8	42	1.49274	178.8	60	50
14	527	3.8	73.1	.891	27.3	43			86	75
15	572	3.8	78.9	.903	23.2	46			170	90
Residuum		19.1	98.0	.957	16.4					

Carbon residue, Conradson Residuum 5.0 percent, crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.3	0.691	73.3	
Total gasoline and naphtha	38.2	0.743	58.9	
Kerosine distillate	4.3	.810	43.2	
Gas oil	19.8	.849	35.2	
Nonviscous lubricating distillate	10.7	.874-.893	30.4-27.0	50-100
Medium lubricating distillate	5.7	.893-.906	27.0-24.7	100-200
Viscous lubricating distillate	.2	.906-.907	24.7-24.5	Above 200
Residuum	19.1	.957	16.4	
Distillation loss	2.0			

Bureau of Mines
Sample
Item 306
Laramie
PC-52-241
Laboratory

IDENTIFICATION

Tioga field
Madison, Mississippian
8,258-8,290 feet

North Dakota
Williams County

GENERAL CHARACTERISTICS

Gravity, specific 0.819 Gravity, ° API 41.3 Pour point, ° F, below 5
Sulfur, percent 0.31 Color, NPA 8
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen percent, 0.016

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.8	2.8	0.643	88.6					
2	167	3.4	6.2	.664	81.6	4.6	1.37324	122.3		
3	212	6.7	12.9	.714	66.7	18	1.39732	131.0		
4	257	8.7	21.6	.766	58.2	25	1.41436	139.4		
5	302	6.9	28.5	.765	53.5	26	1.42561	146.4		
6	347	6.9	35.4	.779	50.1	26	1.43382	146.8		
7	392	5.3	40.7	.791	47.4	25	1.43984	143.8		
8	437	5.5	46.2	.803	44.7	25	1.44597	142.9		
9	482	5.8	52.0	.819	41.3	28	1.45517	148.0		
10	527	6.5	58.5	.835	38.0	31	1.46492	158.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.5	62.0	0.858	33.4	37			37	10
12	437	5.9	67.9	.863	32.5	36			45	30
13	482	4.9	72.8	.878	29.7	40			56	50
14	527	4.8	77.6	.888	27.9	41			78	70
15	572	5.6	83.2	.895	26.6	42			135	90
Residuum		15.2	98.4	.934	20.0					

Carbon residue, Conradson Residuum 2.8 percent crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.9	0.685	75.1	
Total gasoline and naphtha	40.7	0.741	59.5	
Kerosine distillate	11.3	.811	43.0	
Gas oil	15.3	.850	35.0	
Nonviscous lubricating distillate	9.8	.870-.891	31.1-27.3	50-100
Medium lubricating distillate	6.1	.891-.899	27.3-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.2	.934	20.0	
Distillation loss	1.6			

Item 307
Bureau of Mines Laramie Laboratory
Sample PC-61-175

IDENTIFICATION

Tioga, North Field
Madison, Mississippian
7,891-7,897 feet

North Dakota
Burke

GENERAL CHARACTERISTICS

Gravity, specific 0.818 Gravity, ° API, 41.5 Pour point, ° F, below 5
Sulfur, percent, 0.25 Color, green
Viscosity, Saybolt Universal at 100° F, 33 sec. Nitrogen, percent, 0.027

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.642	88.9					
2	167	3.7	6.4	.667	80.6	6.1	1.38251	121.3		
3	212	6.7	13.1	.718	65.6	20	1.40080	120.6		
4	257	8.5	21.6	.746	58.2	25	1.41641	135.0		
5	302	7.2	28.8	.765	53.5	26	1.42750	146.6		
6	347	6.1	34.9	.780	49.9	26	1.43568	145.7		
7	392	5.6	40.5	.792	47.2	26	1.44186	145.5		
8	437	4.7	45.2	.804	44.5	26	1.44784	143.4		
9	482	5.1	50.3	.818	41.5	27	1.45555	146.9		
10	527	6.2	56.5	.835	38.0	31	1.46582	157.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.0	60.5	0.855	34.0	36	1.47628	164.6	41	Below 5
12	437	5.6	66.1	.861	32.8	35	1.47956	165.6	43	25
13	482	4.6	70.7	.872	30.8	37	1.48567	171.2	53	40
14	527	4.1	74.8	.886	28.2	40			69	60
15	572	4.9	79.7	.892	27.0	41			105	80
Residuum		18.3	98.0	.933	20.2					

Carbon residue, Conradson Residuum 3.4 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.1	0.688	74.2	
Total gasoline and naphtha	40.5	0.742	59.2	
Kerosene distillate	9.8	.811	43.0	
Gas oil	16.5	.851	34.8	
Nonviscous lubricating distillate	9.8	.869-.892	31.3-27.1	50-100
Medium lubricating distillate	3.1	.892-.897	27.1-26.3	100-200
Viscous lubricating distillate				Above 200
Residuum	18.3	.933	20.2	
Distillation loss	2.0			

Item 308
Bureau of Mines Bartlesville Laboratory
Sample 61075

IDENTIFICATION

Allen field
Allen, Pennsylvanian
696-723 feet

Oklahoma
Hughes County

GENERAL CHARACTERISTICS

Gravity, specific 0.876 Gravity, ° API, 29.3 Pour point, ° F, below 5
Sulfur percent 0.20 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 118 sec., 100° F, 85 sec. Nitrogen, percent, 0.21
at 130° F, 59 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.5	3.5	0.696	71.8	-	1.39804	125.5		
4	257	4.5	8.0	.730	62.3	17	1.40927	124.4		
5	302	3.9	11.9	.747	57.9	18	1.41559	124.2		
6	347	4.4	16.3	.767	53.0	20	1.42588	126.5		
7	392	4.2	20.5	.786	48.5	23	1.43478	131.1		
8	437	4.6	25.1	.803	44.7	25	1.44426	133.4		
9	482	5.5	30.6	.818	41.5	27	1.45256	137.6		
10	527	6.8	37.4	.836	37.8	31	1.46294	143.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.3	39.7	0.862	32.7	39	1.47268	149.4	40	10
12	437	7.0	46.7	.868	31.5	38	1.47765	152.8	46	30
13	482	4.8	51.5	.876	30.0	39	1.48552	160.3	58	65
14	527	4.8	56.3	.892	27.1	43	1.49205	154.6	74	70
15	572	5.9	62.2	.902	25.4	45			155	80
Residuum		37.0	99.2	.972	14.1					

Carbon residue, Conradson Residuum 6.1 percent crude 2.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.5	0.696	71.8	
Total gasoline and naphtha	20.5	0.747	57.9	
Kerosene distillate	10.1	.811	43.0	
Gas oil	14.8	.852	34.6	
Nonviscous lubricating distillate	10.2	.871-.895	31.0-26.6	50-100
Medium lubricating distillate	6.6	.895-.907	26.6-24.5	100-200
Viscous lubricating distillate				Above 200
Residuum	37.0	.972	14.1	
Distillation loss	.8			

Item 309
Bureau of Mines Bartlesville Laboratory
Sample 64030

IDENTIFICATION

Beebe-Konawa field
Viola, Ordovician
2,364 - 2,493 feet

Oklahoma
Pottawatomie County

GENERAL CHARACTERISTICS

Gravity, specific 0.835 Gravity, ° API, 38.0 Pour point, ° F, below 5
Sulfur, percent, 0.49 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 47 sec. Nitrogen, percent, 0.101

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.642	88.9					
2	167	3.1	5.5	.671	79.4	8.0	1.37137	126.0		
3	212	4.6	10.1	.709	68.1	16	1.39550	127.8		
4	257	5.5	15.6	.732	61.8	18	1.40740	127.9		
5	302	5.0	20.6	.752	56.7	20	1.41873	129.4		
6	347	4.8	25.4	.772	51.8	22	1.42911	135.4		
7	392	4.5	29.9	.791	47.4	25	1.43857	138.0		
8	437	4.6	34.5	.805	44.3	26	1.44698	140.6		
9	482	4.7	39.2	.819	41.3	28	1.45487	144.2		
1/10	527	4.8	44.0	.831	38.8	29	1.46225	148.5		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	4.8	48.8	0.859	33.2	36	1.47171	151.2	42	20
12	437	4.6	53.4	.865	32.1	37	1.47752	157.3	51	40
13	482	4.6	58.0	.873	30.6	37	1.48501	161.9	69	60
14	527	5.1	63.1	.889	27.7	42	1.49226	-	125	70
15	572	6.4	69.5	.899	25.9	44			270	95
Residuum		25.7	95.2	.952	17.1					

Carbon residue, Conradson Residuum 7.8 percent, crude 2.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.1	0.661	76.2	
Total gasoline and naphtha	29.9	0.734	61.4	
Kerosene distillate	9.3	.812	42.7	
Gas oil	11.4	.848	35.4	
Nonviscous lubricating distillate	7.8	.864-.882	32.2-29.0	50-100
Medium lubricating distillate	5.1	.882-.894	29.0-26.7	100-200
Viscous lubricating distillate	6.0	.894-.905	26.7-24.9	Above 200
Residuum	25.7	.952	17.1	
Distillation loss	4.8			

1/ Distillation discontinued at 518°F.

Item 310
Bureau of Mines Bartlesville Laboratory
Sample 58015

IDENTIFICATION

Burbank field
Layton and Burbank, Pennsylvanian
2,700-2,760 feet

Oklahoma
Osage County

GENERAL CHARACTERISTICS

Gravity, specific 0.827 Gravity, ° API 32.6 Pour point, ° F, below 5
Sulfur, percent 0.24 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 43 sec. Nitrogen, percent, 0.051

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 753 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.3	2.3	0.639	89.9					
2	167	2.6	4.9	.667	80.6	6.1	1.37554	127.1		
3	212	4.8	9.7	.713	67.0	18	1.39692	125.5		
4	257	5.4	15.1	.739	60.0	21	1.41002	128.2		
5	302	4.5	19.6	.756	55.7	22	1.41934	131.3		
6	347	5.7	25.3	.775	51.1	24	1.42925	132.7		
7	392	4.9	30.2	.790	47.6	25	1.43735	145.4		
8	437	5.1	35.3	.806	44.1	27	1.44580	135.4		
9	482	5.0	40.3	.819	41.3	28	1.45318	134.6		
10	527	6.5	46.8	.834	38.2	30	1.46088	140.0		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.4	49.2	0.844	36.2	31	1.46886	149.6	40	14
12	437	5.1	54.3	.854	34.2	32	1.47160	147.8	44	24
13	482	5.7	60.0	.863	32.5	33	1.47731	153.3	54	54
14	527	6.5	66.5	.880	29.3	38	1.48403	154.1	76	70
15	572	4.4	70.9	.887	28.0	38			130	84
Residuum		26.0	96.9	.925	21.5					

Carbon residue, Conradson Residuum 4.4 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.7	0.683	75.7	
Total gasoline and naphtha	30.2	0.739	60.0	
Kerosene distillate	10.1	.812	42.8	
Gas oil	14.8	.843	36.4	
Nonviscous lubricating distillate	10.6	.859-.883	33.2-28.8	50-100
Medium lubricating distillate	5.2	.883-.890	28.8-27.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.0	.925	21.5	
Distillation loss	3.1			

Bureau of Mines
Sample
Item 311
Bartlesville
47028
Laboratory

IDENTIFICATION

Cache Creek field
Lower Cache, Pennsylvanian
1,320-1,323 feet

Oklahoma
Cotton County

GENERAL CHARACTERISTICS

Gravity, specific 0.844 Gravity ° API, 36.2 Pour point, ° F, -
Sulfur, percent, 0.52 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 60 sec., 100°F., 50 sec. Nitrogen percent -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.5	2.5	0.635	91.3					
2	167	2.1	4.6	.657	83.9	1.3	1.37101	123.0		
3	212	4.5	9.1	.703	69.8	13	1.39135	123.9		
4	257	5.8	14.9	.731	62.1	18	1.40575	121.3		
5	302	4.6	19.5	.749	57.4	18	1.41600	126.3		
6	347	5.1	24.6	.766	53.2	20	1.42519	129.1		
7	392	4.9	29.5	.782	49.5	21	1.43322	130.2		
8	437	5.4	34.9	.798	45.8	23	1.44150	131.4		
9	482	6.4	41.3	.813	42.6	25	1.45037	134.4		
10	527	6.1	47.4	.831	38.8	29	1.45978	140.0		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.2	49.6	0.849	35.2	33			42	10
12	437	5.4	55.0	.859	33.2	34			47	25
13	482	5.2	60.2	.872	30.8	37			60	50
14	527	5.3	65.5	.884	28.6	40			94	60
15	572	4.4	69.9	.895	26.6	42			170	80
Residuum		28.7	98.6	.968	14.7					

Carbon residue, Conradson Residuum 12.7 percent crude 4.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.1	0.674	78.4	
Total gasoline and naphtha	29.5	0.731	62.1	
Kerosene distillate	11.8	.806	44.1	
Gas oil	11.4	.841	36.8	
Nonviscous lubricating distillate	10.5	.860-.885	33.0-28.4	50-100
Medium lubricating distillate	6.4	.885-.899	28.4-25.9	100-200
Viscous lubricating distillate	3	.899-.900	25.9-25.7	Above 200
Residuum	28.7	.968	14.7	
Distillation loss	1.4			

Bureau of Mines
Sample
Item 312
Bartlesville
64051
Laboratory

IDENTIFICATION

Camrick field
Morrow, Pennsylvanian
7,434 - 7,454 feet

Oklahoma
Beaver County

GENERAL CHARACTERISTICS

Gravity specific 0.830 Gravity, ° API, 39.0 Pour point, ° F, 30
Sulfur, percent, 0.06 Color, dark green
Viscosity, Saybolt Universal at 77°F., 111 sec., 100°F., 64 sec Nitrogen, percent, 0.041

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.635	91.3					
2	167	1.7	3.5	.665	81.3	5.1	1.37223	123.6		
3	212	3.9	7.4	.711	67.5	17	1.39589	125.7		
4	257	5.2	12.6	.734	61.3	19	1.40556	130.3		
5	302	3.9	16.5	.749	57.4	18	1.41762	135.3		
6	347	3.7	20.2	.762	54.2	18	1.42521	135.5		
7	392	4.0	24.2	.776	50.8	18	1.43224	135.4		
8	437	3.7	27.9	.790	47.6	19	1.43936	137.0		
9	482	4.4	32.3	.802	44.9	20	1.44626	140.2		
10	527	4.6	36.9	.813	42.5	20	1.45280	142.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.7	40.6	0.830	39.0	24	1.46016	144.4	39	35
12	437	5.0	45.6	.837	37.6	24	1.46347	144.8	46	50
13	482	4.9	50.5	.842	36.6	23	1.46506	146.4	55	75
14	527	6.2	56.7	.856	33.8	26			77	100
15	572	6.2	62.9	.860	33.0	25			125	110
Residuum		35.3	98.2	.904	25.0					

Carbon residue, Conradson Residuum 3.1 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.4	0.682	76.0	
Total gasoline and naphtha	24.2	0.732	61.9	
Kerosene distillate	12.7	.802	44.8	
Gas oil	6.4	.834	36.2	
Nonviscous lubricating distillate	11.3	.839-.856	37.1-33.4	50-100
Medium lubricating distillate	6.3	.856-.862	33.4-32.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	35.3	.904	25.0	
Distillation loss	1.6			

1/ Distillation discontinued at 516°F

Bureau of Mines
Sample

Item 313
Bartlesville
57109

Laboratory

IDENTIFICATION

Cement field
Upper Melton, Pennsylvanian
5,790-5 824 feet

Oklahoma
Caddo County

GENERAL CHARACTERISTICS

Gravity, specific 0.859 Gravity, ° API 33.2 Pour point, ° F, 25
Sulfur percent 0.47 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 56 sec., 130°F., 48 sec. Nitrogen percent, 0.152

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 750 mm Hg
First drop 151 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.5	1.5	0.709	68.1	-				
4	257	4.3	5.8	.744	58.7	24	1.40961	126.3		
5	302	7.7	13.5	.760	54.7	24	1.42198	125.3		
6	347	9.2	22.7	.775	51.1	24	1.43059	133.7		
7	392	6.2	28.9	.790	47.6	25	1.43792	137.4		
8	437	5.0	33.9	.809	43.4	28	1.44624	138.9		
9	482	4.7	38.6	.822	40.6	29	1.45495	135.7		
10	527	5.2	43.8	.836	37.8	31	1.46281	143.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.9	45.7	0.845	36.0	31	1.46896	158.7	39	16
12	437	6.2	51.9	.857	33.6	33	1.47194	147.4	45	26
13	482	6.5	58.4	.864	32.3	33	1.47729	-	57	44
14	527	5.2	63.6	.878	29.7	37	1.48334	-	79	66
15	572	6.3	69.9	.890	27.5	39			140	80
Residuum		29.8	99.7	.960	15.9					

Carbon residue, Conradson Residuum 5.3 percent crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.5	0.709	68.1	
Total gasoline and naphtha	28.9	0.766	53.2	
Kerosene distillate	9.7	.815	42.1	
Gas oil	13.0	.845	36.0	
Nonviscous lubricating distillate	11.4	.860-.881	33.0-29.1	50 100
Medium lubricating distillate	6.9	.881-.897	29.1-26.3	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.8	.960	15.9	
Distillation loss	.3			

Bureau of Mines
Sample

Item 314
Bartlesville
61063

Laboratory

IDENTIFICATION

Cumberland field
Bromide, Ordovician
5,000 feet

Oklahoma
Bryan County

GENERAL CHARACTERISTICS

Gravity, specific 0.852 Gravity, ° API, 34.6 Pour point, ° F, below 5
Sulfur, percent, 0.47 Color, dark green
Viscosity, Saybolt Universal at 100°F., 49 sec. Nitrogen, percent, 0.19

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.688	74.2					
2	167	1.8	3.2	.697	71.5	20	1.37864	125.4		
3	212	3.2	7.1	.706	68.9	15	1.39437	128.1		
4	257	6.3	13.4	.734	61.3	19	1.40918	131.5		
5	302	5.5	18.9	.753	56.4	20	1.41972	134.6		
6	347	5.2	24.1	.769	52.5	21	1.42898	134.8		
7	392	5.1	29.2	.785	48.8	23	1.43718	136.6		
8	437	4.8	34.0	.800	45.4	24	1.44442	137.6		
9	482	5.2	39.2	.814	42.3	25	1.45245	140.6		
10	527	6.1	45.3	.829	39.2	28	1.46055	145.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.3	49.6	0.844	36.2	31	1.47070	153.1	40	15
12	437	4.8	54.4	.862	32.7	36	1.47525	151.9	48	45
13	482	5.0	59.4	.870	31.1	36	1.48315	157.2	58	55
14	527	5.6	65.0	.884	28.6	40	1.49057	166.0	85	75
15	572	3.9	68.9	.896	26.4	42			135	85
Residuum		30.3	99.2	.957	16.4					

Carbon residue, Conradson Residuum 6.8 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.1	0.700	70.6	
Total gasoline and naphtha	29.2	0.744	58.7	
Kerosene distillate	10.0	.807	43.8	
Gas oil	13.9	.841	36.8	
Nonviscous lubricating distillate	10.6	.864-.888	32.3-27.9	50 100
Medium lubricating distillate	5.2	.888-.901	27.9-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	30.3	.957	16.4	
Distillation loss	.8			

Bureau of Mines
Sample
Item 315
Bartlesville
61064 Laboratory

IDENTIFICATION

Cumberland field
McLish, Ordovician
5,700 feet

Oklahoma
Bryan County

GENERAL CHARACTERISTICS

Gravity, specific, 0.836 Gravity, ° API, 37.8 Pour point, ° F, below 5
Sulfur, percent, 0.41 Color, green
Viscosity, Saybolt Universal at 100°F., 44 sec. Nitrogen, percent, 0.16

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 48 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.653	85.2					
2	167	2.8	5.5	.663	81.9	4.2	1.37852	128.4		
3	212	4.6	10.1	.704	69.5	14	1.39534	126.5		
4	257	5.3	15.4	.734	61.3	19	1.41003	132.2		
5	302	4.9	20.3	.752	56.7	20	1.42001	135.6		
6	347	4.7	25.0	.768	52.7	21	1.42898	135.7		
7	392	4.4	29.4	.784	49.0	22	1.43664	137.8		
8	437	4.6	34.0	.798	45.8	23	1.44392	137.0		
9	482	4.8	38.8	.812	42.8	24	1.45160	140.8		
10	527	6.4	45.2	.829	39.2	28	1.46028	142.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.3	48.5	0.852	34.6	35	1.47015	149.6	40	15
12	437	5.1	53.6	.857	33.6	33	1.47487	149.8	45	20
13	482	5.5	59.1	.871	31.0	37	1.48251	153.6	56	50
14	527	4.6	63.7	.889	27.7	42	1.48967	161.5	79	65
15	572	5.7	69.4	.896	26.4	42			130	85
Residuum		26.2	95.6	.949	17.6					

Carbon residue, Conradson Residuum 5.6 percent crude 1.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.679	76.9	
Total gasoline and naphtha	29.4	0.731	62.1	
Kerosene distillate	9.4	.805	44.3	
Gas oil	14.8	.845	36.0	
Nonviscous lubricating distillate	10.9	.864-.892	32.3-27.1	50-100
Medium lubricating distillate	5.8	.892-.900	27.1-25.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.2	.949	17.6	
Distillation loss	4.4			

Bureau of Mines
Sample
Item 316
Bartlesville
61062 Laboratory

IDENTIFICATION

Cumberland field
Oil Creek, Ordovician
6,300 feet

Oklahoma
Bryan County

GENERAL CHARACTERISTICS

Gravity, specific 0.846 Gravity, ° API, 35.8 Pour point, ° F, below 5
Sulfur, percent, 0.48 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 48 sec. Nitrogen, percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4							
2	167	2.3	3.7	0.669	80.0	7	1.37824	127.3		
3	212	4.4	8.1	.709	68.1	16	1.39738	128.8		
4	257	5.1	13.2	.734	61.3	19	1.41006	133.1		
5	302	5.1	18.3	.754	56.2	21	1.42088	133.5		
6	347	4.7	23.0	.770	52.3	22	1.42916	135.4		
7	392	4.5	27.5	.785	48.8	23	1.43709	138.5		
8	437	4.9	32.4	.800	45.4	24	1.44492	140.5		
9	482	5.3	37.7	.815	42.1	26	1.45348	141.4		
10	527	6.9	44.6	.829	39.2	28	1.46210	150.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.5	48.1	0.853	34.4	35	1.47229	152.2	41	20
12	437	7.1	55.2	.859	33.2	34	1.47608	151.3	46	35
13	482	5.0	60.2	.872	30.8	37	1.48436	150.7	59	55
14	527	5.5	65.7	.887	28.0	41	1.49210	-	83	75
15	572	6.1	71.8	.897	26.3	43			150	85
Residuum		26.4	98.2	.948	17.8					

Carbon residue, Conradson Residuum 6.7 percent crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.1	0.694	72.4	
Total gasoline and naphtha	27.5	0.740	59.7	
Kerosene distillate	10.2	.808	43.6	
Gas oil	15.9	.845	36.0	
Nonviscous lubricating distillate	10.8	.863-.890	32.5-27.5	50-100
Medium lubricating distillate	7.4	.890-.902	27.5-25.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.4	.948	17.8	
Distillation loss	1.8			

Item 317
Bureau of Mines Bartlesville Laboratory
Sample 55089

IDENTIFICATION

Cushing field
Bartlesville, Pennsylvanian
2,624-2,637 feet

Oklahoma
Creek County

GENERAL CHARACTERISTICS

Gravity, specific, 0.815 Gravity, ° API, 42.1 Pour point, ° F, below 5
Sulfur, percent, 0.22 Color, dark green
Viscosity, Saybolt Universal at 100°F, 38 sec, Nitrogen, percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.0	3.0	0.636	91.0					
2	167	3.7	6.7	.663	81.9	4.2	1.38119	124.5		
3	212	6.3	13.0	.707	68.6	15	1.39487	123.4		
4	257	8.3	21.3	.732	61.8	18	1.40814	127.6		
5	302	7.5	28.8	.753	56.4	20	1.41919	130.2		
6	347	6.6	35.4	.773	51.6	23	1.43007	134.7		
7	392	5.8	41.2	.790	47.6	25	1.43880	134.6		
8	437	5.8	47.0	.804	44.5	26	1.44640	139.5		
9	482	6.0	53.0	.819	41.3	28	1.45429	139.5		
10	527	6.3	59.3	.831	38.8	29	1.46241	149.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.3	52.6	0.847	35.6	32	1.47053	152.3	41	15
12	437	6.1	68.7	.854	34.2	32	1.47410	158.1	46	35
13	482	4.6	73.3	.868	31.5	35	1.48080	157.9	58	50
14	527	3.7	77.0	.877	29.2	36			82	70
15	572	4.9	81.9	.889	27.7	39			145	80
Residuum		17.0	98.9	.943	18.6					

Carbon residue, Conradson Residuum 5.6 percent, crude 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.0	0.678	77.2	
Total gasoline and naphtha	41.2	0.734	61.3	
Kerosene distillate	11.8	.812	42.8	
Gas oil	14.5	.842	36.6	
Nonviscous lubricating distillate	9.0	.858-.884	33.4-28.6	50-100
Medium lubricating distillate	5.4	.884-.893	28.6-27.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.0	.943	18.6	
Distillation loss	1.1			

Item 318
Bureau of Mines Bartlesville Laboratory
Sample 59169

IDENTIFICATION

Domes-Pond Creek field
Bartlesville, Pennsylvanian

Oklahoma
Osage County

GENERAL CHARACTERISTICS

Gravity, specific, 0.863 Gravity, ° API, 32.5 Pour point, ° F, below 5
Sulfur, percent, 0.20 Color, greenish black
Viscosity, Saybolt Universal at 77°F, 93 sec., 100°F., 62 sec. Nitrogen, percent, 0.063

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.9	0.9	0.661	82.6					
2	167	1.4	2.3	.672	79.1	8.4	1.37161	120.7		
3	212	2.6	4.9	.705	69.2	14	1.39227	126.6		
4	257	3.7	8.6	.732	61.8	18	1.40734	127.9		
5	302	3.7	12.3	.753	56.4	20	1.41890	131.0		
6	347	3.9	16.2	.775	51.1	24	1.43025	131.0		
7	392	2.9	19.1	.796	46.3	28	1.43992	133.6		
8	437	4.6	23.7	.816	41.9	32	1.44930	134.6		
9	482	4.9	28.6	.834	38.2	35	1.45876	138.4		
10	527	6.2	34.8	.850	35.0	38	1.46761	143.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	38.2	0.863	32.5	40	1.47569	146.9	41	Below 5
12	437	6.6	44.8	.869	31.3	39	1.48039	148.2	49	6
13	482	4.3	49.1	.882	28.9	42	1.48647	155.9	64	20
14	527	5.5	54.6	.894	26.8	44	1.49204	157.3	99	40
15	572	5.9	60.5	.902	25.4	45	1.49725	160.4	195	60
Residuum		35.4	95.9	.944	18.4					

Carbon residue, Conradson Residuum 5.3 percent, crude 2.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.9	0.687	74.5	
Total gasoline and naphtha	19.1	0.743	58.9	
Kerosene distillate	4.6	.816	41.9	
Gas oil	18.8	.852	34.6	
Nonviscous lubricating distillate	9.5	.871-.895	31.0-26.6	50-100
Medium lubricating distillate	5.8	.895-.902	26.6-25.4	100-200
Viscous lubricating distillate	2.7	.902-.906	25.4-24.7	Above 200
Residuum	35.4	.944	18.4	
Distillation loss	4.1			

Bureau of Mines
Sample
Item 319
Bartlesville
61002 Laboratory

IDENTIFICATION

Dover-Hennessey field
Mississippian

Oklahoma
Kingfisher County

GENERAL CHARACTERISTICS

Gravity, specific, 0.829 Gravity, ° API, 32.2 Pour point, ° F, 30
Sulfur, percent, 0.19 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 46 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.656	84.2					
2	167	3.3	6.5	.681	76.3	13	1.38146	126.1		
3	212	4.2	10.7	.718	65.6	20	1.40007	126.2		
4	257	6.8	17.5	.740	59.7	22	1.41141	130.7		
5	302	5.1	22.6	.759	54.9	23	1.42224	131.4		
6	347	4.7	27.3	.774	51.3	23	1.43064	134.4		
7	392	5.0	32.3	.792	47.2	26	1.43986	133.2		
8	437	5.1	37.4	.808	43.6	28	1.44806	137.4		
9	482	4.9	42.3	.820	41.1	28	1.45584	140.3		
10	527	5.7	48.0	.832	38.6	29	1.46265	147.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	50.9	0.844	36.2	31	1.47066	148.3	41	20
12	437	5.1	56.0	.858	33.4	34	1.47337	151.3	46	40
13	482	6.1	62.1	.869	31.3	36	1.47911	151.4	58	55
14	527	4.5	66.6	.879	29.5	37	1.48496	158.5	87	65
15	572	6.0	72.6	.889	27.7	39			155	85
Residuum		23.5	96.1	.935	19.8					

Carbon residue, Conradson Residuum 4.6 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.7	0.688	74.2	
Total gasoline and naphtha	32.3	0.739	60.0	
Kerosene distillate	10.0	.814	42.3	
Gas oil	13.1	.843	36.4	
Nonviscous lubricating distillate	10.0	.867-.881	31.7-29.1	50-100
Medium lubricating distillate	7.2	.881-.895	29.1-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.5	.935	19.8	
Distillation loss	3.9			

Bureau of Mines
Sample
Item 320
Bartlesville
53013 Laboratory

IDENTIFICATION

Edmond, West field

Oklahoma
Canadian County

GENERAL CHARACTERISTICS

Gravity, specific, 0.806 Gravity, ° API, 44.1 Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, greenish black
Viscosity, Saybolt Universal at 100°F., 37 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	3.5	3.5	0.635	91.3					
2	167	4.4	7.9	.667	80.6	6.1	1.37545	124.0		
3	212	7.2	15.1	.707	68.6	15	1.40059	130.0		
4	257	8.3	23.4	.734	61.3	19	1.40874	125.0		
5	302	6.4	29.8	.754	56.2	21	1.41998	135.6		
6	347	5.7	35.5	.772	51.8	23	1.42987	136.7		
7	392	4.6	40.1	.781	49.7	21	1.43763	140.0		
8	437	4.7	44.8	.800	45.4	24	1.44492	136.1		
9	482	4.8	49.6	.814	42.3	25	1.45239	141.3		
10	527	5.5	55.1	.827	39.6	27	1.46031	142.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.1	58.2	0.840	37.0	29	-		39	10
12	437	6.5	64.7	.848	35.4	29	-		45	30
13	482	4.9	69.6	.859	33.2	31	-		57	50
14	527	5.3	74.9	.870	31.1	33	-		81	65
15	572	4.3	79.2	.878	29.7	34	-		135	80
Residuum		19.3	98.5	.918	22.6					

Carbon residue, Conradson Residuum 3.0 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.1	0.679	76.9	
Total gasoline and naphtha	40.1	0.727	63.1	
Kerosene distillate	9.5	.807	43.8	
Gas oil	14.3	.839	37.2	
Nonviscous lubricating distillate	10.1	.853-.873	34.4-30.6	50-100
Medium lubricating distillate	5.2	.873-.882	30.6-28.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.3	.918	22.6	
Distillation loss	1.5			

Bureau of Mines Item 321
Bartlesville Laboratory
Sample 59189

IDENTIFICATION

Eola-Robberson field
Bromide, Ordovician

Oklahoma
Garvin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.826 Gravity, ° API, 39.8 Pour point, ° F, below 5
Sulfur, percent, 0.35 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 41 sec. Nitrogen, percent, 0.115

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	3.1	3.1	0.641	89.3					
2	167	3.0	6.1	.669	80.0	7.0	1.37984	128.2		
3	212	4.9	11.0	.713	67.0	18	1.39707	125.7		
4	257	6.2	17.2	.735	61.0	19	1.41097	130.2		
5	302	5.2	22.4	.758	55.2	23	1.42131	135.7		
6	347	5.5	27.9	.776	50.9	24	1.43102	136.7		
7	392	5.2	33.1	.791	47.4	25	1.43964	138.4		
8	437	5.1	38.2	.807	43.8	27	1.44770	139.0		
9	482	5.0	43.2	.821	40.9	29	1.45535	142.5		
10	527	5.8	49.0	.833	38.4	30	1.46297	145.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.5	51.5	0.850	35.0	34	1.47098	151.8	39	20
12	437	4.9	56.4	.855	34.0	32	1.47423	153.7	44	50
13	482	5.3	61.7	.867	31.7	35	1.48090	152.0	54	60
14	527	5.5	67.2	.880	29.3	38	1.48751	160.0	74	70
15	572	5.3	72.5	.894	26.8	41			135	80
Residuum		22.7	95.2	.941	18.9					

Carbon residue, Conradson Residuum 3.9 percent crude 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.0	0.681	76.3	
Total gasoline and naphtha	33.1	0.736	60.8	
Kerosine distillate	10.1	.814	42.3	
Gas oil	14.0	.846	35.8	
Nonviscous lubricating distillate	8.6	.862-.883	32.7-28.8	50-100
Medium lubricating distillate	6.7	.883-.901	28.8-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.7	.941	18.9	
Distillation loss	4.8			

Bureau of Mines Item 322
Bartlesville Laboratory
Sample 59188

IDENTIFICATION

Eola-Robberson field
Oil Creek and McLish, Ordovician

Oklahoma
Garvin County

GENERAL CHARACTERISTICS

Gravity, specific 0.835 Gravity, ° API, 38.0 Pour point, ° F, below 5
Sulfur, percent 0.27 Color, brownish green
Viscosity, Saybolt Universal at 100°F, 42 sec. Nitrogen, percent, 0.110

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.3	1.3	0.659	83.2					
2	167	2.7	4.0	.669	80.0	7.0	1.37557	121.4		
3	212	5.4	9.4	.716	66.1	19	1.39761	129.1		
4	257	6.5	15.9	.743	58.9	23	1.41209	131.9		
5	302	6.0	21.9	.761	54.4	24	1.42288	133.6		
6	347	5.7	27.6	.774	51.3	23	1.43187	139.9		
7	392	5.0	32.6	.791	47.4	25	1.43986	139.9		
8	437	5.1	37.7	.806	44.1	27	1.44728	141.6		
9	482	5.3	43.0	.817	41.7	27	1.45501	143.5		
10	527	6.0	49.0	.833	38.4	30	1.46337	149.9		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.0	51.0	0.846	35.8	32	1.47108	150.2	39	14
12	437	5.9	56.9	.854	34.2	32	1.47316	155.5	43	30
13	482	6.1	63.0	.864	32.3	33	1.47988	-	52	50
14	527	4.4	67.4	.879	29.5	37	1.48572	-	72	60
15	572	6.0	73.4	.887	28.0	38			115	80
Residuum		24.6	98.0	.938	19.4					

Carbon residue, Conradson Residuum 3.5 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.4	0.695	72.1	
Total gasoline and naphtha	32.6	0.745	58.4	
Kerosine distillate	10.4	.812	42.8	
Gas oil	15.7	.845	36.0	
Nonviscous lubricating distillate	9.9	.862-.884	32.7-28.6	50-100
Medium lubricating distillate	4.8	.884-.891	28.6-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.6	.938	19.4	
Distillation loss	2.0			

Item 323
Bureau of Mines Bartlesville Laboratory
Sample 54172

IDENTIFICATION

Glennpool field Oklahoma
Glenn, Pennsylvanian Creek County
1,420-1,500 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API, 37.4 Pour point, ° F, below 5
Sulfur percent 0.31 Color, brownish black
Viscosity, Saybolt Universal at 100°F, 42 sec Nitrogen, percent, 0.025

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4							
2	167	1.6	3.0	0.864	81.6	-	1.37635	131.1		
3	212	5.0	8.0	.720	65.0	21	-	-		
4	257	6.8	14.8	.743	58.9	23	1.41254	127.5		
5	302	6.1	20.9	.762	54.2	25	1.42276	132.8		
6	347	6.0	26.9	.780	49.9	26	1.43336	133.2		
7	392	5.4	32.3	.795	46.5	27	1.44172	134.1		
8	437	5.7	38.0	.808	43.6	28	1.44864	140.2		
9	482	6.3	44.3	.820	41.1	28	1.45576	143.7		
10	527	6.9	51.2	.833	38.4	30	1.46326	155.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	54.7	0.849	35.2	33	1.47077	149.8	39	10
12	437	6.5	61.2	.858	33.4	34	1.47570	153.5	45	25
13	482	4.9	66.1	.869	31.3	36	1.48144	155.9	56	45
14	527	5.2	71.3	.879	29.5	37			78	60
15	572	5.1	76.4	.892	27.1	40			140	75
Residuum		23.0	99.4	.946	18.1					

Carbon residue, Conradson Residuum 6.5 percent crude 1.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.0	0.699	70.9	
Total gasoline and naphtha	32.3	0.751	56.9	
Kerosene distillate	12.0	.814	42.3	
Gas oil	16.4	.845	36.0	
Nonviscous lubricating distillate	9.9	.863-.883	32.5-28.8	50-100
Medium lubricating distillate	5.8	.883-.898	28.8-26.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.0	.946	18.1	
Distillation loss	.6			

Item 324
Bureau of Mines Bartlesville Laboratory
Sample 50129

IDENTIFICATION

Golden Trend field Oklahoma
(Antioch, Southwest area) Garvin County
1st and 2d Gibson, Pennsylvanian

GENERAL CHARACTERISTICS

Gravity, specific 0.815 Gravity, ° API, 42.1 Pour point, ° F, below 5
Sulfur percent 0.11 Color, NPA 8
Viscosity, Saybolt Universal at 100°F, 32 sec Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.836	91.0					
2	167	3.2	5.6	.856	84.2	0.8	1.37108	125.0		
3	212	5.4	11.0	.701	70.4	12	1.39208	126.5		
4	257	6.5	17.5	.726	63.4	15	1.40598	130.3		
5	302	6.2	23.7	.748	57.7	18	1.41691	132.8		
6	347	5.7	29.4	.766	53.2	20	1.42682	134.0		
7	392	5.2	34.6	.782	49.5	21	1.43484	134.9		
8	437	5.5	40.1	.797	46.0	23	1.44248	134.1		
9	482	5.3	45.4	.812	42.8	24	1.45032	138.4		
10	527	6.3	51.7	.825	40.0	26	1.45784	142.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	55.1	0.840	37.0	29			41	Below 5
12	437	5.7	60.8	.842	35.2	29			46	20
13	482	4.7	65.5	.861	32.8	32			58	35
14	527	4.3	69.8	.872	30.8	34			85	55
15	572	5.3	75.1	.883	28.8	36			140	75
Residuum		22.3	97.4	.914	23.3					

Carbon residue, Conradson Residuum 2.7 percent crude 0.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.0	0.674	78.4	
Total gasoline and naphtha	34.6	0.728	62.9	
Kerosene distillate	17.1	.812	42.8	
Gas oil	8.1	.845	36.0	
Nonviscous lubricating distillate	9.2	.853-.874	34.4-30.4	50-100
Medium lubricating distillate	6.1	.874-.890	30.4-27.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.3	.914	23.3	
Distillation loss	2.6			

Bureau of Mines Sample
 Item 325
 Bartlesville
 61074 Laboratory

IDENTIFICATION

Golden Trend field
 (Bradley area)
 Springer, Pennsylvanian
 9,670-9,781 feet

Oklahoma
 Grady County

GENERAL CHARACTERISTICS

Gravity, specific, 0.850 — Gravity, ° API, 35.0 — Pour point, ° F, below 5
 Sulfur, percent, 0.22 — Color, greenish black
 Viscosity, Saybolt Universal at 77° F., 90 sec., at 100° F., 56 sec. Nitrogen, percent, 0.15

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
 First drop 54 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	4.7	4.7	0.703	69.8	—	1.40005	127.7		
4	257	5.8	10.5	.739	60.0	21	1.41151	125.9		
5	302	4.8	15.3	.754	56.2	21	1.41850	127.5		
6	347	4.8	20.1	.770	52.3	22	1.42705	127.2		
7	392	4.2	24.3	.785	48.8	23	1.43466	129.4		
8	437	4.7	29.0	.797	46.0	23	1.44169	129.9		
9	482	5.1	34.1	.809	43.4	23	1.44815	134.4		
10	527	5.8	39.9	.823	40.4	25	1.45506	136.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.8	44.7	0.838	37.4	28	1.46270	139.1	40	25
12	437	7.9	52.6	.849	35.2	29	1.46794	138.4	48	50
13	482	5.1	57.7	.861	32.8	32	1.47606	142.6	66	65
14	527	5.3	63.0	.876	30.0	36			99	80
15	572	6.0	69.0	.887	28.0	38			190	120
Residuum		30.4	99.4	.943	18.6					

Carbon residue, Conradson Residuum 6.7 percent, crude 2.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.7	0.703	69.8	
Total gasoline and naphtha	24.3	0.749	57.4	
Kerosene distillate	15.6	.811	43.0	
Gas oil	9.6	.842	36.6	
Nonviscous lubricating distillate	11.0	.851-.876	34.8-30.0	50-100
Medium lubricating distillate	8.5	.876-.892	30.0-27.1	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	30.4	.943	18.6	
Distillation loss	.6			

Bureau of Mines Sample
 Item 326
 Bartlesville
 50126 Laboratory

IDENTIFICATION

Golden Trend field
 (Elmore, Northeast area)
 Gibson, Pennsylvanian
 6,409-6,454 feet

Oklahoma
 Garvin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.815 — Gravity, ° API, 42.1 — Pour point, ° F, below 5
 Sulfur, percent, 0.14 — Color, NFA 8
 Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen, percent, —

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
 First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	2.1	2.1	0.640	89.6					
2	167	3.3	5.4	.662	82.2	3.7	1.37337	123.0		
3	212	5.7	11.1	.703	69.8	13	1.39507	126.5		
4	257	7.8	18.9	.729	62.6	17	1.40655	129.0		
5	302	6.7	25.6	.749	57.4	18	1.41722	131.9		
6	347	5.9	31.5	.766	53.2	20	1.42668	133.9		
7	392	5.5	37.0	.782	49.5	21	1.43478	134.7		
8	437	6.8	43.8	.798	45.8	23	1.44300	135.5		
9	482	4.5	48.3	.812	42.8	24	1.45054	137.3		
10	527	6.1	54.4	.824	40.2	25	1.45765	141.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.7	58.1	0.837	37.6	28			40	Below 5
12	437	5.3	63.4	.849	35.2	29			46	15
13	482	6.0	69.4	.860	33.0	31			58	33
14	527	5.0	74.4	.872	30.8	34			94	60
15	572	4.7	79.1	.881	29.1	35			170	75
Residuum		20.2	99.3	.918	22.6					

Carbon residue, Conradson Residuum 3.0 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.1	0.679	76.9	
Total gasoline and naphtha	37.0	0.731	62.1	
Kerosene distillate	17.4	.811	43.0	
Gas oil	8.8	.843	36.4	
Nonviscous lubricating distillate	9.1	.853-.873	34.4-30.6	50-100
Medium lubricating distillate	6.4	.873-.884	30.6-28.6	100-200
Viscous lubricating distillate	.4	.884-.885	28.6-28.4	Above 200
Residuum	20.2	.918	22.6	
Distillation loss	.7			

Item 327
Bureau of Mines Bartlesville Laboratory
Sample 50111

IDENTIFICATION

Golden Trend field
(New Hope, Southeast area)
Gibson, Pennsylvanian
7,318-7,380 feet

Oklahoma
Garvin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.820 Gravity, ° API, 41.1 Pour point, ° F, below 5
Sulfur, percent, 0.19 Color, green
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.8	2.8	0.644	88.2					
2	167	2.9	5.7	.659	83.2	2.3	1.37154	126.1		
3	212	4.9	10.6	.703	69.8	13	1.39332	127.5		
4	257	6.4	17.0	.732	61.8	18	1.40773	130.8		
5	302	5.5	22.5	.752	56.7	20	1.41899	134.6		
6	347	5.3	27.8	.770	52.3	22	1.42847	136.0		
7	392	4.9	32.7	.785	48.8	23	1.43619	135.7		
8	437	5.5	38.2	.800	45.4	24	1.44364	137.1		
9	482	5.6	43.8	.813	42.6	25	1.45182	140.3		
10	527	6.9	50.7	.826	39.8	26	1.46036	145.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.9	53.6	0.842	36.6	30			41	5
12	437	6.7	60.3	.852	34.6	31			46	20
13	482	5.3	65.6	.863	32.5	33			59	40
14	527	5.3	70.9	.875	30.2	35			91	55
15	572	8.0	78.9	.887	28.0	38			200	75
Residuum		19.0	97.9	.927	21.1					

Carbon residue, Conradson Residuum 4.3 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.6	0.675	78.1	
Total gasoline and naphtha	32.7	0.731	62.1	
Kerosene distillate	11.1	.807	43.8	
Gas oil	15.1	.837	37.6	
Nonviscous lubricating distillate	9.9	.855-.876	34.0-30.0	50-100
Medium lubricating distillate	6.1	.876-.887	30.0-28.0	100-200
Viscous lubricating distillate	4.0	.887-.894	28.0-26.8	Above 200
Residuum	19.0	.927	21.1	
Distillation loss	2.1			

Item 328
Bureau of Mines Bartlesville Laboratory
Sample 50119

IDENTIFICATION

Golden Trend field
(Panther Creek, Southwest area)
Hart, Pennsylvanian
8,075-8,127 feet

Oklahoma
Garvin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.816 Gravity, ° API, 41.9 Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, green
Viscosity, Saybolt Universal at 100° F, 38 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.1	4.1	0.638	90.3					
2	167	3.7	7.8	.667	80.6	6.1	1.37573	122.5		
3	212	6.5	14.3	.709	68.1	16	1.39600	127.0		
4	257	6.8	21.1	.736	60.8	20	1.40977	129.6		
5	302	5.9	27.0	.756	55.7	22	1.42056	133.8		
6	347	6.0	33.0	.775	51.1	24	1.43087	136.7		
7	392	4.6	37.6	.790	47.6	25	1.43900	137.4		
8	437	4.9	42.5	.804	44.5	26	1.44666	138.9		
9	482	5.3	47.8	.819	41.3	28	1.45460	142.1		
10	527	5.9	53.7	.833	38.4	30	1.46299	147.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.0	55.7	0.844	36.2	31			40	5
12	437	4.9	60.6	.853	34.4	31			46	20
13	482	5.3	65.9	.867	31.9	35			58	40
14	527	5.4	71.3	.879	29.5	37			94	55
15	572	4.5	75.8	.889	27.7	39			190	75
Residuum		21.2	97.0	.931	20.5					

Carbon residue, Conradson Residuum 4.5 percent, crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.3	0.678	77.2	
Total gasoline and naphtha	37.6	0.730	62.3	
Kerosene distillate	10.2	.812	42.8	
Gas oil	12.1	.841	36.6	
Nonviscous lubricating distillate	9.0	.857-.879	34.8-29.5	50-100
Medium lubricating distillate	5.2	.879-.890	29.5-27.5	100-200
Viscous lubricating distillate	1.7	.890-.893	27.5-27.0	Above 200
Residuum	21.2	.931	20.5	
Distillation loss	3.0			

Bureau of Mines Item 329
Bartlesville
Sample 49018 Laboratory

IDENTIFICATION

Healdton field
Healdton, Pennsylvanian
1,866-1,898 feet

Oklahoma
Carter County

GENERAL CHARACTERISTICS

Gravity, specific, 0.882 Gravity, ° API, 28.9 Pour point, ° F, below 5
Sulfur, percent, 0.92 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 110 sec., at 130°F., 70 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 127 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167	1.7	1.7	0.699	70.9	-	1.38502	122.3		
3	212	2.6	4.3	.729	62.6	26	1.40391	124.1		
4	257	2.1	6.4	.749	57.4	26	1.41462	127.0		
5	302	3.1	9.5	.765	53.5	26	1.42314	130.5		
6	347	4.2	13.7	.783	49.2	28	1.43204	133.0		
7	392	3.5	17.2	.799	45.6	29	1.44083	135.0		
8	437	3.9	21.1	.812	42.8	30	1.44831	136.1		
9	482	5.7	26.8	.826	39.8	31	1.45493	138.8		
10	527	6.5	33.3	.836	37.8	31	1.46235	143.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	36.6	0.846	35.8	32			41	10
12	437	6.3	42.9	.859	33.2	34			46	25
13	482	6.0	48.9	.872	30.8	37			60	45
14	527	5.6	54.5	.885	28.4	40			91	70
15	572	8.5	63.0	.896	26.4	42			160	80
Residuum		36.7	99.7	.966	15.0					

Carbon residue, Conradson Residuum 10.7 percent crude 4.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.3	0.717	65.9	
Total gasoline and naphtha	17.2	0.762	54.2	
Kerosene distillate	3.9	.812	42.8	
Gas oil	20.6	.840	37.0	
Nonviscous lubricating distillate	10.9	.863-.886	32.5-28.2	50-100
Medium lubricating distillate	10.4	.886-.903	28.2-25.2	100-200
Viscous lubricating distillate		-	-	Above 200
Residuum	36.7	.966	15.0	
Distillation loss	.3			

Bureau of Mines Item 330
Bartlesville
Sample 57048 Laboratory

IDENTIFICATION

Hewitt field
Lone Grove, Pennsylvanian
3,748-3,752 feet

Oklahoma
Carter County

GENERAL CHARACTERISTICS

Gravity, specific, 0.840 Gravity, ° API, 37.0 Pour point, ° F, below 5
Sulfur, percent, 0.65 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 49 sec. Nitrogen, percent, 0.148

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 85 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.646	87.5					
2	167	2.1	4.1	.665	81.3	5.1	1.37554	121.1		
3	212	4.2	8.3	.706	68.9	15	1.39417	122.5		
4	257	5.5	13.8	.731	62.1	18	1.40639	127.0		
5	302	5.6	19.4	.750	57.2	19	1.41715	124.8		
6	347	4.6	24.0	.768	52.7	21	1.42699	133.8		
7	392	4.6	28.6	.785	48.8	23	1.43589	130.9		
8	437	4.8	33.4	.800	45.4	24	1.44452	132.3		
9	482	4.9	38.3	.816	41.9	26	1.45208	136.0		
10	527	5.7	44.0	.829	39.2	28	1.45906	139.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	47.7	0.842	36.6	30	1.46832	142.6	40	15
12	437	4.8	52.5	.856	33.8	33	1.47223	141.1	46	30
13	482	5.1	57.6	.866	31.9	34	1.47993	146.2	59	45
14	527	4.7	62.3	.882	28.9	39	1.48728	150.9	85	60
15	572	5.9	68.2	.897	26.3	43			165	75
Residuum		29.0	97.2	.954	16.8					

Carbon residue, Conradson Residuum 8.3 percent, crude 2.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.3	0.681	76.3	
Total gasoline and naphtha	28.6	0.735	61.0	
Kerosene distillate	9.7	.808	43.6	
Gas oil	13.5	.840	37.0	
Nonviscous lubricating distillate	9.2	.859-.885	33.2-28.4	50-100
Medium lubricating distillate	6.7	.885-.904	28.4-25.0	100-200
Viscous lubricating distillate	.5	.904-.905	25.0-24.9	Above 200
Residuum	29.0	.954	16.8	
Distillation loss	2.8			

Bureau of Mines Sample Item 331 Bartlesville 61108 Laboratory

IDENTIFICATION

Joiner City field
Bois D'Arc, Siluro-Devonian
8 632-8,700 feet

Oklahoma
Carter County

GENERAL CHARACTERISTICS

Gravity, specific 0.823 Gravity, ° API 40.4 Pour point, ° F below 5
Sulfur, percent 0.47 Color, green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.09

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 738 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.2	4.2	0.667	80.6					
2	167	3.5	7.7	.665	81.3	5.1	1.37740	124.7		
3	212	5.3	13.0	.700	70.6	12	1.39329	128.5		
4	257	6.5	19.5	.724	63.9	14	1.40521	128.3		
5	302	5.6	25.1	.744	58.7	16	1.41629	128.1		
6	347	5.2	30.3	.764	53.7	19	1.42625	131.7		
7	392	4.6	34.9	.784	49.0	22	1.43546	134.5		
8	437	4.7	39.6	.803	44.7	25	1.44364	136.2		
9	482	5.2	44.8	.812	42.8	24	1.45152	139.4		
10	527	6.2	51.0	.827	39.6	27	1.45989	135.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	1.9	52.9	0.849	35.2	33	1.46808	148.9	40	25
12	437	5.1	58.0	.855	34.0	32	1.47247	148.4	46	40
13	482	5.1	63.1	.866	31.9	34	1.47996	153.2	60	60
14	527	4.4	67.5	.880	29.3	38	1.48682	155.4	89	75
15	572	5.2	72.7	.895	26.6	42	1.49382	-	160	90
Residuum		24.3	97.0	.941	18.9					

Carbon residue, Conradson Residuum 4.0 percent crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.0	0.680	76.6	
Total gasoline and naphtha	34.9	0.725	63.7	
Kerosine distillate	9.9	.808	43.6	
Gas oil	12.2	.840	37.0	
Nonviscous lubricating distillate	9.1	.858-.885	33.4-28.4	50-100
Medium lubricating distillate	6.6	.885-.903	28.4-25.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.3	.941	18.9	
Distillation loss	3.0			

Bureau of Mines Sample Item 332 Bartlesville 64035 Laboratory

IDENTIFICATION

Marietta, Southeast field
Oil Creek, Ordovician
14,200 feet

Oklahoma
Love County

GENERAL CHARACTERISTICS

Gravity, specific 0.829 Gravity, ° API 39.2 Pour point, ° F 55
Sulfur, percent, 0.08 Color, NPA 2
Viscosity, Saybolt Universal at 100° F., 49 sec. Nitrogen, percent, 0.012

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm Hg
First drop 154 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	-	-	-	-	-	-	-	-	-
2	167	-	-	-	-	-	-	-	-	-
3	212	1.3	1.3	0.703	69.8	-	1.39673	133.8		
4	257	3.6	4.9	.737	60.5	20	1.41200	137.1		
5	302	5.1	10.0	.756	55.7	22	1.42261	143.1		
6	347	5.6	15.6	.770	52.3	22	1.42928	141.1		
7	392	5.8	21.4	.780	49.9	20	1.43423	137.5		
8	437	6.2	27.6	.793	46.9	21	1.44042	136.8		
9	482	6.5	34.1	.806	44.1	22	1.44714	139.2		
10	527	7.8	41.9	.818	41.5	22	1.45410	138.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.8	47.7	0.839	37.2	26	1.46257	141.6	41	25
12	437	8.8	56.5	.845	36.0	27	1.46613	142.1	46	45
13	482	7.5	64.0	.852	34.6	27	1.47124	145.5	59	65
14	527	7.5	71.5	.860	33.0	28	-	-	80	80
15	572	7.3	78.8	.866	31.9	28	-	-	120	115
Residuum		20.1	98.9	.892	27.1					

Carbon residue, Conradson Residuum 0.1 percent crude 0.02 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.3	0.703	69.8	
Total gasoline and naphtha	21.4	0.760	54.7	
Kerosine distillate	20.5	.807	43.9	
Gas oil	11.7	.841	36.7	
Nonviscous lubricating distillate	17.8	.846-.863	35.7-32.5	50-100
Medium lubricating distillate	7.4	.863-.869	32.5-31.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.1	.892	27.1	
Distillation loss	1.1			

Bureau of Mines
Sample
Item 333
Bartlesville
62074
Laboratory

IDENTIFICATION

Muskogee field
Dutcher, Muskogee and Timber
Ridge, Pennsylvanian
1,284-1,348 feet

Oklahoma
Muskogee County

GENERAL CHARACTERISTICS

Gravity, specific 0.823 Gravity, ° API, 40.4 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 743 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167	3.7	3.7	0.681	76.3	-				
3	212	5.7	9.4	.706	68.9	15	1.39851	131.7		
4	257	6.2	15.6	.733	61.5	18	1.40952	137.7		
5	302	5.8	21.4	.752	56.7	20	1.41934	137.0		
6	347	5.6	27.0	.770	52.3	22	1.42857	138.9		
7	392	5.3	32.3	.784	49.0	22	1.43570	138.6		
8	437	5.6	37.9	.797	46.0	23	1.44293	146.0		
9	482	5.9	43.8	.810	43.2	23	1.45011	141.2		
10	527	7.1	50.9	.824	40.2	25	1.45766	141.7		

STAGE 2—Distillation continued at 40 mm Hg

11	892	5.4	56.3	0.846	35.8	32	1.46661	143.3	43	20
12	437	7.2	63.5	.853	34.4	31	1.47124	147.1	50	35
13	482	7.8	71.3	.866	31.9	34	1.47855	154.9	73	65
14	527	6.4	77.7	.879	29.5	37			150	95
15	572	4.2	81.9	.892	27.1	40			275	110
Residuum		16.8	98.7	.921	22.1					

Carbon residue, Conradson Residuum 3.1 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.4	0.696	71.8	
Total gasoline and naphtha	32.3	0.740	59.7	
Kerosene distillate	18.6	.811	43.0	
Gas oil	9.0	.848	35.4	
Nonviscous lubricating distillate	10.0	.853-.870	34.4-31.1	50-100
Medium lubricating distillate	6.8	.870-.884	31.1-28.6	100-200
Viscous lubricating distillate	5.2	.884-.897	28.6-26.3	Above 200
Residuum	16.8	.921	22.1	
Distillation loss	1.3			

Bureau of Mines
Sample
Item 334
Bartlesville
54016
Laboratory

IDENTIFICATION

Naval Reserve field
Burbank, Pennsylvanian

Oklahoma
Osage County

GENERAL CHARACTERISTICS

Gravity specific 0.826 Gravity, ° API, 39.8 Pour point, ° F, 15
Sulfur percent 0.25 Color, green
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen, percent, 0.059

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 742 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122	2.6	2.6	0.642	88.9					
2	167	2.5	5.1	.664	81.6	4.6	1.37377	121.9		
3	212	4.4	9.5	.707	68.6	15	1.39468	127.9		
4	257	5.9	15.4	.735	61.0	19	1.40921	127.6		
5	302	5.6	21.0	.757	55.4	22	1.42021	132.0		
6	347	5.5	26.5	.774	51.3	23	1.43021	133.8		
7	392	4.7	31.2	.791	47.4	25	1.43875	133.8		
8	437	5.0	36.2	.805	44.3	26	1.44644	136.5		
9	482	5.3	41.5	.818	41.5	27	1.45370	141.3		
10	527	6.4	47.9	.831	38.8	29	1.46096	143.7		

STAGE 2—Distillation continued at 40 mm Hg

11	892	2.8	50.7	0.844	36.2	31			39	10
12	437	5.5	56.2	.851	34.8	30			45	30
13	482	5.4	61.6	.862	32.7	32			55	50
14	527	5.2	66.8	.873	30.6	34			76	65
15	572	5.9	72.7	.882	28.9	36			125	80
Residuum		25.6	98.3	.920	22.3					

Carbon residue, Conradson Residuum 4.0 percent crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.5	0.678	77.2	
Total gasoline and naphtha	31.2	0.737	60.5	
Kerosene distillate	10.3	.812	42.8	
Gas oil	14.8	.841	36.8	
Nonviscous lubricating distillate	10.7	.857-.877	33.6-29.9	50-100
Medium lubricating distillate	5.7	.877-.887	29.9-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.6	.920	22.3	
Distillation loss	1.7			

Bureau of Mines
Sample

Item 335
Bartlesville
57101

Laboratory

IDENTIFICATION

Oklahoma City field
Wilcox, Ordovician
6,348-6,563 feet

Oklahoma
Oklahoma County

GENERAL CHARACTERISTICS

Gravity specific 0.837 Gravity ° API 37.6 Pour point, ° F below 5
Sulfur percent 0.16 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen percent 0.079

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.653	85.2					
2	167	2.7	3.7	.679	76.9	12	1.37808	125.0		
3	212	3.3	7.0	.716	66.1	19	1.39878	120.8		
4	257	5.2	12.2	.738	60.2	21	1.41050	129.2		
5	302	6.6	18.8	.760	54.7	24	1.42342	130.8		
6	347	3.4	22.2	.776	50.9	24	1.43221	136.9		
7	392	5.3	27.5	.788	48.1	24	1.43899	132.1		
8	437	4.4	31.9	.803	44.7	25	1.44577	129.9		
9	482	6.2	38.1	.818	41.5	27	1.45429	146.8		
10	527	6.3	44.4	.833	38.4	30	1.46233	147.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.0	47.4	0.841	36.8	29	1.46898	150.1	40	14
12	437	6.5	53.9	.848	35.4	29	1.47223	-	45	30
13	482	5.9	59.8	.860	33.0	31	1.47842	-	57	50
14	527	6.3	66.1	.878	29.7	37	1.48324	-	81	66
15	572	6.1	72.2	.886	28.2	37			140	90
Residuum		26.0	98.2	.928	21.0					

Carbon residue, Conradson Residuum 4.2 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.693	72.3	
Total gasoline and naphtha	27.5	0.746	58.2	
Kerosene distillate	10.6	.812	42.8	
Gas oil	15.3	.841	36.8	
Nonviscous lubricating distillate	11.4	.853-.880	34.4-29.3	50-100
Medium lubricating distillate	7.4	.880-.890	29.3-27.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.0	.928	21.0	
Distillation loss	1.8			

Bureau of Mines
Sample

Item 336
Bartlesville
61065

Laboratory

IDENTIFICATION

Payne, Northeast field
7,026 1st Bromide, Ordovician
9,560-9,710 feet

Oklahoma
McClain County

GENERAL CHARACTERISTICS

Gravity, specific 0.831 Gravity, ° API, 38.8 - Pour point, ° F below 5
Sulfur percent 0.27 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen percent, 0.11

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.3	3.3	0.670	79.7					
2	167	3.1	6.4	.671	79.4	8.0	1.37876	120.9		
3	212	5.5	11.9	.709	68.1	16	1.39759	126.0		
4	257	6.3	18.2	.736	60.8	20	1.41006	131.4		
5	302	5.8	24.0	.753	56.4	20	1.42033	132.3		
6	347	5.4	29.4	.771	52.0	22	1.42981	137.5		
7	392	5.1	34.5	.787	48.3	23	1.43811	137.9		
8	437	5.2	39.7	.802	44.9	25	1.44625	135.1		
9	482	5.5	45.2	.815	42.1	26	1.45425	140.2		
10	527	5.7	50.9	.827	39.6	27	1.46144	144.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.7	53.6	0.848	35.4	33	1.47030	160.1	39	5
12	437	5.6	59.2	.856	33.8	33	1.47435	154.8	44	30
13	482	5.4	64.6	.870	31.1	36	1.48146	158.1	54	50
14	527	5.1	69.7	.883	28.8	39	1.48862	160.0	77	70
15	572	6.6	76.3	.897	26.3	43			140	90
Residuum		22.5	98.8	.945	18.2					

Carbon residue, Conradson Residuum 5.6 percent crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.9	0.688	74.2	
Total gasoline and naphtha	34.5	0.735	61.0	
Kerosene distillate	10.7	.809	43.4	
Gas oil	14.7	.844	36.2	
Nonviscous lubricating distillate	9.4	.865-.888	32.1-27.9	50-100
Medium lubricating distillate	7.0	.888-.905	27.9-24.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.5	.945	18.2	
Distillation loss	1.2			

Bureau of Mines **Item 337**
Bartlesville
 Sample 51048 Laboratory

IDENTIFICATION

Ringwood field
 Manning, Ordovician
 6,500 feet

Oklahoma
 Major County

GENERAL CHARACTERISTICS

Gravity, specific, 0.832 Gravity, ° API, 38.6 Pour point, ° F, 10
 Sulfur, percent, 0.13 Color, greenish black
 Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, ---

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
 First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	123	1.5	1.5	0.632	92.4					
2	167									
3	212	5.8	7.3	.700	70.6	-	1.39063	123.7		
4	257	7.0	14.3	.737	60.5	20	1.40865	127.4		
5	302	5.4	19.7	.755	55.9	21	1.41879	128.5		
6	347	5.7	25.4	.771	52.0	22	1.42787	130.8		
7	392	5.1	30.5	.788	48.1	24	1.43605	131.5		
8	437	5.3	35.8	.802	44.9	25	1.44342	133.5		
9	482	5.1	40.9	.814	42.3	25	1.45048	134.9		
10	527	6.3	47.2	.827	39.6	27	1.45787	137.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.2	50.4	0.837	37.6	28			41	20
12	437	6.6	57.0	.842	36.6	26			46	35
13	482	5.5	62.5	.849	35.2	26			56	55
14	527	5.1	67.6	.863	32.5	30			80	75
15	572	5.4	73.0	.873	30.6	31			135	85
Residuum		26.8	99.8	.920	22.3					

Carbon residue, Conradson Residuum 4.2 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.3	0.686	74.8	
Total gasoline and naphtha	30.5	0.743	58.9	
Kerosene distillate	10.4	.808	43.6	
Gas oil	15.4	.835	38.0	
Nonviscous lubricating distillate	10.7	.845-.867	36.0-31.7	50-100
Medium lubricating distillate	6.0	.867-.878	31.7-29.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.8	.920	22.3	
Distillation loss	.2			

Bureau of Mines **Item 338**
Bartlesville
 Sample 54064 Laboratory

IDENTIFICATION

Sho-Vel-Tum field
 Camp area
 Springer, Pennsylvanian
 6,295-6,385 feet

Oklahoma
 Carter County

GENERAL CHARACTERISTICS

Gravity, specific, 0.887 Gravity, ° API, 28.0 Pour point, ° F, 10
 Sulfur, percent, 1.41 Color, brownish black
 Viscosity, Saybolt Universal at 100° F., 115 sec., at 130° F., 81 sec. Nitrogen, percent, 0.318

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
 First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.648	86.9					
2	167	1.5	2.8	.674	78.4	9.4				
3	212	3.3	6.1	.712	67.2	18	1.39123	127.3		
4	257	4.3	10.4	.739	60.0	21	1.40995	127.9		
5	302	4.0	14.4	.758	55.2	23	1.42105	130.1		
6	347	4.1	18.5	.779	50.1	26	1.43181	134.3		
7	392	3.7	22.2	.798	45.8	29	1.44175	136.9		
8	437	4.1	26.3	.814	42.3	31	1.45087	141.2		
9	482	4.8	31.1	.831	38.8	33	1.46025	145.7		
10	527	6.0	37.1	.848	35.4	37	1.46939	155.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	1.1	38.2	0.862	32.7	39	1.47778	153.8	43	10
12	437	4.7	42.9	.873	30.6	41	1.48216	156.6	46	25
13	482	4.6	47.5	.882	28.9	42	1.48952	161.8	58	40
14	527	5.3	52.8	.898	26.1	46			88	55
15	572	5.3	58.1	.911	23.8	49			175	70
Residuum		40.9	99.0	.982	12.6					

Carbon residue, Conradson Residuum 11.4 percent crude 5.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.1	0.689	73.9	
Total gasoline and naphtha	22.2	0.746	58.2	
Kerosene distillate	4.1	.814	42.3	
Gas oil	16.0	.844	36.2	
Nonviscous lubricating distillate	8.6	.854-.871	34.2-31.0	50-100
Medium lubricating distillate	6.1	.871-.891	31.0-27.3	100-200
Viscous lubricating distillate	1.1	.891-.894	27.3-26.8	Above 200
Residuum	40.9	.982	12.6	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 339
Bartlesville
54072
Laboratory

IDENTIFICATION

Sho-Vel-Tum field
Doyle area
Culberson and Deese, Pennsylvanian
5,893-5,917 feet

Oklahoma
Stephens County

GENERAL CHARACTERISTICS

Gravity specific 0.821 Gravity ° API 40.9 Pour point, ° F, below 5
Sulfur, percent 0.27 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent, 0.094

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.632	92.4					
2	167	2.8	4.9	.662	82.2	3.7	1.37390	128.5		
3	212	5.0	9.9	.702	70.1	13	1.39356	126.4		
4	257	6.6	16.5	.728	62.9	16	1.40735	129.7		
5	302	5.8	22.3	.750	57.2	19	1.41844	132.8		
6	347	5.8	28.1	.767	53.0	20	1.42770	136.4		
7	392	6.1	34.2	.783	49.2	22	1.43560	133.6		
8	437	4.9	39.1	.795	46.5	22	1.44256	134.0		
9	482	5.4	44.5	.808	43.6	22	1.44938	136.4		
10	527	6.8	51.3	.822	40.6	24	1.45738	141.3		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.3	54.6	0.840	37.0	29	1.46617	144.3	40	Below 5
12	437	5.7	60.3	.848	35.4	29	1.47015	147.2	45	20
13	482	5.2	65.5	.859	33.2	31	1.47654	148.2	57	45
14	527	4.4	69.9	.870	31.1	33			80	65
15	572	5.6	75.5	.884	28.6	37			140	75
Residuum		22.5	98.0	.927	21.1					

Carbon residue, Conradson Residuum 3.3 percent crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.9	0.676	77.8	
Total gasoline and naphtha	34.2	0.733	61.5	
Kerosene distillate	17.1	.810	43.2	
Gas oil	8.6	.845	36.0	
Nonviscous lubricating distillate	9.5	.853-.875	34.4-30.2	50-100
Medium lubricating distillate	6.1	.875-.891	30.2-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.5	.927	21.1	
Distillation loss	2.0			

Bureau of Mines
Sample
Item 340
Bartlesville
57047
Laboratory

IDENTIFICATION

Sho-Vel-Tum field
Fox-Graham area
Upper Fusulinid, Deese, Pennsylvanian
2,660-2,710 feet

Oklahoma
Carter County

GENERAL CHARACTERISTICS

Gravity, specific 0.864 Gravity ° API 32.3 Pour point, ° F, 25
Sulfur, percent 1.00 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 96 sec., 100°F., 74 sec. Nitrogen, percent, 0.203

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2	0.638	90.3					
2	167	1.9	3.1	.665	81.3	5.1				
3	212	3.5	6.6	.708	68.4	16	1.38276	115.0		
4	257	4.5	11.1	.734	61.3	19	1.40716	122.1		
5	302	3.8	14.9	.755	55.9	21	1.41861	127.4		
6	347	4.7	19.6	.771	52.0	22	1.42777	133.2		
7	392	4.1	23.7	.787	48.3	23	1.43680	127.2		
8	437	4.5	28.2	.800	45.4	24	1.43674	126.3		
9	482	4.8	33.0	.815	42.1	26	1.45190	134.9		
10	527	5.7	38.7	.831	38.8	29	1.46091	143.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.4	41.1	0.844	36.2	31	1.46859	150.2	40	15
12	437	4.9	46.0	.855	34.0	32	1.47304	137.6	44	35
13	482	5.2	51.2	.865	32.1	34	1.47955	156.8	55	50
14	527	4.8	56.0	.880	29.3	38	1.48726	150.2	78	60
15	572	5.4	61.4	.893	27.0	41			135	80
Residuum		37.4	98.8	.966	15.0					

Carbon residue, Conradson Residuum 4.8 percent crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.6	0.683	75.7	
Total gasoline and naphtha	23.7	0.740	59.7	
Kerosene distillate	9.3	.808	43.6	
Gas oil	13.5	.843	36.4	
Nonviscous lubricating distillate	11.2	.861-.889	32.8-27.7	50-100
Medium lubricating distillate	3.7	.889-.898	27.7-26.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	37.4	.966	15.0	
Distillation loss	1.2			

Bureau of Mines Item 341
Bartlesville Laboratory
 Sample 64036

IDENTIFICATION

Sho-Vel-Tum field
 Sholem Alechem area
 Pennsylvanian
 3,468 - 3,488 feet

Oklahoma
 Stephens County

GENERAL CHARACTERISTICS

Gravity, specific, 0.893 Gravity, ° API, 27.0 Pour point, ° F, below 5
 Sulfur, percent, 1.34 Color, greenish black
 Viscosity, Saybolt Universal at 100°F., 131 sec. at 130°F., 64 sec. Nitrogen, percent, 0.243

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 732 mm. Hg
 First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API, 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.2	3.2	0.704	69.5	-	1.39260	126.2		
4	257	3.5	6.7	.737	66.5	20	1.40952	131.7		
5	302	3.7	10.4	.759	54.9	23	1.42062	133.4		
6	347	3.8	14.2	.776	50.4	25	1.43550	132.0		
7	392	3.5	17.7	.798	45.0	29	1.44144	137.7		
8	437	4.0	21.7	.824	42.3	31	1.45145	140.6		
9	482	4.7	26.4	.852	38.6	34	1.46032	142.1		
1/10	527	5.1	31.5	.877	35.6	36	1.46909	154.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	35.2	0.870	31	43	1.47931	158.1	42	5
12	437	4.7	39.9	.877	29.8	43	1.48490	164.2	50	25
13	482	5.6	45.5	.895	26.6	48	1.49369	-	73	50
2/14	527	3.8	49.3	.905	24.9	49		115	60	
15	572									
Residuum		48.9	98.2	.972	14.1					

Carbon residue, Conradson Residuum 9.2 percent, crude 4.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.2	0.704	69.5	
Total gasoline and naphtha	17.7	0.757	55.5	
Kerosene distillate	4.0	.814	42.3	
Gas oil	15.8	.852	34.6	
Nonviscous lubricating distillate	8.2	.877-.901	29.8-25.5	50-100
Medium lubricating distillate	3.6	.901-.909	25.5-24.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	48.9	.972	14.1	
Distillation loss	1.8			

1/ Distillation discontinued at 513°F.

2/ Distillation discontinued at 509°F.

Bureau of Mines Item 342
Bartlesville Laboratory
 Sample 59172

IDENTIFICATION

Sho-Vel-Tum field
 Tatum area
 Pennsylvanian

Oklahoma
 Garvin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.928 Gravity, ° API, 21.0 Pour point, ° F, below 5
 Sulfur, percent, 1.68 Color, brownish black
 Viscosity, Saybolt Universal at 100°F., 550 sec. at 130°F., 440 sec. Nitrogen, percent, 0.482

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm. Hg
 First drop 147 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API, 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.6	2.6	0.695	72.1	-	1.38886	124.3		
4	257	2.8	5.4	.737	60.5	20	1.40876	124.0		
5	302	2.9	8.3	.758	55.2	23	1.41971	128.8		
6	347	3.5	11.8	.778	50.3	25	1.43164	131.0		
7	392	2.7	14.5	.799	45.6	29	1.44187	135.5		
8	437	3.1	17.6	.817	41.7	32	1.45080	136.7		
1/9	482	4.4	22.0	.832	38.6	-	1.46062	143.8		
10	527									

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.1	28.1	0.859	33.2	-	1.47659	156.3	38	Below 5
12	437	4.5	32.6	.878	29.7	43	1.48547	160.2	47	do
13	482	3.9	36.5	.890	27.5	46	1.49374	157.4	62	do
2/14	527	4.8	41.3	.909	24.2	-	1.50253	161.8	105	do
15	572									
Residuum		55.9	97.2	1.012	8.3					

Carbon residue, Conradson Residuum 8.2 percent, crude 5.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.695	72.1	
Total gasoline and naphtha	14.5	0.755	55.9	
Kerosene distillate	3.1	.817	41.7	
Gas oil	13.6	.854	34.2	
Nonviscous lubricating distillate	7.3	.880-.907	29.3-24.5	50-100
Medium lubricating distillate	2.8	.907-.919	24.5-22.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	55.9	1.012	8.3	
Distillation loss	2.8			

1/ Distillation discontinued at 482°F.

2/ Distillation discontinued at 527°F.

Bureau of Mines
Sample

Item 343
Bartlesville
48097

Laboratory

IDENTIFICATION

Sho-Vel-Tum field
Velma area
Lower Dornick Hills and Springer, Pennsylvanian
4,900-5,366 feet

Oklahoma
Stephens County

GENERAL CHARACTERISTICS

Gravity, specific, 0.881 Gravity, ° API, 29.1 Pour point, ° F, below 5
Sulfur, percent, 1.36 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 130 sec., 100° F., 87 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2							
2	167	2.4	3.6	0.659	83.2	-	1.37322	125.4		
3	212	2.6	6.2	.714	66.7	18	1.39720	125.4		
4	257	4.1	10.3	.736	60.8	20	1.40891	127.0		
5	302	3.7	14.0	.758	55.2	23	1.41995	130.6		
6	347	3.8	17.8	.777	50.6	25	1.43041	134.4		
7	392	3.4	21.2	.796	46.3	28	1.44057	138.1		
8	437	4.3	25.5	.812	42.8	30	1.45004	140.3		
9	482	3.8	29.3	.829	39.2	32	1.45919	145.6		
10	527	6.1	35.4	.847	35.6	36	1.46888	153.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	38.8	0.865	32.1	41			43	20
12	437	5.1	43.9	.875	30.2	42			50	30
13	482	4.3	48.2	.892	27.1	46			66	60
14	527	4.1	52.3	.903	25.2	49			105	70
15	572	5.6	57.9	.912	23.7	50			190	80
Residuum		40.4	98.3	.973	13.9					

Carbon residue, Conradson Residuum 10.1 percent, crude 4.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.2	0.682	76.0	
Total gasoline and naphtha	21.2	0.741	59.5	
Kerosine distillate	4.3	.812	42.8	
Gas oil	15.9	.851	34.8	
Nonviscous lubricating distillate	8.5	.876-.902	30.0-25.4	50-100
Medium lubricating distillate	5.9	.902-.913	25.4-23.5	100-200
Viscous lubricating distillate	2.2	.913-.917	23.5-22.8	Above 200
Residuum	40.4	.973	13.9	
Distillation loss	1.7			

Bureau of Mines
Sample

Item 344
Bartlesville
60011

Laboratory

IDENTIFICATION

St. Louis field
Calvin, Pennsylvanian
3,182-3,197 feet

Oklahoma
Pottawatomie County

GENERAL CHARACTERISTICS

Gravity, specific, 0.812 Gravity, ° API, 42.8 Pour point, ° F, below 5
Sulfur, percent, 0.11 Color, green
Viscosity, Saybolt Universal at 100° F., 36 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.644	88.2					
2	167	2.9	5.3	.660	82.9	2.7	1.37210	125.2		
3	212	5.1	10.4	.694	72.4	8.9	1.38905	127.0		
4	257	7.0	17.4	.723	64.2	14	1.40360	127.7		
5	302	6.1	23.5	.744	58.7	16	1.41481	130.0		
6	347	6.0	29.5	.763	54.0	18	1.42504	130.6		
7	392	5.2	34.7	.778	50.4	19	1.43327	134.5		
8	437	5.1	40.8	.795	46.5	22	1.44176	134.6		
9	482	4.3	45.1	.808	43.6	22	1.44891	135.0		
10	527	6.1	51.2	.822	40.6	24	1.45660	140.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	54.6	0.842	36.6	30	1.46550	142.7	40	Below 5
12	437	5.0	59.6	.850	35.0	30	1.46950	142.9	46	20
13	482	4.7	64.3	.859	33.2	31	1.47532	148.2	58	30
14	527	5.1	69.4	.872	30.8	34	1.48192	152.1	87	55
15	572	5.3	74.7	.883	28.8	36	1.48652	168.0	160	70
Residuum		21.8	96.5	.920	22.3					

Carbon residue, Conradson Residuum 3.3 percent, crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.4	0.673	78.8	
Total gasoline and naphtha	34.7	0.626	94.5	
Kerosine distillate	16.5	.808	43.6	
Gas oil	7.6	.846	35.8	
Nonviscous lubricating distillate	9.0	.853-.874	34.4-30.4	50-100
Medium lubricating distillate	6.9	.874-.889	30.4-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.8	.920	22.3	
Distillation loss	3.5			

Bureau of Mines
Sample
Item 345
Bartlesville
50130
Laboratory

IDENTIFICATION

Wayne, Southwest field
Pennsylvanian
6,600-6,660 feet

Oklahoma
McClain County

GENERAL CHARACTERISTICS

Gravity, specific, 0.805 Gravity, ° API, 44.3
Sulfur, percent, 0.12 Pour point, ° F, below 5
Viscosity, Saybolt Universal at 100° F., 38 sec. Color, NPA 8
Nitrogen, percent,

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 86° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	4.2	4.2	0.636	91.0					
2	167	4.0	8.2	.661	82.6	3.2	1.37256	123.6		
3	212	6.0	14.2	.701	70.4	12	1.39196	126.1		
4	257	7.3	21.5	.726	63.4	15	1.40521	129.0		
5	302	6.0	27.5	.747	57.9	18	1.41629	129.8		
6	347	5.8	33.3	.763	54.0	18	1.42619	134.0		
7	392	5.2	38.5	.782	49.5	21	1.43466	134.9		
8	437	5.2	43.7	.796	46.3	22	1.44214	135.7		
9	482	5.3	49.0	.811	43.0	24	1.44960	138.2		
10	527	5.7	54.7	.824	40.2	25	1.45619	141.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.2	56.9	0.839	37.2	28			40	Below 5
12	437	6.1	63.0	.848	35.4	29			46	20
13	482	4.1	67.1	.860	33.0	31			60	45
14	527	4.0	71.1	.870	31.1	33			85	55
15	572	5.2	76.3	.880	29.3	35			155	75
Residuum		21.2	97.5	.914	23.3					

Carbon residue, Conradson Residuum 3.2 percent, crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.2	0.670	79.7	
Total gasoline and naphtha	38.5	0.718	65.6	
Kerosene distillate	16.2	.811	43.0	
Gas oil	6.8	.844	36.2	
Nonviscous lubricating distillate	8.6	.851-.872	34.8-30.8	50 100
Medium lubricating distillate	6.2	.872-.885	30.8-28.4	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.2	.914	23.3	
Distillation loss	2.5			

Bureau of Mines
Sample
Item 346
Bartlesville
58016
Laboratory

IDENTIFICATION

Bradford field
Upper Devonian

Pennsylvania
McKean County

GENERAL CHARACTERISTICS

Gravity, specific, 0.820 Gravity, ° API, 41.1
Sulfur, percent, 0.11 Pour point, ° F, below 5
Viscosity, Saybolt Universal at 100° F., 44 sec. Color, green
Nitrogen, percent, 0.010

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm Hg
First drop 90° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167	2.0	2.0	0.671	79.4	-				
3	212	4.5	6.5	.713	67.0	18	1.39133	127.6		
4	257	6.9	13.4	.738	60.2	21	1.41120	126.6		
5	302	5.8	19.2	.756	55.7	22	1.42140	136.0		
6	347	5.9	25.1	.770	52.3	22	1.42893	136.9		
7	392	5.6	30.7	.781	49.7	21	1.43483	134.7		
8	437	5.7	36.4	.793	46.9	21	1.44056	134.6		
9	482	5.7	42.1	.805	44.3	21	1.44635	134.0		
10	527	6.7	48.8	.817	41.7	22	1.45097	-		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.9	50.7	0.827	39.6	23	1.46003	-	39	24
12	437	5.1	55.8	.835	38.0	23	1.46241	-	43	40
13	482	5.7	61.5	.843	36.4	23	1.46648	-	52	60
14	527	5.3	66.8	.854	34.2	25	1.47197	-	66	70
15	572	6.6	73.4	.864	32.3	27			100	80
Residuum		25.0	98.4	.900	25.7					

Carbon residue, Conradson Residuum 1.6 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.5	0.700	70.6	
Total gasoline and naphtha	30.7	0.754	56.2	
Kerosene distillate	18.1	.806	44.1	
Gas oil	8.7	.833	38.4	
Nonviscous lubricating distillate	12.6	.841-.864	36.8-32.3	50 100
Medium lubricating distillate	3.3	.864-.870	32.3-31.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.0	.900	25.7	
Distillation loss	1.6			

Bureau of Mines
Sample
Item 347
Bartlesville
51052
Laboratory

IDENTIFICATION

Adair field
San Andres, Permian
4,866-4,927 feet
Texas
Terry County

GENERAL CHARACTERISTICS

Gravity specific 0.860 Gravity, ° API 33.0 Pour point, ° F, below 5
Sulfur percent, 2.04 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.646	87.5					
2	167	2.7	5.1	.693	72.7	18	1.39144	142.3		
3	212	5.8	10.9	.737	60.5	29	1.41192	145.0		
4	257	6.3	17.2	.760	54.7	31	1.42395	150.4		
5	302	5.2	22.4	.777	50.6	32	1.43296	151.4		
6	347	5.1	27.5	.788	48.1	30	1.43822	150.6		
7	392	4.4	31.9	.800	45.4	30	1.44429	144.5		
8	437	4.3	36.2	.813	42.6	30	1.45160	144.0		
9	482	5.2	41.4	.830	39.0	33	1.46098	154.6		
10	527	6.7	48.1	.850	35.0	38	1.47260	162.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.4	50.5	0.866	31.9	41			43	20
12	437	5.1	55.6	.875	30.2	42			48	30
13	482	5.9	61.5	.884	28.6	43			59	55
14	527	5.1	66.6	.903	25.2	49			91	65
15	572	5.2	71.8	.913	23.5	50			170	85
Residuum		26.4	98.2	.985	12.2					

Carbon residue, Conradson Residuum 10.2 percent crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.9	0.706	68.9	
Total gasoline and naphtha	31.9	0.754	56.2	
Kerosene distillate	4.3	.813	42.6	
Gas oil	18.0	.851	34.8	
Nonviscous lubricating distillate	10.5	.877-.904	29.9-25.0	50-100
Medium lubricating distillate	6.5	.904-.917	25.0-22.8	100-200
Viscous lubricating distillate	.6	.917-.918	22.8-22.6	Above 200
Residuum	26.4	.985	12.2	
Distillation loss	1.8			

Bureau of Mines
Sample
Item 348
Bartlesville
54134
Laboratory

IDENTIFICATION

Adair field
Wolfcamp, Permian
8,434-8,540 feet
Texas
Terry County

GENERAL CHARACTERISTICS

Gravity, specific 0.823 Gravity, ° API, 40.4 Pour point, ° F, below 5
Sulfur percent 0.38 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, 0.089

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 739 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.645	87.9					
2	167	3.7	5.6	.672	79.1	8.4	1.37410	122.3		
3	212	9.5	15.1	.721	64.8	22	1.39926	126.8		
4	257	10.6	25.7	.749	57.4	26	1.41370	128.9		
5	302	5.9	31.6	.771	52.0	29	1.42610	136.7		
6	347	6.7	38.3	.791	47.4	32	1.43727	137.9		
7	392	4.9	43.2	.806	44.1	32	1.44629	138.4		
8	437	5.5	48.7	.819	41.3	33	1.45473	142.5		
9	482	6.0	54.7	.832	38.6	34	1.46252	148.9		
10	527	6.0	60.7	.844	36.2	35	1.46866	165.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	64.0	0.867	31.7	42	1.41287	170.2	40	15
12	437	5.3	69.3	.879	29.5	44	1.48836	170.1	46	45
13	482	4.6	73.9	.895	26.6	48	1.49715	176.2	58	55
14	527	5.1	79.0	.911	23.8	52	1.50449	168.8	87	70
15	572	4.8	83.8	.920	22.3	54			150	85
Residuum		15.0	98.8	.947	17.9					

Carbon residue, Conradson Residuum 5.7 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.1	0.699	70.9	
Total gasoline and naphtha	43.2	0.748	57.7	
Kerosene distillate	5.5	.819	41.3	
Gas oil	19.6	.852	34.6	
Nonviscous lubricating distillate	9.2	.884-.913	28.6-23.5	50-100
Medium lubricating distillate	6.3	.913-.924	23.5-21.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.0	.947	17.9	
Distillation loss	1.2			

Item 349
Bureau of Mines Bartlesville Laboratory
Sample 63217

Alazan, North field
Frio, H-21, Oligocene
7,212 - 7,262 feet

IDENTIFICATION

Texas
Kleberg County

GENERAL CHARACTERISTICS

Gravity, specific, 0.808 Gravity, ° API, 43.6 Pour point, ° F, 10
Sulfur, percent, 0.04 Color, brownish green
Viscosity, Saybolt Universal at 100°F., 35 sec. Nitrogen, percent, 0.014

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 734 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	2.2	2.2	0.654	64.9	-	1.37235	132.5		
2	167	2.8	5.0	.704	69.5	14	1.39472	132.9		
3	212	4.2	9.2	.730	62.3	17	1.40740	134.2		
4	257	4.5	13.7	.744	58.7	16	1.41628	135.9		
5	302	6.1	19.8	.761	54.4	17	1.42481	137.9		
6	347	7.9	27.7	.776	50.8	18	1.43224	135.4		
7	392	11.0	38.7	.790	47.6	19	1.43863	134.6		
8	437	12.5	51.2	.802	44.9	20	1.44604	135.8		
9	482	12.6	63.8	.817	41.7	22	1.45397	139.2		
10	527									

Stage 2—Distillation continued at 40 mm Hg

11	392	9.6	73.4	0.837	37.6	27	1.46187	141.7	42	30
12	437	6.9	80.3	.844	36.2	27	1.46523	141.4	49	65
13	482	4.5	84.8	.852	34.6	27	1.47200	144.6	59	70
14	527	3.8	88.6	.870	31.1	33			81	100
15	572	3.9	92.5	.885	28.4	37			165	110
16		6.5	99.0	.956	16.5					
Residuum										

Carbon residue, Conradson Residuum 2.7 percent, crude 0.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.0	0.662	76.0	
Total gasoline and naphtha	27.7	0.744	58.8	
Kerosene distillate	36.1	.804	44.6	
Gas oil	13.6	.839	37.2	
Nonviscous lubricating distillate	10.2	.845-.873	36.0-30.5	50-100
Medium lubricating distillate	4.2	.873-.891	30.5-27.3	100-200
Viscous lubricating distillate	3.3	.891-.893	27.3-27.0	Above 200
Residuum	6.5	.956	16.5	
Distillation loss	1.0			

Item 350
Bureau of Mines Bartlesville Laboratory
Sample 55047

IDENTIFICATION

Amelia field
Marginulina 3 Frio, Oligocene
6,236-6,644 feet

Texas
Jefferson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.889 Gravity, ° API, 27.7 Pour point, ° F, below 5
Sulfur, percent, 0.24 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 69 sec., at 100°F., 56 sec. Nitrogen percent, 0.046

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm Hg
First drop 154 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.3	3.3	0.753	56.4	-	1.41271	121.5		
4	257	2.1	5.4	.774	51.3	38	1.41966	120.1		
5	302	2.0	7.4	.785	48.8	36				
6	347	3.2	10.6	.805	44.3	38	1.43519	132.0		
7	392	4.2	14.8	.828	39.4	43	1.45501	131.9		
8	437	6.0	20.8	.847	35.6	46	1.46457	142.8		
9	482	9.9	30.7	.862	32.7	48	1.47410	151.4		
10	527	12.5	43.2	.881	29.1	52	1.48485	157.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	8.4	51.6	0.895	26.6	55	1.49165	158.3	44	Below 5
12	437	7.3	58.9	.899	25.9	53	1.49387	162.2	54	do.
13	482	6.5	65.4	.908	24.3	54	1.49693	159.5	78	do.
14	527	6.2	71.6	.914	23.3	54			145	do.
15	572	8.2	79.8	.926	21.3	56			390	do.
16		20.0	99.8	.948	17.8					
Residuum										

Carbon residue, Conradson Residuum 4.3 percent crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.3	0.753	56.4	
Total gasoline and naphtha	10.6	0.779	50.1	
Kerosene distillate				
Gas oil	41.6	.869	31.3	
Nonviscous lubricating distillate	12.1	.897-.910	26.3-24.0	50-100
Medium lubricating distillate	5.9	.910-.917	24.0-22.8	100-200
Viscous lubricating distillate	9.6	.917-.933	22.8-20.2	Above 200
Residuum	20.0	.948	17.8	
Distillation loss	2			

Bureau of Mines Item 351
Bartlesville
Sample 55049 Laboratory

IDENTIFICATION

Anahuac field Texas
Marginulina 1, Frio, Oligocene Chambers County
7,053-7,075 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.859 Gravity, ° API, 33.2 Pour point, ° F, below 5
Sulfur, percent, 0.23 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 48 sec. Nitrogen, percent, 0.041

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm Hg
First drop 158 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vac 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.7	1.7	0.712	67.2	-				
4	257	2.9	4.6	.748	57.7	26	1.40989	138.3		
5	302	3.5	8.1	.766	53.2	27	1.42596	138.2		
6	347	4.5	12.6	.784	49.0	28	1.43673	140.4		
7	392	5.1	17.7	.800	45.4	30	1.44359	137.7		
8	437	7.0	24.7	.815	42.1	31	1.45039	139.0		
9	482	8.0	32.7	.831	38.8	33	1.45835	141.5		
10	527	11.0	43.7	.845	36.0	35	1.46650	144.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.6	50.3	0.859	33.2	38	1.47285	146.3	41	Below 5
12	437	8.7	59.0	.861	32.8	35	1.47509	146.2	46	20
13	482	6.6	65.6	.877	29.9	39	1.48003	145.2	59	35
14	527	6.4	72.0	.883	28.8	39			88	50
15	572	6.2	78.2	.894	26.8	41			160	65
Residuum		21.6	99.8	.939	19.4					

Carbon residue, Conradson Residuum 4.0 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.7	0.712	67.2	
Total gasoline and naphtha	17.7	0.772	51.8	
Kerosene distillate	7.0	.815	42.1	
Gas oil	32.4	.849	35.2	
Nonviscous lubricating distillate	12.8	.866-.885	31.9-28.4	50-100
Medium lubricating distillate	8.3	.885-.899	28.4-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.6	.938	19.4	
Distillation loss	.2			

Bureau of Mines Item 352
Bartlesville
Sample 51057 Laboratory

IDENTIFICATION

Andector field Texas
Ellenburger, Cambro-Ordovician Ector County
8,463-8,513 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.810 Gravity, ° API, 43.2 Pour point, ° F, below 5
Sulfur, percent, 0.22 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 38 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vac 100° F	Cloud test ° F
1	122	3.3	3.3	0.635	91.3					
2	167	3.3	6.6	.659	83.2	2.3	1.37278	125.4		
3	212	4.8	11.4	.699	70.9	11	1.39084	126.2		
4	257	6.4	17.8	.723	64.2	14	1.40385	129.2		
5	302	5.6	23.4	.743	58.9	16	1.41436	132.6		
6	347	5.8	29.2	.758	55.2	16	1.42317	133.9		
7	392	5.7	34.9	.773	51.6	17	1.43061	134.0		
8	437	7.5	42.4	.790	47.4	20	1.44004	136.2		
9	482	4.5	46.9	.802	44.9	20	1.44666	140.2		
10	527	6.7	53.6	.813	42.6	20	1.45341	140.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.7	57.3	0.825	40.0	22			40	15
12	437	7.0	64.3	.835	38.0	27			43	30
13	482	5.5	69.8	.853	34.4	31			53	40
14	527	4.1	73.9	.868	31.5	32			73	55
15	572	4.6	78.5	.880	29.3	35			120	80
Residuum		20.0	98.5	.930	20.7					

Carbon residue, Conradson Residuum 4.9 percent, crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.4	0.669	80.0	
Total gasoline and naphtha	34.9	0.723	64.2	
Kerosene distillate	18.7	.802	44.9	
Gas oil	9.8	.832	38.6	
Nonviscous lubricating distillate	11.0	.842-.875	36.6-30.2	50-100
Medium lubricating distillate	4.1	.875-.887	30.2-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.0	.930	20.7	
Distillation loss	1.5			

Bureau of Mines
Sample

Item 353
Bartlesville
56062

Laboratory

IDENTIFICATION

Andrews field
Pennsylvanian
9,220 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.830 Gravity, ° API, 39.0 Pour point ° F, below 5
Sulfur, percent, 0.11 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent, 0.091

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.653	85.2					
2	167	2.8	5.5	.673	78.8	8.9	1.38941	126.9		
3	212	6.1	11.6	.719	65.3	21	1.40094	131.7		
4	257	7.2	18.8	.746	58.2	25	1.41417	131.9		
5	302	5.2	24.0	.763	54.0	25	1.42409	133.1		
6	347	5.3	29.3	.779	50.1	26	1.43287	133.9		
7	392	4.5	33.8	.795	46.5	27	1.44062	131.4		
8	437	4.6	38.4	.807	43.8	27	1.44770	134.1		
9	482	5.5	43.9	.820	41.1	28	1.45555	142.2		
10	527	6.0	49.9	.832	38.6	29	1.46235	145.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	53.4	0.850	35.0	34	1.46914	142.6	41	15
12	437	5.8	59.2	.853	34.4	31	1.47212	143.6	46	25
13	482	5.4	64.6	.866	31.9	34	1.47834	147.0	60	45
14	527	4.0	68.6	.879	29.5	37	1.48388	144.7	84	60
15	572	5.8	74.4	.889	27.7	38			140	80
Residuum		24.2	98.6	.935	19.8					

Carbon residue, Conradson Residuum 5.6 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.6	0.693	72.7	
Total gasoline and naphtha	33.8	0.742	59.2	
Kerosene distillate	10.1	.814	42.3	
Gas oil	14.1	.844	36.2	
Nonviscous lubricating distillate	10.0	.857-.882	34.6-28.9	50-100
Medium lubricating distillate	6.4	.882-.894	28.9-26.8	100-200
Viscous lubricating distillate		-	-	Above 200
Residuum	24.2	.935	19.8	
Distillation loss	1.4			

Bureau of Mines
Sample

Item 354
Bartlesville
61151

Laboratory

IDENTIFICATION

Andrews, North field
Ellenburger, Cambro-Ordovician
12,482-12,490 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.801 Gravity, ° API, 45.2 Pour point ° F, below 5
Sulfur, percent, 0.11 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 37 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.7	4.7	0.656	84.2					
2	167	4.1	8.8	.655	84.5	0.4	1.37229	128.0		
3	212	5.1	13.9	.687	74.5	5.6	1.38814	127.7		
4	257	5.7	19.6	.709	68.1	7.1	1.39971	128.8		
5	302	5.5	25.1	.727	63.1	8.0	1.40890	132.1		
6	347	5.7	30.8	.741	59.5	7.8	1.41721	132.3		
7	392	6.2	37.0	.757	55.4	9.2	1.42541	142.2		
8	437	6.6	43.6	.775	51.1	12	1.43445	137.0		
9	482	6.3	49.9	.791	47.4	14	1.44315	141.8		
10	527	6.7	56.6	.804	44.5	16	1.45000	143.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.6	62.2	0.831	38.8	25	1.45962	145.5	39	25
12	437	6.7	68.9	.843	36.4	27	1.46682	151.6	43	40
13	482	4.9	73.8	.857	33.6	30	1.47782	163.5	53	55
14	527	4.0	77.8	.878	29.7	37	1.48761	169.6	74	70
15	572	4.6	82.4	.890	27.5	39	1.49619	184.1	125	95
Residuum		16.0	98.4	.943	18.6					

Carbon residue, Conradson Residuum 7.8 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.9	0.667	80.6	
Total gasoline and naphtha	37.0	0.709	68.1	
Kerosene distillate	19.6	.790	47.6	
Gas oil	13.0	.840	37.0	
Nonviscous lubricating distillate	8.4	.853-.884	34.4-28.6	50-100
Medium lubricating distillate	4.4	.884-.896	28.6-26.4	100-200
Viscous lubricating distillate		-	-	Above 200
Residuum	16.0	.943	18.6	
Distillation loss	1.6			

Bureau of Mines Item 355
Bartlesville
Sample 59064 Laboratory

IDENTIFICATION

Andrews, South field Texas
Wolfcamp, Permian Andrews County
9,183 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.841 Gravity, ° API 36.8 Pour point ° F, 35
Sulfur, percent 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 49 sec., Nitrogen, percent, 0.089

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm Hg
First drop 127 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.6	1.6	0.678	77.2	-	1.38107	126.7		
3	212	5.4	7.0	.722	64.5	22	1.40165	128.4		
4	257	7.8	14.8	.745	58.4	24	1.41324	128.1		
5	302	6.3	21.1	.762	54.2	25	1.42250	131.3		
6	347	5.6	26.7	.778	50.3	25	1.43184	132.8		
7	392	5.3	32.0	.792	47.2	26	1.43939	136.3		
8	437	5.2	37.2	.807	43.8	27	1.44692	137.1		
9	482	5.3	42.5	.821	40.9	29	1.45457	141.1		
10	527	6.4	48.9	.829	39.2	28	1.46208	145.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.2	53.1	0.842	36.6	30	1.46940	148.4	40	10
12	437	6.4	59.5	.847	35.6	28	1.47273	149.2	46	30
13	482	5.7	65.2	.863	32.5	33	1.47893	147.3	58	54
14	527	3.5	68.7	.874	30.4	35	1.48395	-	78	66
15	572	6.0	74.7	.882	28.9	36			130	74
Residuum		25.0	99.7	.937	19.5					

Carbon residue, Conradson Residuum 5.6 percent crude 1.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.712	67.2	
Total gasoline and naphtha	32.0	0.755	55.9	
Kerosene distillate	10.5	.814	42.3	
Gas oil	15.9	.839	37.2	
Nonviscous lubricating distillate	10.6	.852-.877	34.6-29.9	50-100
Medium lubricating distillate	5.7	.877-.887	29.9-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.0	.937	19.5	
Distillation loss	.3			

Bureau of Mines Item 356
Bartlesville
Sample 59015 Laboratory

IDENTIFICATION

Arthur field Texas
Spraberry, Permian Borden County
7,565 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.844 Gravity, ° API 36.2 Pour point, ° F, below 5
Sulfur, percent, 0.14 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 46 sec., Nitrogen, percent, 0.127

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 753 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.646	87.5					
2	167	2.4	4.1	.677	77.5	11	1.37953	121.6		
3	212	5.1	9.2	.726	63.4	24	1.40153	122.7		
4	257	8.0	17.2	.749	58.7	26	1.41446	129.1		
5	302	4.9	22.1	.756	55.7	22	1.42472	132.4		
6	347	4.9	27.0	.782	49.5	27	1.43366	132.5		
7	392	4.5	31.5	.800	45.4	30	1.44212	134.3		
8	437	4.9	36.4	.816	41.9	32	1.45003	136.7		
9	482	4.7	41.1	.826	39.8	31	1.45714	142.1		
10	527	5.7	46.8	.837	37.6	32	1.46422	144.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.6	49.4	0.848	35.4	33	1.47108	149.6	40	14
12	437	5.0	54.4	.854	34.2	32	1.47382	153.1	45	24
13	482	5.1	59.5	.866	31.9	34	1.48012	155.2	56	44
14	527	4.1	63.6	.879	29.5	37	1.48635	152.6	80	60
15	572	6.0	69.6	.893	27.0	41			145	74
Residuum		29.4	99.0	.938	19.4					

Carbon residue, Conradson Residuum 3.8 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.2	0.699	70.9	
Total gasoline and naphtha	31.5	0.748	57.7	
Kerosene distillate	4.9	.816	41.9	
Gas oil	17.9	.841	36.8	
Nonviscous lubricating distillate	8.8	.859-.883	33.2-28.8	50-100
Medium lubricating distillate	6.5	.883-.901	28.8-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.4	.938	19.4	
Distillation loss	1.0			

Bureau of Mines Item 357
Bartlesville
Sample 59060 Laboratory

IDENTIFICATION

Bakke field
Devonian
10,500 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.803 Gravity, ° API, 44.7 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen percent, 0.031

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	3.0	3.0	0.640	89.6					
2	167	4.4	7.4	.669	80.0	7.0	1.37551	120.8		
3	212	7.0	14.4	.708	68.4	16	1.39571	125.5		
4	257	8.7	23.1	.737	60.5	20	1.40988	125.5		
5	302	7.4	30.5	.758	55.2	23	1.42198	131.8		
6	347	6.3	36.8	.775	51.1	24	1.43173	136.3		
7	392	5.6	42.4	.788	48.1	24	1.43729	145.8		
8	437	5.3	47.7	.800	45.4	24	1.44415	136.6		
9	482	5.4	53.1	.813	42.6	25	1.45080	138.4		
10	527	6.4	59.5	.826	39.8	26	1.45832	142.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.6	64.1	0.838	37.4	28	1.46595	145.2	41	10
12	437	4.8	68.9	.844	36.2	27	1.46901	146.9	46	30
13	482	5.0	73.9	.856	33.8	29	1.47439	146.9	59	54
14	527	4.2	78.1	.866	31.9	31	1.47885	148.6	84	70
15	572	5.0	83.1	.874	30.4	32			140	84
Residuum		15.0	98.1	.908	24.3					

Carbon residue, Conradson Residuum 1.1 percent crude 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.4	0.682	76.0	
Total gasoline and naphtha	42.4	0.734	61.3	
Kerosene distillate	10.7	.807	43.8	
Gas oil	15.0	.835	38.0	
Nonviscous lubricating distillate	9.3	.848-.870	35.4-31.1	50 100
Medium lubricating distillate	5.7	.870-.877	31.1-29.9	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.0	.908	24.3	
Distillation loss	1.9			

Bureau of Mines Item 358
Bartlesville
Sample 58150 Laboratory

IDENTIFICATION

Bakke field
Ellenburger, Cambro-Ordovician
12,400 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.799 Gravity, ° API 45.6 Pour point ° F below 5
Sulfur, percent, 0.21 Color, greenish black
Viscosity, Saybolt Universal at 100° F., less than 32 sec. Nitrogen percent, 0.044

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	3.4	3.4	0.640	89.6					
2	167	3.9	7.3	.660	82.9	2.7	1.37244	123.8		
3	212	5.1	12.4	.691	73.3	7.5	1.38844	124.5		
4	257	5.9	18.3	.716	66.1	10	1.40100	126.9		
5	302	5.7	24.0	.733	61.5	11	1.41064	126.5		
6	347	5.9	29.9	.752	56.7	13	1.41995	131.3		
7	392	6.8	36.7	.768	52.7	14	1.42825	136.3		
8	437	5.7	42.4	.781	49.7	15	1.43660	134.2		
9	482	6.7	49.1	.797	46.0	18	1.44466	139.4		
10	527	7.1	56.2	.812	42.8	20	1.45184	143.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.4	62.6	0.826	39.8	22	1.46110	146.7	40	20
12	437	6.2	68.8	.839	37.2	22	1.46808	149.9	44	30
13	482	3.4	72.2	.854	34.2	28	1.47687	159.8	52	46
14	527	4.3	76.5	.872	30.8	34	1.48535	165.6	69	60
15	572	3.9	80.4	.884	28.6	37	1.49275	167.7	105	76
Residuum		18.2	98.6	.900	25.7					

Carbon residue, Conradson Residuum 6.3 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.4	0.667	80.6	
Total gasoline and naphtha	36.7	0.718	65.6	
Kerosene distillate	19.5	.798	45.8	
Gas oil	13.1	.835	38.0	
Nonviscous lubricating distillate	8.6	.850-.882	35.0-28.9	50 100
Medium lubricating distillate	2.5	.882-.889	28.9-27.7	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.2	.900	25.7	
Distillation loss	1.4			

Item 359
Bureau of Mines Bartlesville
Sample 59024 Laboratory

IDENTIFICATION

Bakke field
Pennsylvanian
9,000 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.828 Gravity, ° API, 39.4 Pour point, ° F, below 5
Sulfur, percent, Less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen percent, 0.079

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

752
STAGE 1—Distillation at atmospheric pressure mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.632	92.4					
2	167	2.3	3.4	.666	81.0	5.6	1.37437	123.0		
3	212	5.5	8.9	.709	68.1	16	1.39905	122.5		
4	257	8.5	17.4	.741	59.5	22	1.41191	131.1		
5	302	6.1	23.5	.761	54.4	24	1.42264	134.5		
6	347	5.4	28.9	.775	51.1	24	1.43150	137.0		
7	392	5.0	33.9	.791	47.4	25	1.43908	136.7		
8	437	5.3	39.2	.805	44.3	26	1.44577	136.0		
9	482	5.4	44.6	.813	42.6	25	1.45318	141.5		
10	527	6.5	51.1	.828	39.4	27	1.46035	145.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.8	53.9	0.840	37.0	29	1.46722	144.7	40	10
12	437	5.5	59.4	.845	36.0	28	1.46982	148.2	44	24
13	482	5.7	65.1	.855	34.0	29	1.47472	147.9	54	40
14	527	5.4	70.5	.869	31.3	32	1.48054	147.4	76	54
15	572	6.0	76.5	.879	29.5	34			135	74
Residuum		22.7	99.2	.923	21.8					

Carbon residue, Conradson Residuum 2.2 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.9	0.688	74.2	
Total gasoline and naphtha	33.9	0.743	58.9	
Kerosene distillate	10.7	.809	43.4	
Gas oil	14.2	.837	37.6	
Nonviscous lubricating distillate	11.4	.849-.873	35.2-30.6	50-100
Medium lubricating distillate	6.3	.873-.884	30.6-28.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.7	.923	21.8	
Distillation loss	.8			

Item 360
Bureau of Mines Bartlesville
Sample 59026 Laboratory

IDENTIFICATION

Bakke field
Wolfcamp, Permian
8,500 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.838 Gravity, ° API, 37.4 Pour point, ° F, 25
Sulfur, percent, 0.41 Color, dark green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.105

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

752
STAGE 1—Distillation at atmospheric pressure mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.647	87.2					
2	167	2.4	4.5	.690	73.6	17	1.38823	130.8		
3	212	5.6	10.1	.731	62.1	27	1.40740	137.1		
4	257	7.9	18.0	.757	55.4	30	1.42096	138.9		
5	302	6.3	24.3	.776	50.9	31	1.43130	143.9		
6	347	5.4	29.7	.788	48.1	30	1.43874	143.4		
7	392	6.1	35.8	.801	45.2	30	1.44568	144.8		
8	437	4.3	40.1	.811	43.0	29	1.45269	145.8		
9	482	5.9	46.0	.829	39.2	32	1.46048	148.4		
10	527	6.1	52.1	.844	36.2	35	1.46861	157.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	54.6	0.851	34.8	34	1.47564	160.9	40	10
12	437	5.1	59.7	.857	33.6	33	1.47837	161.1	44	30
13	482	5.4	65.1	.871	31.0	37	1.48426	163.9	54	44
14	527	5.4	70.5	.885	28.4	40	1.49075	159.5	74	64
15	572	4.9	75.4	.893	27.0	41			120	74
Residuum		22.4	97.8	.945	18.2					

Carbon residue, Conradson Residuum 4.7 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.704	69.5	
Total gasoline and naphtha	35.8	0.758	55.2	
Kerosene distillate	4.3	.811	43.0	
Gas oil	20.3	.845	36.0	
Nonviscous lubricating distillate	10.4	.865-.889	32.1-27.7	50-100
Medium lubricating distillate	4.6	.889-.897	27.7-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.4	.945	18.2	
Distillation loss	2.2			

Bureau of Mines Item 361
Sample Bartlesville
55050 Laboratory

IDENTIFICATION

Barbers Hill field
Frio, Oligocene
4,495-4,556 feet

Texas
Chambers County

GENERAL CHARACTERISTICS

Gravity, specific 0.898 Gravity, ° API, 26.1 Pour point, ° F, below 5
Sulfur, percent, 0.27 Color, dark green
Viscosity, Saybolt Universal at 77°F., 130 sec., at 100°F., 85 sec. Nitrogen, percent, 0.060

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 190 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.2	0.2							
4	257	0.9	1.1	0.742	59.2	-				
5	302	1.3	2.4	.761	54.4	24				
6	347	2.8	5.2	.789	47.8	31	1.43310	130.2		
7	392	3.5	8.7	.828	39.4	43	1.45307	132.8		
8	437	4.7	13.4	.846	35.8	46	1.46350	143.6		
9	482	8.4	21.8	.860	33.0	47	1.47379	149.2		
10	527	10.9	32.7	.878	29.7	51	1.48622	167.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.8	40.5	0.891	27.3	53	1.49377	172.5	44	Below 5
12	437	7.3	47.8	.900	25.7	54	1.49659	170.5	53	do.
13	482	7.1	54.9	.909	24.2	55	1.50101	167.7	79	do.
14	527	6.3	61.2	.915	23.1	54			140	do.
15	572	7.7	68.9	.929	20.8	58			300	do.
Residuum		29.7	98.6	.944	18.4					

Carbon residue, Conradson Residuum 4.3 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	5.2	0.772	51.8	
Kerosene distillate	-	-	-	
Gas oil	36.6	.868	31.5	
Nonviscous lubricating distillate	11.9	.897-.911	26.3-23.8	50-100
Medium lubricating distillate	7.0	.911-.920	23.8-22.3	100-200
Viscous lubricating distillate	8.2	.920-.936	22.3-19.7	Above 200
Residuum	29.7	.944	18.4	
Distillation loss	1.4			

Bureau of Mines Item 362
Sample Bartlesville
62078 Laboratory

IDENTIFICATION

Bethany field
4,300', Glen Rose, Lower Cretaceous
4,401-4,411 feet

Texas
Harrison County

GENERAL CHARACTERISTICS

Gravity, specific, 0.818 Gravity, ° API, 41.5 Pour point, ° F, below 5
Sulfur, percent, 0.23 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 41 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 165 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.0	3.0	0.696	71.8	-	1.39124	132.4		
4	257	5.7	8.7	.711	67.5	8.0	1.39845	124.6		
5	302	7.1	15.8	.727	63.1	8.0	1.40707	124.5		
6	347	8.3	24.1	.744	58.7	9.2	1.41549	125.3		
7	392	6.8	30.9	.762	54.2	12	1.42429	125.2		
8	437	7.0	37.9	.777	50.6	13	1.43201	128.2		
9	482	6.6	44.5	.792	47.2	15	1.43964	131.6		
10	527	8.0	52.5	.803	44.7	15	1.44692	133.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.7	57.2	0.831	38.8	25	1.45870	134.0	39	20
12	437	6.5	63.7	.841	36.8	26	1.46315	137.3	46	40
13	482	4.7	68.4	.850	35.0	27	1.46959	142.9	55	55
14	527	4.9	73.3	.864	32.3	30	1.47587	-	73	80
15	572	5.7	79.0	.875	30.2	32			115	90
Residuum		19.4	98.4	.940	19.0					

Carbon residue, Conradson Residuum 6.8 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.0	0.696	71.8	
Total gasoline and naphtha	30.9	0.733	61.5	
Kerosene distillate	21.6	.791	47.4	
Gas oil	10.0	.836	37.8	
Nonviscous lubricating distillate	11.8	.844-.871	36.2-31.0	50-100
Medium lubricating distillate	4.7	.871-.881	31.0-29.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.4	.940	19.0	
Distillation loss	1.6			

Bureau of Mines Item 363
Sample Bartlesville
58076 Laboratory

IDENTIFICATION

Bethany, Northeast field Texas
Mooringsport, Cretaceous Panola County
3,903-3,907 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.813 Gravity, ° API, 42.6 Pour point, ° F, 30
Sulfur, percent 0.21 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 41 sec, Nitrogen, percent, 0.025

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 133 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.1	1.1	0.668	80.3	-	1.37254	121.7		
3	212	3.0	4.1	.690	73.6	7.1	1.38817	121.8		
4	257	6.0	10.1	.714	66.7	9.4	1.39911	123.0		
5	302	7.3	17.4	.729	62.6	8.9	1.40858	124.1		
6	347	8.0	25.4	.750	57.2	12	1.41771	122.8		
7	392	8.0	33.4	.764	53.7	13	1.42667	125.9		
8	437	7.1	40.5	.782	49.5	15	1.43530	128.1		
9	482	6.7	47.2	.793	46.9	15	1.44168	128.0		
1/10	527	8.0	55.2	.809	43.4	-	1.44886	131.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.5	60.7	0.825	40.0	-	1.45838	136.5	41	20
12	437	7.2	67.9	.841	36.8	26	1.46401	136.3	47	40
13	482	5.0	72.9	.851	34.8	27	1.47093	142.9	59	56
14	527	5.6	78.5	.865	32.1	31			85	76
15	572	5.1	83.6	.880	27.5	35			160	84
Residuum		15.5	99.1	.945	18.2					

Carbon residue, Conradson Residuum 4.8 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.1	0.684	75.4	
Total gasoline and naphtha	33.4	0.734	61.3	
Kerosene distillate	21.8	.795	46.5	
Gas oil	10.8	.831	38.8	
Nonviscous lubricating distillate	10.8	.843-.868	36.4-31.5	50-100
Medium lubricating distillate	6.8	.868-.887	31.5-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.5	.945	18.2	
Distillation loss	.9			

1/ Distillation discontinued at 518° F.

Bureau of Mines Item 364
Sample Bartlesville
56057 Laboratory

IDENTIFICATION

Big Mineral Creek field Texas
Barnes, Des Moines, Pennsylvanian Grayson County
4,925-5,145 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.842 Gravity, ° API, 36.6 Pour point, ° F, below 5
Sulfur, percent, 0.59 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 49 sec, Nitrogen, percent, 0.137

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.0	3.0	0.642	88.9					
2	167	1.7	4.7	.670	79.7	7.5	1.36930	127.7		
3	212	4.5	9.2	.705	69.2	14	1.39408	121.0		
4	257	6.0	15.2	.731	62.1	18	1.40784	124.5		
5	302	4.8	20.0	.751	56.9	19	1.41820	128.0		
6	347	5.2	25.2	.768	52.7	21	1.42756	130.4		
7	392	4.1	29.3	.786	48.5	23	1.43683	131.8		
8	437	4.8	34.1	.801	45.2	24	1.44507	139.8		
9	482	5.0	39.1	.816	41.6	26	1.45299	138.5		
10	527	5.6	44.7	.830	39.0	28	1.46153	142.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.3	47.0	0.851	34.8	34	1.47003	146.3	40	10
12	437	4.9	51.9	.862	32.7	36	1.47441	150.3	45	25
13	482	5.1	57.0	.870	31.1	36	1.48167	145.9	57	40
14	527	4.3	61.3	.888	27.9	41	1.48826	-	82	55
15	572	5.0	66.3	.899	25.9	44			150	75
Residuum		30.6	96.9	.952	17.1					

Carbon residue, Conradson Residuum 5.2 percent, crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.2	0.678	77.8	
Total gasoline and naphtha	29.3	0.732	61.8	
Kerosene distillate	9.8	.809	43.4	
Gas oil	12.6	.844	36.2	
Nonviscous lubricating distillate	8.8	.865-.891	32.1-27.3	50-100
Medium lubricating distillate	5.8	.891-.904	27.3-25.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	30.6	.952	17.1	
Distillation loss	3.1			

Bureau of Mines Item 365
Sample Bartlesville
 63136 Laboratory

IDENTIFICATION

Blessing field Texas
Frio F - 14 B, Oligocene Matagorda County
8,179-8,183 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.812 Gravity, ° API, 42.8 Pour point, ° F, 25
Sulfur, percent 0.06 Color, green
Viscosity, Saybolt Universal at 100° F., 36 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	1.6	1.6	0.646	87.5					
2	167	2.2	3.8	.683	75.7	14	1.37935	125.8		
3	212	5.2	9.0	.723	64.2	23	1.40264	131.9		
4	257	6.7	15.7	.745	58.4	24	1.41481	134.7		
5	302	5.5	21.2	.761	54.4	24	1.42406	139.2		
6	347	6.6	27.8	.774	51.3	23	1.43201	140.3		
7	392	6.7	34.5	.788	48.1	24	1.43885	140.2		
8	437	8.8	43.3	.801	45.2	24	1.44599	140.9		
9	482	10.2	53.5	.817	41.7	27	1.45383	143.7		
1/10	527	11.1	64.6	.831	38.8	29	1.46241	148.7		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	7.0	71.6	0.848	35.4	33	1.46909	151.9	43	30
12	437	7.4	79.0	.852	34.6	31	1.47087	149.2	49	55
13	482	5.7	84.7	.860	33.0	31	1.47726	155.0	61	70
14	527	3.9	88.6	.878	29.7	37			86	90
15	572	3.3	91.9	.891	27.3	40			165	105
Residuum		6.5	98.4	.960	15.9					

Carbon residue, Conradson Residuum 3.5 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.0	0.700	70.8	
Total gasoline and naphtha	34.5	0.750	57.3	
Kerosene distillate	19.0	.810	43.3	
Gas oil	22.3	.840	36.9	
Nonviscous lubricating distillate	11.4	.853-.880	34.5-29.2	50-100
Medium lubricating distillate	4.6	.880-.897	29.2-26.3	100-200
Viscous lubricating distillate	.1	.897-.897	26.3-26.3	Above 200
Residuum	6.5	.960	15.9	
Distillation loss	1.6			

1/ Distillation discontinued at 518° F.

Bureau of Mines Item 366
Sample Bartlesville
 63077 Laboratory

IDENTIFICATION

Block 31 field Texas
Devonian Crane County
8,815-8,990 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.799 Gravity, ° API, 45.6 Pour point, ° F, below 5
Sulfur, percent, 0.11 Color, green
Viscosity, Saybolt Universal at 100° F., 34 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 754 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	5.3	5.3	0.635	91.3					
2	167	4.9	10.2	.671	79.4	8.0	1.37793	127.0		
3	212	7.5	17.7	.713	67.0	18	1.39719	131.6		
4	257	8.5	26.2	.737	60.5	20	1.41053	131.8		
5	302	7.0	33.2	.757	55.4	22	1.42198	137.2		
6	347	6.3	39.5	.775	51.1	24	1.43184	140.7		
7	392	5.3	44.8	.790	47.6	25	1.43936	140.6		
8	437	5.1	49.9	.802	44.9	25	1.44604	140.9		
9	482	5.4	55.3	.815	42.1	26	1.45094	144.9		
10	527	5.9	61.2	.827	39.6	27	1.46064	148.5		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	4.1	65.3	0.836	37.8	27	1.46798	152.5	40	15
12	437	5.7	71.0	.851	34.8	30	1.47330	155.4	49	25
13	482	4.3	75.3	.865	32.1	34	1.48009	157.8	63	60
14	527	3.7	79.0	.874	30.4	35	1.48552	-	96	75
15	572	5.2	84.2	.888	27.8	38			200	100
Residuum		12.5	96.7	.928	21.0					

Carbon residue, Conradson Residuum 3.0 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	17.7	0.678	77.2	
Total gasoline and naphtha	44.8	0.728	62.8	
Kerosene distillate	10.5	.809	43.5	
Gas oil	13.2	.835	38.0	
Nonviscous lubricating distillate	8.8	.852-.875	34.6-30.3	50-100
Medium lubricating distillate	4.3	.875-.888	30.3-27.8	100-200
Viscous lubricating distillate	2.6	.888-.896	27.8-26.4	Above 200
Residuum	12.5	.928	21.0	
Distillation loss	3.3			

Bureau of Mines
Sample
Item 367
Bartlesville
59116
Laboratory

IDENTIFICATION

Borregos field
Frio F-5, Oligocene
5,141-5,151 feet

Texas
Kleberg County

GENERAL CHARACTERISTICS

Gravity, specific 0.815 Gravity, ° API, 42.1 Pour point ° F, 20
Sulfur percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen percent, 0.029

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2	0.650	86.2					
2	167	2.8	4.0	.673	78.8	8.9	1.37784	126.9		
3	212	5.8	9.8	.720	65.0	21	1.39962	121.9		
4	257	9.7	19.5	.746	58.2	25	1.41420	130.3		
5	302	7.9	27.4	.767	53.0	27	1.42625	138.7		
6	347	8.0	35.4	.786	48.5	29	1.43719	142.3		
7	392	6.9	42.3	.800	45.4	30	1.44413	142.5		
8	437	6.6	48.9	.813	42.6	30	1.45179	142.8		
9	482	9.4	58.3	.829	39.2	32	1.46005	147.3		
10	527	12.7	71.0	.847	35.6	36	1.46953	153.9		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	5.2	76.2	0.858	33.4	37	1.47744	156.7	40	24
12	437	6.3	82.5	.863	32.5	36	1.47834	154.5	45	38
13	482	4.5	87.0	.873	30.6	37	1.48449	-	58	50
14	527	3.1	90.1	.891	27.3	43			89	64
15	572	3.7	93.8	.917	22.8	52			240	84
Residuum		4.3	98.1	.983	12.5					

Carbon residue, Conradson Residuum 3.3 percent crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.8	0.698	71.2	
Total gasoline and naphtha	42.3	0.755	55.9	
Kerosene distillate	6.6	.813	42.6	
Gas oil	32.6	.847	35.6	
Nonviscous lubricating distillate	7.4	.867-.892	31.7-27.1	50-100
Medium lubricating distillate	2.9	.892-.910	27.1-24.0	100-200
Viscous lubricating distillate	2.0	.910-.922	24.0-22.0	Above 200
Residuum	4.3	.983	12.5	
Distillation loss	1.9			

Bureau of Mines
Sample
Item 368
Bartlesville
58148
Laboratory

IDENTIFICATION

Brahoney field
San Andres, Permian
5,301 feet

Texas
Yoakum County

GENERAL CHARACTERISTICS

Gravity, specific, 0.885 Gravity, ° API, 28.4 Pour point, ° F, 40
Sulfur, percent, 2.45 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 96 sec., at 100°F., 59 sec. Nitrogen, percent, 0.122

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.680	76.6					
2	167	2.3	3.3	.687	74.5	30	1.38530	132.1		
3	212	4.4	7.7	.734	61.3	28	1.40958	141.2		
4	257	5.8	13.5	.761	54.4	32	1.42452	150.2		
5	302	5.7	19.2	.779	50.1	33	1.43488	152.3		
6	347	5.3	24.5	.793	46.9	32	1.44090	151.3		
7	392	3.8	28.3	.804	44.5	32	1.44585	146.8		
8	437	4.1	32.4	.816	41.9	32	1.45272	148.8		
9	482	4.6	37.0	.833	38.4	34	1.46187	151.4		
10	527	6.5	43.5	.855	34.0	40	1.47413	166.0		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.2	45.7	0.873	30.6	45	1.48509	170.3	40	10
12	437	5.6	51.3	.886	28.2	47	1.49003	177.4	45	44
13	482	5.3	56.6	.897	26.3	49	1.49794	181.1	57	54
14	527	5.4	62.0	.912	23.7	53	1.50522	187.7	78	64
15	572	4.3	66.3	.922	22.0	-			170	80
Residuum		32.9	99.2	1.005	9.3					

Carbon residue, Conradson Residuum 9.3 percent, crude 4.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.7	0.713	67.0	
Total gasoline and naphtha	28.3	0.763	54.0	
Kerosene distillate	4.1	.816	41.9	
Gas oil	18.5	.860	33.0	
Nonviscous lubricating distillate	9.6	.891-.914	27.3-23.3	50-100
Medium lubricating distillate	5.3	.914-.925	23.3-21.5	100-200
Viscous lubricating distillate	5	.925-.927	21.5-21.1	Above 200
Residuum	32.9	1.005	9.3	
Distillation loss	.8			

1/ Distillation discontinued at 558° F.

Bureau of Mines
Sample
Item 369
Bartlesville
61026
Laboratory

IDENTIFICATION

Breedlove field
Devonian
12,110-12,135 feet

Texas
Martin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.818 Gravity, ° API, 41.5 - Pour point, ° F, below 5
Sulfur, percent, 0.32 - Color, brownish green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.04

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 113 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.1	2.1	0.668	80.3	-	1.37848	135.1		
3	212	4.3	6.4	.694	72.4	8.9	1.38902	124.0		
4	257	6.7	13.1	.720	65.0	12	1.40120	125.7		
5	302	5.6	19.7	.740	59.7	14	1.41256	121.6		
6	347	5.9	25.6	.760	54.7	17	1.42233	126.1		
7	392	6.2	32.8	.778	50.4	19	1.43189	129.3		
8	437	6.1	38.9	.795	46.5	22	1.44096	131.9		
9	482	6.9	45.8	.808	43.6	22	1.44753	134.6		
10	527	7.5	53.3	.823	40.4	25	1.45568	143.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	7.4	60.7	0.843	36.4	30	1.46597	143.7	41	25
12	437	7.6	68.3	.852	34.6	31	1.47145	150.5	51	45
13	482	6.6	74.9	.868	31.5	35	1.48039	159.3	76	65
14	527	5.5	80.4	.883	28.8	39			125	85
15	572	4.6	85.0	.892	27.1	40			215	90
Residuum		14.0	99.0	.930	20.7					

Carbon residue, Conradson Residuum 6.1 percent, crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.4	0.685	75.1	
Total gasoline and naphtha	32.8	0.737	60.5	
Kerosene distillate	20.5	.810	43.2	
Gas oil	10.4	.844	36.2	
Nonviscous lubricating distillate	10.9	.851-.874	34.8-30.4	50-100
Medium lubricating distillate	7.3	.874-.890	30.4-27.5	100-200
Viscous lubricating distillate	3.1	.890-.897	27.5-26.3	Above 200
Residuum	14.0	.930	20.7	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 370
Bartlesville
51051
Laboratory

IDENTIFICATION

Cedar Lake field
San Andres, Permian
4,580-4,765 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific 0.863 Gravity, ° API, 32.5 - Pour point, ° F, below 5
Sulfur, percent 2.12 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.656	84.2					
2	167	6.4	8.2	.697	71.5	20	1.39023	139.5		
3	212	3.1	11.3	.740	69.5	31	-	-		
4	257	4.7	16.0	.761	54.4	32	1.42215	146.8		
5	302	6.4	22.4	.777	50.6	32	1.43240	150.7		
6	347	4.6	27.0	.790	47.6	31	1.43892	147.8		
7	392	4.8	31.8	.801	45.2	30	1.44401	145.3		
8	437	4.3	36.1	.815	42.1	31	1.45084	145.9		
9	482	5.4	41.5	.831	38.8	33	1.46039	151.1		
10	527	6.8	48.3	.849	35.2	37	1.47221	162.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	1.4	49.7	0.862	32.7	39			40	15
12	437	5.7	55.4	.873	30.6	41			44	30
13	482	5.6	61.0	.889	27.7	45			56	50
14	527	5.3	66.3	.899	25.9	47			82	65
15	572	5.5	71.8	.916	23.0	55			150	85
Residuum		27.0	98.8	.987	11.9					

Carbon residue, Conradson Residuum 10.7 percent, crude 3.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.3	0.702	70.1	
Total gasoline and naphtha	31.8	0.754	56.2	
Kerosene distillate	4.3	.815	42.1	
Gas oil	19.5	.852	34.6	
Nonviscous lubricating distillate	9.5	.881-.903	29.1-25.2	50-100
Medium lubricating distillate	6.7	.903-.925	25.2-21.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.0	.987	11.9	
Distillation loss	1.2			

Item 371
Bureau of Mines Bartlesville
Sample 50021 Laboratory

IDENTIFICATION

Charlotte field
Upper Cretaceous
5,154-5,199 feet

Texas
Atascosa County

GENERAL CHARACTERISTICS

Gravity, specific, 0.856 Gravity, ° API, 33.8 Pour point, ° F, below 5
Sulfur, percent, 0.58 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.6	1.6	0.676	77.8	-	1.39063	133.6		
3	212	2.6	4.2	.714	66.7	18	1.40008	136.6		
4	257	5.3	9.5	.742	59.2	23	1.41521	141.9		
5	302	6.1	15.6	.762	54.2	25	1.42648	146.0		
6	347	6.0	21.6	.779	50.1	26	1.43461	143.0		
7	392	5.8	27.4	.793	46.9	26	1.44116	142.0		
8	437	6.2	33.6	.808	43.6	28	1.44872	141.2		
9	482	6.7	40.3	.826	39.8	31	1.45819	145.9		
10	527	7.5	47.8	.842	36.6	34	1.46778	153.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.6	52.4	0.856	33.8	37			42	5
12	437	7.0	59.4	.867	31.7	38			48	25
13	482	6.3	65.7	.882	28.9	42			62	45
14	527	4.4	70.1	.893	27.0	44			97	60
15	572	5.6	75.7	.902	25.4	45			180	76
Residuum		24.1	99.8	.956	16.5					

Carbon residue, Conradson Residuum 8.2 percent crude 2.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.2	0.700	70.6	
Total gasoline and naphtha	27.4	0.759	54.9	
Kerosene distillate	6.2	.808	43.6	
Gas oil	23.3	.845	36.0	
Nonviscous lubricating distillate	11.2	.869-.893	31.3-27.0	50-100
Medium lubricating distillate	6.0	.893-.904	27.0-25.0	100-200
Viscous lubricating distillate	1.6	.904-.907	25.0-24.5	Above 200
Residuum	24.1	.956	16.5	
Distillation loss	.2			

Item 372
Bureau of Mines Bartlesville
Sample 62063 Laboratory

IDENTIFICATION

Clam Lake field
Miocene
4,436-4,444 feet

Texas
Jefferson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.900 Gravity, ° API, 25.7 Pour point, ° F, below 5
Sulfur, percent, 0.18 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 162 sec., at 100° F., 100 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 349 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392	2.3	2.3	0.824	40.2	-	1.44828	126.7		
8	437	4.2	6.5	.844	36.2	45	1.45868	128.8		
9	482	8.4	14.9	.858	33.4	46	1.46682	135.0		
10	527	12.1	27.0	.866	31.9	45	1.47337	139.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.4	33.4	0.875	30.2	46	1.48085	143.7	44	Below 5
12	437	11.5	44.9	.878	29.7	43	1.48426	149.4	51	do.
13	482	8.5	53.4	.891	27.3	46	1.49003	150.6	69	do.
14	527	8.4	61.8	.905	24.9	49	1.49590	151.2	145	do.
15	572	8.7	70.5	.918	22.6	53	1.50245	178.3	300	do.
Residuum		28.3	98.8	.949	17.6					

Carbon residue, Conradson Residuum 4.8 percent crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	2.3	0.824	40.2	
Kerosene distillate	-	-	-	
Gas oil	35.7	.865	32.1	
Nonviscous lubricating distillate	15.9	.878-.900	29.7-25.7	50-100
Medium lubricating distillate	7.4	.900-.910	25.7-24.0	100-200
Viscous lubricating distillate	9.2	.910-.924	24.0-21.6	Above 200
Residuum	28.3	.949	17.6	
Distillation loss	1.2			

Bureau of Mines Item 373
Bartlesville
Sample 50034 Laboratory

IDENTIFICATION

Cogdell field
Canyon, Pennsylvanian
6,857 feet

Texas
Kent County

GENERAL CHARACTERISTICS

Gravity, specific 0.817 Gravity, ° API, 41.7 -- Pour point, ° F, below 5
Sulfur, percent 0.38 -- Color, greenish-black
Viscosity, Saybolt Universal at 100° F., 37 sec., Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 736 mm. Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	5.7	5.7	0.639	89.9					
2	167	3.7	9.4	.668	80.3	6.5	1.37653	126.4		
3	212	6.3	15.7	.713	67.0	18	1.39768	128.2		
4	257	6.7	22.4	.741	59.5	22	1.41180	132.6		
5	302	5.8	28.2	.761	54.4	24	1.42324	135.7		
6	347	5.5	33.7	.781	49.7	27	1.43391	140.8		
7	392	4.5	38.2	.795	46.5	27	1.44220	149.7		
8	437	5.0	43.2	.809	43.4	28	1.44955	145.6		
9	482	4.9	48.1	.821	40.9	29	1.45722	148.2		
10	527	5.7	53.8	.836	37.8	31	1.46538	154.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	57.2	0.847	35.6	32			40	10
12	437	5.5	62.7	.857	33.6	33			45	35
13	482	5.1	67.8	.869	31.3	36			56	55
14	527	4.5	72.3	.882	28.9	39			79	65
15	572	4.6	76.9	.890	27.5	39			145	85
Residuum		19.9	96.8	.950						

Carbon residue, Conradson Residuum 7.6 percent, crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.7	0.676	77.8	
Total gasoline and naphtha	38.2	0.729	62.6	
Kerosene distillate	9.9	.815	42.1	
Gas oil	14.4	.846	35.8	
Nonviscous lubricating distillate	9.0	.862-.884	32.7-28.6	50-100
Medium lubricating distillate	5.4	.884-.894	28.6-26.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.9	.950	17.5	
Distillation loss	3.2			

Bureau of Mines Item 374
Bartlesville
Sample 63019 Laboratory

IDENTIFICATION

Conley field
Ellenburger, Cambro-Ordovician
8,072-8,237 feet

Texas
Hardeman County

GENERAL CHARACTERISTICS

Gravity, specific, 0.803 -- Gravity, ° API, 44.7 -- Pour point, ° F, below 5
Sulfur, percent, 0.04 -- Color, dark green
Viscosity, Saybolt Universal at 100° F., 40 sec., Nitrogen, percent, 0.007

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.4	3.4	0.639	89.9					
2	167	3.4	6.8	.683	75.7	14	1.38331	126.6		
3	212	7.8	14.6	.721	64.8	22	1.40123	126.9		
4	257	10.1	24.7	.743	58.9	23	1.41271	132.3		
5	302	8.0	32.7	.763	54.0	25	1.42403	135.7		
6	347	7.0	39.7	.780	49.9	26	1.43372	138.8		
7	392	6.8	46.5	.795	46.5	27	1.44151	138.4		
8	437	6.1	52.6	.809	43.4	28	1.44867	140.9		
9	482	6.0	58.6	.820	41.1	28	1.45589	143.8		
10	527	6.4	65.0	.832	38.6	29	1.46211	147.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.4	69.4	0.848	35.4	33	1.46777	148.5	40	20
12	437	6.1	75.5	.853	34.4	31	1.47254	153.2	47	45
13	482	4.4	79.9	.862	32.7	32	1.47921	-	60	70
14	527	4.2	84.1	.873	30.6	34			84	85
15	572	4.4	88.5	.880	29.3	35			140	110
Residuum		10.4	98.9	.930	20.7					

Carbon residue, Conradson Residuum 5.2 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.6	0.693	72.7	
Total gasoline and naphtha	46.5	0.744	58.7	
Kerosene distillate	12.1	.814	42.2	
Gas oil	15.0	.842	36.5	
Nonviscous lubricating distillate	9.6	.855-.875	34.0-30.2	50-100
Medium lubricating distillate	5.3	.875-.884	30.2-28.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.4	.930	20.7	
Distillation loss	1.1			

Item 375
Bureau of Mines Bartlesville
Sample 53018 Laboratory

IDENTIFICATION

Conroe field
Upper Cockfield, Eocene

Texas
Montgomery County

GENERAL CHARACTERISTICS

Gravity specific 0.837 Gravity ° API 37.6 Pour point, ° F below 5
Sulfur, percent, 0.15 Color, green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, - - -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122	1.0	1.0							
2	167	1.1	2.1							
3	212	4.7	6.8	0.724	63.9	-	1.40417	131.0		
4	257	8.2	15.0	.773	51.6	37	1.43126	155.0		
5	302	7.0	22.0	.794	46.7	40	1.44331	165.8		
6	347	6.7	28.7	.805	44.3	38	1.45114	164.8		
7	392	5.9	34.6	.812	42.8	35	1.45466	159.8		
8	437	7.4	42.0	.827	39.6	37	1.46264	165.1		
9	482	9.6	51.6	.846	35.8	41	1.47395	175.3		
10	527	12.3	63.9	.859	33.2	42	1.48187	179.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.9	70.8	0.868	31.5	42			39	20
12	437	7.6	78.4	.869	31.3	39			45	40
13	482	5.7	84.1	.871	31.0	37			57	65
14	527	4.4	88.5	.878	29.7	37			77	80
15	572	3.8	92.3	.888	27.9	38			130	95
Residuum		7.5	99.8	.946	18.1					

Carbon residue, Conradson Residuum 4.4 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.8	0.724	63.9	
Total gasoline and naphtha	34.6	0.780	49.9	
Kerosine distillate	-	-	-	
Gas oil	42.9	.854	34.2	
Nonviscous lubricating distillate	10.6	.870-.882	31.1-28.9	50-100
Medium lubricating distillate	4.2	.882-.892	28.9-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	7.5	.946	18.1	
Distillation loss	.2			

Item 376
Bureau of Mines Bartlesville
Sample 56112 Laboratory

IDENTIFICATION

Corsicana field
Wolf City, Upper Cretaceous
1,088-1,116 feet

Texas
Navarro County

GENERAL CHARACTERISTICS

Gravity, specific 0.834 Gravity, ° API 38.2 Pour point, ° F below 5
Sulfur, percent 0.24 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, 0.000 - -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 751 mm. Hg
First drop 106 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167	1.7	1.7	0.666	81.0					
3	212	3.2	4.9	.701	70.4	12	1.38738	127.2		
4	257	6.2	11.1	.724	63.9	14	1.40466	128.3		
5	302	5.9	17.0	.742	59.2	15	1.41441	122.9		
6	347	7.6	24.6	.762	54.2	18	1.42379	132.2		
7	392	6.8	31.4	.778	50.4	19	1.43298	128.6		
8	437	5.7	37.1	.795	46.5	22	1.44101	125.8		
9	482	7.1	44.2	.809	43.4	23	1.44869	130.9		
10	527	7.4	51.6	.826	39.8	26	1.45727	134.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.5	56.1	0.844	36.2	31	1.46666	136.0	41	10
12	437	6.2	62.3	.854	34.2	32	1.47114	139.4	47	25
13	482	5.1	67.4	.866	31.9	34	1.47746	141.3	59	45
14	527	4.8	72.2	.884	28.6	40	1.48359	147.2	84	60
15	572	5.5	77.7	.894	26.8	41	1.49112	142.5	155	75
Residuum		21.6	99.3	.951	17.2					

Carbon residue, Conradson Residuum 8.3 percent crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.9	0.689	73.9	
Total gasoline and naphtha	31.4	0.743	58.9	
Kerosine distillate	12.8	.803	44.7	
Gas oil	16.5	.839	37.2	
Nonviscous lubricating distillate	10.3	.857-.886	33.6-28.2	50-100
Medium lubricating distillate	6.7	.886-.899	28.2-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.6	.951	17.3	
Distillation loss	.7			

Bureau of Mines
Sample
Item 377
Bartlesville
52061
Laboratory

IDENTIFICATION

Cowden, North field
Grayburg, Permian
4,406-4,606 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.874 Gravity, ° API, 30.4 Pour point, ° F, 10
Sulfur, percent, 1.89 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 1.61 sec., at 100° F, 1.51 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm. Hg
First drop 124 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122									
2	167									
3	212	5.2	5.2	0.706	68.9	-	1.39486	133.0		
4	257	6.6	11.8	.751	56.9	27	1.41856	144.2		
5	302	6.1	17.9	.771	52.0	29	1.43035	146.2		
6	347	4.9	22.8	.785	48.8	29	1.43811	148.1		
7	392	4.9	27.7	.797	46.0	28	1.44423	147.2		
8	437	5.0	32.7	.811	43.0	29	1.45103	147.7		
9	482	5.3	38.0	.828	39.4	32	1.46028	149.2		
10	527	6.2	44.2	.846	35.8	36	1.47082	160.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	47.8	0.863	31.5	40			39	15
12	437	5.8	53.6	.872	30.8	40			44	35
13	482	5.1	58.7	.883	28.8	42			55	55
14	527	5.2	63.9	.899	25.9	47			77	70
15	572	6.4	70.3	.910	24.0	49			145	85
Residuum		29.7	100.0	.984	12.3					

Carbon residue, Conradson Residuum 10.9 percent, crude 3.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.2	0.706	68.9	
Total gasoline and naphtha	27.7	0.761	54.4	
Kerosene distillate	5.0	.811	43.0	
Gas oil	19.5	.850	35.0	
Nonviscous lubricating distillate	11.0	.874-.905	30.4-24.9	50-100
Medium lubricating distillate	7.1	.905-.919	24.9-22.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.7	.984	12.3	
Distillation loss	.0			

Bureau of Mines
Sample
Item 378
Bartlesville
56041
Laboratory

IDENTIFICATION

Cowden Deep, North field
San Andres, Permian
5,170 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.835 Gravity, ° API, 38.0 Pour point, ° F, below 5
Sulfur, percent, 0.80 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 1.41 sec. Nitrogen, percent, 0.094

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122	2.4	2.4	0.650	86.2					
2	167	2.9	5.3	.676	77.8	10	1.40437	134.4		
3	212	6.2	11.5	.722	64.5	22	1.40249	128.1		
4	257	7.2	18.7	.752	56.7	27	1.41797	135.7		
5	302	4.5	23.2	.771	52.0	29	1.42868	139.2		
6	347	6.0	29.2	.786	48.5	29	1.43688	140.7		
7	392	4.0	33.2	.800	45.4	30	1.44369	140.6		
8	437	5.0	38.2	.812	42.8	30	1.45050	142.9		
9	482	5.8	44.0	.827	39.6	31	1.45946	141.4		
10	527	5.5	49.5	.821	40.9	33	1.46814	150.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	53.2	0.855	34.0	36	1.47584	155.9	41	20
12	437	5.5	58.7	.867	31.7	38	1.48054	160.5	47	35
13	482	4.5	63.2	.880	29.3	41	1.48723	163.2	60	45
14	527	4.6	67.8	.889	27.7	42	1.49308	161.2	89	65
15	572	5.9	73.7	.901	25.6	45		165	80	
Residuum		23.0	96.7	.948	17.8					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.5	0.695	72.1	
Total gasoline and naphtha	33.2	0.747	57.9	
Kerosene distillate	5.0	.812	42.8	
Gas oil	19.1	.845	36.0	
Nonviscous lubricating distillate	9.0	.870-.890	31.1-27.5	50-100
Medium lubricating distillate	6.9	.890-.906	27.5-24.7	100-200
Viscous lubricating distillate	.5	.906-.907	24.7-24.5	Above 200
Residuum	23.0	.948	17.8	
Distillation loss	.3			

Item 379
Bureau of Mines Bartlesville Laboratory
Sample 59163

IDENTIFICATION

Cowden, South field
Grayburg, Permian
4,670-4,775 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.852 -- Gravity, ° API, 34.6 Pour point, ° F, below 5
Sulfur, percent, 1.77 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, 0.127

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	3.1	3.1	0.649	86.5					
2	167	2.8	5.9	.675	78.1	9.8	1.37941	128.4		
3	212	5.1	11.0	.719	65.3	21	1.40198	132.4		
4	257	6.5	17.5	.753	56.4	28	1.41879	140.7		
5	302	5.2	22.7	.774	51.3	30	1.43067	148.1		
6	347	4.8	27.5	.789	47.8	31	1.43896	147.0		
7	392	5.1	32.6	.802	44.9	31	1.44543	144.6		
8	437	3.6	36.2	.815	42.1	31	1.45190	145.3		
9	482	4.9	41.1	.827	39.6	31	1.45943	147.5		
10	527	6.9	48.0	.847	35.6	36	1.47006	156.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	51.1	0.866	31.9	41	1.48207	167.9	41	14
12	437	4.7	55.8	.872	30.8	40	1.48628	175.1	47	24
13	482	4.8	60.6	.888	27.9	45	1.49368	175.2	59	44
14	527	4.6	65.2	.901	25.6	48	1.50048	-	88	64
15	572	5.0	70.2	.911	23.8	49			150	80
Residuum		26.8	97.0	.976	13.5					

Carbon residue, Conradson Residuum 3.5 percent, crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.0	0.688	74.2	
Total gasoline and naphtha	32.6	0.747	57.9	
Kerosine distillate	3.6	.815	42.1	
Gas oil	18.5	.850	35.0	
Nonviscous lubricating distillate	9.2	.875-.903	30.2-25.2	50 100
Medium lubricating distillate	6.3	.903-.916	25.2-23.0	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.8	.976	13.5	
Distillation loss	3.0			

Item 380
Bureau of Mines Bartlesville Laboratory
Sample 63188

IDENTIFICATION

Crossett, South field
Devonian
5,220-5,298 feet

Texas
Crockett County

GENERAL CHARACTERISTICS

Gravity, specific, 0.827 -- Gravity, ° API, 39.6 -- Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, -- green
Viscosity, Saybolt Universal at 100° F., 41 sec. Nitrogen, percent, 0.053 --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.6	0.6	0.666	81.0					
2	167	2.1	2.7	.676	77.8	10	1.38153	128.2		
3	212	5.3	8.0	.718	65.6	20	1.40103	131.1		
4	257	7.4	15.4	.744	58.7	24	1.41423	138.7		
5	302	6.6	22.0	.762	54.2	25	1.42544	142.5		
6	347	5.8	27.8	.777	50.6	25	1.43377	144.0		
7	392	5.3	33.1	.791	47.4	25	1.44014	141.4		
8	437	6.0	39.1	.804	44.5	26	1.44698	142.9		
9	482	4.9	44.0	.817	41.7	27	1.45443	146.6		
10	527	6.1	50.1	.829	39.2	28	1.46118	149.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	52.6	0.846	35.8	32	1.46761	148.7	40	15
12	437	6.2	58.8	.851	34.8	30	1.47040	151.8	46	30
13	482	6.0	64.8	.859	33.2	31	1.47649	155.0	58	50
14	527	4.9	69.7	.871	31.0	33	1.48218	-	78	75
15	572	5.1	74.8	.878	29.7	34			125	85
Residuum		23.2	98.0	.922	22.0					

Carbon residue, Conradson Residuum 3.3 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.0	0.703	69.8	
Total gasoline and naphtha	33.1	0.751	56.9	
Kerosine distillate	10.9	.810	43.2	
Gas oil	13.7	.840	36.9	
Nonviscous lubricating distillate	11.9	.854-.874	34.3-30.3	50-100
Medium lubricating distillate	5.2	.874-.882	30.3-29.0	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.2	.922	22.0	
Distillation loss	2.0			

Bureau of Mines Item 381
Bartlesville
Sample 54123 Laboratory

IDENTIFICATION

Darst Creek field
Edwards, Lower Cretaceous
2,500-2,691 feet

Texas
Guadalupe County

GENERAL CHARACTERISTICS

Gravity specific 0.841 Gravity ° API, 36.8 Pour point, ° F., 25
Sulfur percent, 0.78 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen percent, 0.075

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 138 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.3	2.3	0.680	76.6	-	1.38322	132.6		
4	257	3.9	6.2	0.710	67.8	7.5	1.39905	123.2		
5	302	5.6	11.8	0.734	61.5	11	1.41002	123.7		
6	347	6.1	17.9	0.755	55.9	14	1.42015	123.7		
7	392	7.8	25.7	0.788	48.1	24	1.43116	128.3		
8	437	4.8	30.5	0.794	46.7	21	1.43983	130.3		
9	482	6.9	37.4	0.806	44.1	22	1.44665	132.5		
10	527	7.7	45.1	0.820	41.1	23	1.45528	139.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.5	49.6	0.837	37.6	28	1.46398	142.6	39	15
12	437	8.3	57.9	0.844	36.2	27	1.46777	143.0	44	40
13	482	6.6	64.5	0.858	33.4	30	1.47472	147.4	54	55
14	527	5.7	70.2	0.871	31.0	33	1.48264	-	73	70
15	572	5.9	76.1	0.880	29.3	35		115		85
Residuum		23.2	99.3	0.948	17.8					

Carbon residue, Conradson Residuum 6.8 percent crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.3	0.680	76.6	
Total gasoline and naphtha	25.7	0.747	57.9	
Kerosene distillate	19.4	0.809	43.4	
Gas oil	13.1	0.843	36.4	
Nonviscous lubricating distillate	13.0	0.852-0.877	34.6-29.9	50-100
Medium lubricating distillate	4.9	0.877-0.884	29.9-28.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.2	0.948	17.8	
Distillation loss	.7			

Bureau of Mines Item 382
Bartlesville
Sample 50026 Laboratory

IDENTIFICATION

Diamond M field
Canyon, Pennsylvanian
6,569-6,617 feet

Texas
Scurry County

GENERAL CHARACTERISTICS

Gravity, specific 0.800 Gravity, ° API, 45.4 Pour point, ° F., below 5
Sulfur, percent, 0.20 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122	5.8	5.8	0.637	90.6					
2	167	4.3	10.1	0.673	78.8	8.9	1.37731	124.0		
3	212	8.7	18.8	0.722	64.5	22	1.40059	127.2		
4	257	8.2	27.0	0.748	57.7	26	1.41462	133.1		
5	302	5.9	32.9	0.768	52.7	27	1.42625	138.0		
6	347	5.8	38.7	0.786	48.5	29	1.43642	140.7		
7	392	4.3	43.0	0.801	45.2	30	1.44392	142.7		
8	437	5.0	48.0	0.814	42.3	31	1.45160	143.2		
9	482	4.7	52.7	0.828	39.4	32	1.45983	149.6		
10	527	5.6	58.3	0.840	37.0	33	1.46752	156.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	61.2	0.848	35.4	33			41	15
12	437	5.3	66.5	0.856	33.8	33			46	30
13	482	4.5	71.0	0.872	30.8	37			58	50
14	527	3.6	74.6	0.881	29.1	38			82	70
15	572	4.4	79.0	0.886	28.2	37			145	90
Residuum		16.1	95.1	0.933	20.2					

Carbon residue, Conradson Residuum 4.9 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	18.8	0.685	75.1	
Total gasoline and naphtha	43.0	0.733	61.5	
Kerosene distillate	5.0	0.814	42.3	
Gas oil	17.5	0.842	36.6	
Nonviscous lubricating distillate	8.5	0.861-0.882	32.8-28.9	50-100
Medium lubricating distillate	5.0	0.882-0.889	28.9-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.1	0.933	20.2	
Distillation loss	4.9			

Bureau of Mines
Sample

Item 383
Bartlesville
46092

Laboratory

IDENTIFICATION

Dollarhide field
Devonian
7,778-8,051 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0,834 -- Gravity, ° API, 38,2 -- Pour point, ° F., below 5
Sulfur, percent, 0,57 -- Color, brownish green
Viscosity, Saybolt Universal at 100° F., 41 sec. Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2,9	2,9	0,632	92,4					
2	167	3,8	6,7	,667	80,6	6,1	1,37511	124,9		
3	212	6,0	12,7	,709	68,1	16	1,39552	128,6		
4	257	6,4	19,1	,736	60,8	20	1,40950	131,7		
5	302	6,2	25,3	,757	55,4	22	1,42175	137,1		
6	347	5,6	30,9	,778	50,4	25	1,43279	141,3		
7	392	4,9	35,8	,795	46,5	27	1,44208	143,0		
8	437	4,7	40,5	,809	43,4	28	1,44996	144,6		
9	482	5,1	45,6	,823	40,4	30	1,45798	149,9		
10	527	5,8	51,4	,839	37,2	32	1,46710	157,6		

Stage 2—Distillation continued at 40 mm Hg

11	392	3,0	54,4	0,856	33,8	37			41	15
12	437	5,1	59,5	,865	32,1	37			46	30
13	482	4,7	64,2	,876	30,0	39			57	40
14	527	4,5	68,7	,887	28,0	41			82	65
15	572	5,1	73,8	,895	26,6	42			180	80
Residuum		24,7	98,5	,951	17,3					

Carbon residue, Conradson Residuum 6,4 percent, crude 1,8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12,7	0,679	76,9	
Total gasoline and naphtha	35,8	0,734	61,3	
Kerosine distillate	9,8	,816	41,9	
Gas oil	13,2	,851	34,8	
Nonviscous lubricating distillate	8,5	,869-.889	31,3-27,7	50 100
Medium lubricating distillate	4,9	,889-.897	27,7-26,3	100 200
Viscous lubricating distillate	1,6	,897-.899	26,3-25,9	Above 200
Residuum	24,7	,951	17,3	
Distillation loss	1,5			

Bureau of Mines
Sample

Item 384
Bartlesville
52051

Laboratory

IDENTIFICATION

Dollarhide field
Ellenburger, Cambro-Ordovician
10,115-10,315 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0,818 Gravity, ° API, 41,5 Pour point, ° F., below 5
Sulfur, percent, 0,23 -- Color, brownish green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1,9	1,9	0,651	85,9					
2	167	2,8	4,7	,653	85,2	-	1,36896	121,9		
3	212	4,4	9,1	,691	73,3	7,5	1,38804	124,7		
4	257	5,1	14,2	,712	67,2	8,0	1,40032	127,1		
5	302	5,1	19,3	,731	62,1	9,9	1,41009	129,0		
6	347	6,0	25,3	,747	57,9	11	1,41850	131,8		
7	392	6,3	31,6	,763	54,0	12	1,42651	131,2		
8	437	6,4	38,0	,779	50,1	14	1,43562	134,8		
9	482	6,9	44,9	,795	46,5	16	1,44401	138,9		
10	527	7,6	52,5	,807	43,8	17	1,45123	140,3		

Stage 2—Distillation continued at 40 mm Hg

11	392	5,0	57,5	0,825	40,0	22			38	20
12	437	7,8	65,3	,836	37,8	23			42	30
13	482	4,4	69,7	,852	34,6	28			51	40
14	527	3,9	73,6	,869	31,3	32			65	50
15	572	4,9	78,5	,882	28,9	36			100	60
Residuum		21,4	99,9	,936	19,7					

Carbon residue, Conradson Residuum 6,0 percent, crude 1,6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9,1	0,671	79,4	
Total gasoline and naphtha	31,6	0,720	65,0	
Kerosine distillate	20,9	,794	46,7	
Gas oil	14,5	,836	37,8	
Nonviscous lubricating distillate	9,1	,851-.882	34,8-28,9	50 100
Medium lubricating distillate	2,4	,882-.889	28,9-27,7	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21,4	,936	19,7	
Distillation loss	,1			

Bureau of Mines Item 385
Bartlesville Laboratory
Sample 52050

IDENTIFICATION

Dollarhide field
Silurian
8,576-8,676 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.819 Gravity, ° API, 41.3 Pour point, ° F., below 5
Sulfur, percent, 0.36 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 748 mm. Hg
First drop, 88 ° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S U. visc. 100° F	Cloud test, ° F.
1	122	3.3	3.3	0.641	89.3					
2	167	3.2	6.5	.649	86.5	-	1.37024	121.7		
3	212	4.5	11.0	.690	73.6	7.1	1.38950	127.7		
4	257	5.1	16.1	.720	65.0	12	1.40370	131.1		
5	302	5.7	21.8	.738	60.2	13	1.41433	136.0		
6	347	4.7	26.5	.754	56.2	14	1.42198	132.9		
7	392	5.9	32.4	.767	53.0	14	1.42893	133.5		
8	437	5.9	38.3	.783	49.2	16	1.43723	136.0		
9	482	7.7	46.0	.799	45.6	18	1.44595	139.7		
10	527	6.4	52.4	.813	42.6	20	1.45348	144.8		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	4.2	56.6	0.828	39.4	23			38	20
12	437	6.5	63.1	.839	37.2	25			42	30
13	482	5.6	68.7	.854	34.2	28			51	40
14	527	4.2	72.9	.874	30.4	35			69	50
15	572	4.6	77.5	.890	27.5	39			110	70
Residuum		22.2	99.7	.948	17.8					

Carbon residue, Conradson. Residuum, 8.3 percent; crude, 2.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.0	0.663	81.9	
Total gasoline and naphtha	32.4	0.717	65.9	
Kerosine distillate	20.0	.799	45.6	
Gas oil	13.1	.839	37.2	
Nonviscous lubricating distillate	8.6	.853-.886	34.4-28.2	50-100
Medium lubricating distillate	3.4	.886-.898	28.2-26.1	100-200
Viscous lubricating distillate				Above 200
Residuum	22.2	.948	17.8	
Distillation loss	.3			

Bureau of Mines Item 386
Bartlesville Laboratory
Sample 56037

IDENTIFICATION

Dora Roberts field
Ellenburger, Cambro-Ordovician
12,835 feet

Texas
Midland County

GENERAL CHARACTERISTICS

Gravity, specific, 0.771 Gravity, ° API, 52.0 Pour point, ° F., below 5
Sulfur, percent, less than 0.10 Color, NPA 6
Viscosity, Saybolt Universal at 100° F., 34 sec. Nitrogen, percent, 0.023

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 743 mm Hg
First drop, 84 ° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S U. visc. 100° F	Cloud test, ° F.
1	122	5.0	5.0	0.628	93.8					
2	167	5.1	10.1	.656	84.2	0.8	1.37185	123.5		
3	212	6.1	16.2	.691	73.3	7.5	1.38793	125.1		
4	257	6.9	23.1	.716	66.1	10	1.40120	127.0		
5	302	6.6	29.7	.735	61.0	12	1.41176	132.6		
6	347	7.3	37.0	.750	57.2	12	1.41995	132.8		
7	392	7.6	44.6	.763	54.0	12	1.42619	130.0		
8	437	6.7	51.3	.775	51.1	12	1.43201	130.5		
9	482	7.1	58.4	.788	48.1	13	1.43866	130.1		
10	527	7.8	66.2	.800	45.4	14	1.44513	131.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.0	71.2	0.814	42.3	17	1.45283	132.5	38	25
12	437	5.0	77.2	.826	39.8	19	1.45811	132.2	42	35
13	482	4.8	82.0	.838	37.4	21	1.46457	139.6	50	45
14	527	3.4	85.4	.853	34.4	25	1.47093	140.4	65	55
15	572	3.9	89.3	.858	33.4	24	1.47790	135.0	98	75
Residuum		8.6	97.9	.899	25.9					

Carbon residue, Conradson: Residuum, 9.4 percent; crude, 0.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	16.2	0.661	82.6	
Total gasoline and naphtha	44.6	0.712	67.2	
Kerosine distillate	21.6	.788	48.1	
Gas oil	13.4	.820	41.1	
Nonviscous lubricating distillate	8.0	.838-.858	37.4-33.4	50-100
Medium lubricating distillate	1.7	.858-.861	33.4-32.8	100-200
Viscous lubricating distillate				Above 200
Residuum	8.6	.899	25.9	
Distillation loss	2.1			

Bureau of Mines
Sample

Item 387
Bartlesville
59051

Laboratory

IDENTIFICATION

Dune field
Grayburg, Permian
3,270 feet

Texas
Crane County

GENERAL CHARACTERISTICS

Gravity, specific 0.878 Gravity, ° API, 29.7 Pour point, ° F 30
Sulfur, percent, 3.11 Color, greenish black
Viscosity, Saybolt Universal at 77°F, 68 sec., at 100°F, 57 sec. Nitrogen, percent, 0.111

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 104 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.636	91.0					
2	167	1.1	2.2	.696	71.8	20	1.38260	120.5		
3	212	3.5	5.7	.713	67.0	18	1.39845	125.1		
4	257	4.8	10.5	.743	58.9	23	1.41303	130.0		
5	302	7.2	17.7	.771	52.0	29	1.42779	135.3		
6	347	5.0	22.7	.793	46.9	32	1.43980	140.3		
7	392	1.7	24.4	.800	45.4	30	1.44577	142.8		
8	437	4.8	29.2	.815	42.1	31	1.45143	141.7		
9	482	5.5	34.7	.828	39.4	32	1.45954	147.0		
10	527	7.4	42.1	.846	35.8	36	1.46959	153.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.9	45.0	0.862	32.7	39	1.47970	161.8	41	10
12	437	5.3	50.3	.868	31.5	38	1.48380	160.1	45	24
13	482	6.0	56.3	.883	28.8	42	1.49110	165.3	58	46
14	527	6.1	62.4	.899	25.9	47	1.49905	-	85	66
1/15	572	2.1	64.5	.906	24.7	-			135	80
Residuum		35.0	99.5	.978	13.2					

Carbon residue, Conradson Residuum 7.4 percent crude 2.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.7	0.695	72.1	
Total gasoline and naphtha	24.4	0.755	55.9	
Kerosine distillate	4.8	.815	42.1	
Gas oil	20.7	.849	35.2	
Nonviscous lubricating distillate	10.7	.874-.901	30.4-25.6	50-100
Medium lubricating distillate	3.9	.901-.908	25.6-24.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	35.0	.978	13.2	
Distillation loss	.5			

1/ Distillation discontinued at 527° F.

Bureau of Mines
Sample

Item 388
Bartlesville
53014

Laboratory

IDENTIFICATION

East Texas field
Woodbine, Upper Cretaceous

Texas
Rusk County

GENERAL CHARACTERISTICS

Gravity, specific, 0.828 Gravity, ° API, 39.4 Pour point, ° F, below 5
Sulfur, percent, 0.32 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.7	4.7	0.640	89.6					
2	167	2.9	7.6	.672	79.1	8 4				
3	212	5.9	13.5	.718	65.6	20	1.40423	126.6		
4	257	6.6	20.1	.743	58.9	23	1.41257	127.5		
5	302	6.1	26.2	.764	53.7	26	1.42470	137.1		
6	347	5.0	31.2	.782	49.5	27	1.43523	140.5		
7	392	4.4	35.6	.796	46.3	28	1.44322	145.2		
8	437	4.5	40.1	.810	43.2	29	1.45084	148.5		
9	482	5.2	45.3	.824	40.2	30	1.45926	152.7		
10	527	6.2	51.5	.837	37.6	32	1.46728	159.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.3	54.8	0.846	35.8	32			39	20
12	437	6.1	60.9	.854	34.2	32			44	40
13	482	5.4	66.3	.865	32.1	34			54	60
14	527	4.3	70.6	.876	30.0	36			73	75
15	572	4.8	75.4	.886	28.2	37			115	90
Residuum		22.9	98.3	.954	16.8					

Carbon residue, Conradson Residuum 6.6 percent crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.5	0.681	76.3	
Total gasoline and naphtha	35.6	0.735	61.0	
Kerosine distillate	9.7	.818	41.5	
Gas oil	16.1	.846	35.8	
Nonviscous lubricating distillate	10.0	.861-.882	32.8-28.9	50-100
Medium lubricating distillate	4.0	.882-.891	28.9-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.9	.954	16.8	
Distillation loss	1.7			

Item 389
Bureau of Mines Bartlesville
Sample 61153 Laboratory

IDENTIFICATION

El Mar field
Delaware, Permian
4,490-4,500 feet

Texas
Loving County

GENERAL CHARACTERISTICS

Gravity, specific, 0.817 - Gravity, ° API, 41.7 - Pour point, ° F., below 5
Sulfur, percent, 0.13 - Color, greenish black
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen percent, 0.07

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 82° F.

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.5	3.5	0.664	81.6					
2	167	3.2	6.7	.671	79.4	8.0	1.37694	125.8		
3	212	6.3	13.0	.714	66.7	18	1.39743	128.5		
4	257	7.8	20.8	.738	60.2	21	1.41147	131.1		
5	302	5.6	26.4	.758	55.2	23	1.42105	133.7		
6	347	5.3	31.7	.776	50.9	24	1.43036	136.5		
7	392	4.9	36.6	.788	48.1	24	1.43688	136.7		
8	437	5.1	41.7	.801	45.2	24	1.44474	137.4		
9	482	5.2	46.9	.815	42.1	26	1.45211	142.7		
10	527	5.7	52.6	.827	39.6	27	1.45940	145.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.5	56.1	0.840	37.0	29	1.46717	147.0	39	15
12	437	5.2	61.3	.850	35.0	30	1.47048	146.9	45	30
13	482	4.8	66.1	.860	33.0	31	1.47654	149.9	56	55
14	527	4.7	70.8	.874	30.4	35	1.48279	153.3	82	70
15	572	5.8	76.6	.886	28.2	37			-	110
Residium		20.4	97.0	.930	20.7					

Carbon residue, Conradson Residium 4.6 percent, crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.0	0.690	73.6	
Total gasoline and naphtha	36.6	0.736	60.8	
Kerosene distillate	10.3	.808	43.6	
Gas oil	14.1	.827	39.6	
Nonviscous lubricating distillate	9.0	.854-.877	34.2-29.9	50-100
Medium lubricating distillate	6.6	.877-.892	29.9-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residium	20.4	.930	20.7	
Distillation loss	3.0			

Item 390
Bureau of Mines Bartlesville
Sample 61156 Laboratory

IDENTIFICATION

Emma field
Ellenburger, Cambro-Ordovician
12,340-12,580 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.783 Gravity, ° API, 49.2 Pour point, ° F., below 5
Sulfur, percent less than 0.10 Color, dark green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen percent, 0.000

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 740 mm. Hg
First drop 82° F.

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	5.9	5.9	0.660	82.9					
2	167	4.4	10.3	.664	81.6	4.6	1.37173	125.3		
3	212	5.8	16.1	.697	71.5	10	1.38811	125.9		
4	257	6.3	22.4	.720	65.0	12	1.39965	128.4		
5	302	6.3	28.7	.738	60.2	13	1.40979	131.5		
6	347	6.3	35.0	.754	56.2	14	1.41826	130.3		
7	392	7.0	42.0	.769	52.5	15	1.42602	130.6		
8	437	6.9	48.9	.783	49.2	16	1.43377	133.2		
9	482	6.8	55.7	.797	46.0	17	1.44098	136.9		
10	527	7.1	62.8	.810	43.2	19	1.44734	136.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.6	69.4	0.820	41.1	19	1.45692	140.0	39	30
12	437	6.8	76.2	.835	38.0	23	1.46457	146.2	45	40
13	482	4.1	80.3	.852	34.6	28	1.47368	150.7	56	50
14	527	4.1	84.4	.868	31.5	32	1.48146	157.1	82	70
15	572	4.4	88.8	.883	28.8	36			155	85
Residium		8.8	97.6	.923	21.8					

Carbon residue, Conradson Residium 5.6 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	16.1	0.674	78.4	
Total gasoline and naphtha	42.0	0.718	65.6	
Kerosene distillate	20.8	.797	46.0	
Gas oil	12.6	.828	39.4	
Nonviscous lubricating distillate	8.0	.843-.872	36.4-30.8	50-100
Medium lubricating distillate	5.4	.872-.890	30.8-27.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residium	8.8	.923	21.8	
Distillation loss	2.4			

Item 391
Bureau of Mines Bartlesville
Sample 56032 Laboratory

IDENTIFICATION

Emperor field
Yates and Seven Rivers, Permian
2,833-2,900 feet

Texas
Winkler County

GENERAL CHARACTERISTICS

Gravity, specific 0.852 Gravity, ° API 34.6 Pour point, ° F, below 5
Sulfur, percent 1.31 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 43 sec. Nitrogen, percent, 0.104

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.5	2.5	0.645	87.9					
2	167	2.8	5.3	.667	80.0	6.1	1.37974	124.5		
3	212	4.4	9.7	.710	67.8	17	1.39743	121.3		
4	257	6.5	16.2	.740	59.7	22	1.41056	126.8		
5	302	5.2	21.4	.763	54.0	25	1.42374	128.1		
6	347	5.1	26.5	.782	49.5	27	1.43391	133.0		
7	392	4.9	31.4	.800	45.4	30	1.44371	138.8		
8	437	5.0	36.4	.816	41.9	32	1.45195	139.3		
9	482	5.9	42.3	.834	38.2	35	1.46177	144.5		
10	527	5.9	48.2	.854	34.2	40	1.47309	156.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.1	52.3	0.872	30.8	44	1.48344	160.5	42	Below 5
12	437	5.5	57.8	.884	28.6	46	1.49046	168.8	50	20
13	482	5.4	63.2	.901	25.6	51	1.49737	181.2	67	35
14	527	4.3	67.5	.912	23.7	53	1.50469	181.9	110	50
15	572	5.4	72.9	.925	21.5	56	1.50820	-	210	65
Residuum		25.1	98.0	.966	15.0					

Carbon residue, Conradson Residuum 5.6 percent crude 1.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.7	0.681	76.3	
Total gasoline and naphtha	31.4	0.742	59.2	
Kerosine distillate	5.0	.816	41.9	
Gas oil	18.7	.856	33.8	
Nonviscous lubricating distillate	9.2	.884 - .909	28.6-24.2	50-100
Medium lubricating distillate	8.6	.909 - .931	24.2-20.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.1	.966	15.0	
Distillation loss	2.0			

Item 392
Bureau of Mines Bartlesville
Sample 62087 Laboratory

IDENTIFICATION

Fairway field
James, Lower Cretaceous
9,880-9,890 feet

Texas
Anderson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.799 Gravity, ° API, 45.6 Pour point, ° F, below 5
Sulfur, percent, 0.24 Color, green
Viscosity, Saybolt Universal at 100° F, 33 sec. Nitrogen, percent, less than 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.649	86.5					
2	167	3.4	5.3	.665	81.3	5.1	1.37477	-		
3	212	6.3	11.6	.697	71.5	10	1.39106	132.0		
4	257	5.1	16.7	.721	64.8	13	1.40437	133.8		
5	302	6.8	23.5	.745	58.4	17	1.41753	141.3		
6	347	7.3	30.8	.764	53.7	19	1.42727	143.4		
7	392	5.3	36.1	.774	51.3	17	1.43335	144.7		
8	437	6.3	42.4	.786	48.5	17	1.43922	140.9		
9	482	5.6	48.0	.800	45.4	19	1.44643	146.2		
10	527	6.9	54.9	.813	42.5	20	1.45244	144.4		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.6	59.5	0.840	37.0	29	1.46252	146.2	40	20
12	437	4.4	63.9	.845	36.0	28	1.46696	149.6	44	40
13	482	6.4	70.3	.851	34.8	27	1.47332	157.0	53	65
14	527	6.8	77.1	.864	32.3	30	1.47909	-	76	80
15	572	4.6	81.7	.880	29.3	35		-	130	100
Residuum		13.4	95.1	.910	24.0					

Carbon residue, Conradson Residuum 2.0 percent crude 0.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.6	0.680	76.7	
Total gasoline and naphtha	36.1	0.729	62.7	
Kerosine distillate	18.8	.800	45.4	
Gas oil	10.4	.843	36.3	
Nonviscous lubricating distillate	10.9	.849 - .871	35.2-30.9	50-100
Medium lubricating distillate	5.5	.871 - .886	30.9-28.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	13.4	.910	24.0	
Distillation loss	4.9			

Bureau of Mines Item 393
Sample Bartlesville
55055 Laboratory

IDENTIFICATION

Fannett field Texas
Catahoula, Miocene Jefferson County
3,720-3,740 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.864 Gravity, ° API, 32.3 Pour point, ° F, below 5
Sulfur, percent, 0.15 Color, green
Viscosity, Saybolt Universal at 100° F, 45 sec. Nitrogen, percent, 0.033

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm. Hg
First drop 154° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.1	2.1	0.721	65.0	-	1.40144	126.5		
4	257	3.3	5.4	.754	56.2	28	1.41850	132.9		
5	302	3.6	9.0	.773	51.6	30	1.42845	137.3		
6	347	5.0	14.0	.794	46.7	33	1.43908	136.9		
7	392	5.7	19.7	.813	42.6	36	1.44880	143.0		
8	437	7.9	27.6	.832	38.6	39	1.45819	143.2		
9	482	10.6	38.2	.849	35.2	42	1.46751	146.8		
10	527	13.1	51.3	.864	32.3	44	1.47618	151.5		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	6.6	57.9	0.879	29.5	47	1.48175	152.1	42	Below 5
12	437	8.8	66.7	.879	29.5	44	1.48264	149.1	50	do.
13	482	5.6	72.3	.892	27.1	46	1.48565	144.4	68	20
14	527	5.5	77.8	.903	25.2	44			110	35
15	572	5.8	83.6	.916	23.0	52			250	50
Residuum		16.3	99.9	.934	20.0					

Carbon residue, Conradson Residuum 2.7 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.1	0.721	64.8	
Total gasoline and naphtha	19.7	0.781	49.7	
Kerosene distillate	-	-	-	
Gas oil	42.6	.858	33.4	
Nonviscous lubricating distillate	11.4	.879-.900	29.5-25.7	50-100
Medium lubricating distillate	5.0	.900-.911	25.7-23.8	100-200
Viscous lubricating distillate	4.9	.911-.922	23.8-22.0	Above 200
Residuum	16.3	.934	20.0	
Distillation loss	1			

Bureau of Mines Item 394
Sample Bartlesville
58055 Laboratory

IDENTIFICATION

Farnsworth field Texas
Upper Morrow, Pennsylvanian Ochiltree County
7,926-7,932 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.845 Gravity, ° API, 36.0 Pour point, ° F, 65
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 77° F, 215 sec., at 100° F, 75 sec. Nitrogen, percent, 0.029

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 117° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.9	0.9	0.654	84.9	-				
3	212	2.4	3.3	.709	68.1	16	1.39944	131.2		
4	257	3.7	7.0	.738	60.2	21	1.41097	131.3		
5	302	3.8	10.8	.757	55.4	22	1.42238	135.3		
6	347	3.5	14.3	.772	51.8	23	1.43028	138.3		
7	392	3.9	18.2	.783	49.2	22	1.43598	137.4		
8	437	4.2	22.4	.796	46.3	22	1.44246	140.0		
9	482	4.5	26.9	.807	43.8	22	1.44936	142.3		
10	527	5.9	32.8	.820	41.1	23	1.45437	142.4		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.2	35.0	0.826	39.8	22	1.46142	143.1	38	14
12	437	5.8	40.8	.839	37.2	25	1.46340	144.0	43	30
13	482	4.7	45.5	.842	36.6	23	1.46803	145.5	51	50
14	527	5.7	51.2	.853	34.4	25			65	74
15	572	6.4	57.6	.860	33.0	25			93	90
Residuum		41.2	98.8	.900	25.7					

Carbon residue, Conradson Residuum 1.6 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.3	0.694	72.4	
Total gasoline and naphtha	18.2	0.750	57.2	
Kerosene distillate	14.6	.809	43.4	
Gas oil	10.0	.832	38.6	
Nonviscous lubricating distillate	13.2	.842-.862	36.6-32.7	50-100
Medium lubricating distillate	1.6	.862-.863	32.7-32.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	41.2	.900	25.7	
Distillation loss	1.2			

Item 395
Bureau of Mines Bartlesville
Sample 62056 Laboratory

IDENTIFICATION

Farnsworth-Conner field
Des Moines, Pennsylvanian
6,793-6,820 feet

Texas
Ochiltree County

GENERAL CHARACTERISTICS

Gravity, specific 0.824 Gravity ° API, 40.2 Pour point, ° F, 40
Sulfur, percent, less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 46 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.660	82.9					
2	167	3.1	5.2	.662	82.2	3.7	1.37397	127.4		
3	212	5.6	10.8	.702	70.1	13	1.39178	135.4		
4	257	7.1	17.9	.730	62.3	17	1.40559	127.8		
5	302	4.8	22.7	.749	57.4	18	1.41593	128.1		
6	347	4.3	27.0	.766	53.2	20	1.42547	131.0		
7	392	4.1	31.1	.780	49.9	20	1.43360	133.6		
8	437	4.2	35.3	.797	46.0	23	1.44215	136.6		
9	482	4.4	39.7	.810	43.2	23	1.44922	137.3		
10	527	5.5	45.2	.820	41.1	23	1.45549	141.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.1	47.3	0.836	37.8	28	1.46415	142.7	40	20
12	437	5.2	52.5	.841	36.8	26	1.46637	144.4	45	35
13	482	4.7	57.2	.850	35.0	27	1.47129	146.2	56	60
14	527	5.0	62.2	.863	32.5	30	1.47757	151.2	79	80
15	572	5.5	67.7	.871	31.0	30		130		95
Residuum		29.9	97.6	.913	23.5					

Carbon residue, Conradson Residuum 2.9 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.8	0.682	76.0	
Total gasoline and naphtha	31.1	0.729	62.6	
Kerosine distillate	14.1	.810	43.2	
Gas oil	7.0	.840	37.0	
Nonviscous lubricating distillate	9.7	.845-.866	36.0-31.9	50-100
Medium lubricating distillate	5.8	.866-.875	31.9-30.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.9	.913	23.5	
Distillation loss	2.4			

Item 396
Bureau of Mines Bartlesville
Sample 62063 Laboratory

IDENTIFICATION

Fig Ridge field
Frio, Oligocene
8,492-8,562 feet

Texas
Chambers County

GENERAL CHARACTERISTICS

Gravity, specific 0.846 Gravity ° API, 35.8 Pour point, ° F, below 5
Sulfur, percent, 0.13 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 739 mm Hg
First drop 165 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.6	1.6	0.698	71.2	-	1.40318	142.8		
4	257	2.7	4.3	.729	62.6	17	1.41218	143.4		
5	302	3.0	7.3	.752	56.7	20	1.42192	147.6		
6	347	3.7	11.0	.771	52.0	22	1.43087	146.0		
7	392	4.7	15.7	.787	48.3	23	1.43795	144.4		
8	437	6.1	21.8	.801	45.2	24	1.44565	141.6		
9	482	8.7	30.5	.821	40.9	29	1.45399	144.2		
10	527	10.8	41.3	.835	38.0	31	1.46214	147.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.4	46.7	0.849	35.2	33	1.47045	147.1	40	10
12	437	10.2	56.9	.855	34.0	32	1.47155	145.7	45	25
13	482	11.4	68.3	.866	31.9	34	1.47674	145.4	60	50
14	527	8.7	77.0	.886	28.2	40			110	75
15	572	6.6	83.6	.900	25.7	44			285	85
Residuum		13.8	97.4	.940	19.0					

Carbon residue, Conradson Residuum 4.9 percent, crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.6	0.698	71.2	
Total gasoline and naphtha	15.7	0.757	55.4	
Kerosine distillate	14.8	.813	42.6	
Gas oil	25.0	.841	36.8	
Nonviscous lubricating distillate	15.2	.859-.882	33.2-28.9	50-100
Medium lubricating distillate	5.9	.882-.893	28.9-27.0	100-200
Viscous lubricating distillate	7.0	.893-.906	27.0-24.7	Above 200
Residuum	13.8	.940	19.0	
Distillation loss	2.6			

Bureau of Mines
Sample

Item 397
Bartlesville
61140

Laboratory

IDENTIFICATION

Fluvanna field
Strawn, Pennsylvanian
7,950 feet

Texas
Scurry County

GENERAL CHARACTERISTICS

Gravity, specific 0.828 Gravity, ° API, 39.4 Pour point, ° F, below 5
Sulfur, percent, 0.48 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 38 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 738 mm Hg
First drop 77° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.677	77.5					
2	167	3.3	5.4	.676	77.8	10	1.38014	123.2		
3	212	6.0	11.4	.712	67.2	18	1.39749	129.4		
4	257	7.0	18.4	.736	60.8	20	1.40964	131.8		
5	302	6.6	25.0	.756	55.7	22	1.42076	138.7		
6	347	5.4	30.4	.772	51.8	23	1.43002	142.4		
7	392	5.1	35.5	.788	48.1	24	1.43902	142.3		
8	437	5.3	40.8	.801	45.2	24	1.44681	145.9		
9	482	5.7	46.5	.817	41.7	27	1.45454	146.6		
10	527	6.0	52.5	.831	38.8	29	1.46289	154.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.1	56.6	0.852	34.6	35	1.47311	158.0	40	20
12	437	5.9	62.5	.860	33.0	35	1.47752	160.6	58	35
13	482	5.2	67.7	.871	31.0	37	1.48446	165.1	84	60
14	527	4.6	72.3	.885	28.4	40	1.49102	-	84	80
15	572	5.6	77.9	.895	26.6	42		150	100	
Residuum		19.8	97.7	.948	17.8					

Carbon residue, Conradson Residuum 6.8 percent, crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.4	0.695	72.1	
Total gasoline and naphtha	35.5	0.739	60.0	
Kerosine distillate	11.0	.809	43.4	
Gas oil	15.0	.847	35.6	
Nonviscous lubricating distillate	9.8	.864-.888	32.3-27.9	50-100
Medium lubricating distillate	6.6	.888-.901	27.9-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.8	.948	17.8	
Distillation loss	2.3			

Bureau of Mines
Sample

Item 398
Bartlesville
63004

Laboratory

IDENTIFICATION

Fort Chadbourne field
Odom, Strawn, Pennsylvanian
5,350-5,390 feet

Texas
Coke County

GENERAL CHARACTERISTICS

Gravity, specific 0.805 Gravity, ° API, 44.3 Pour point, ° F, 15
Sulfur percent 0.09 Color, dark green
Viscosity, Saybolt Universal at 100° F, 37 sec. Nitrogen, percent, 0.025

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 79° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.9	2.9	0.637	90.6					
2	167	4.0	6.9	.669	80.0	7.0	1.37743	133.0		
3	212	7.6	14.5	.712	67.2	17	1.39815	127.8		
4	257	9.0	23.5	.738	60.2	21	1.41159	135.2		
5	302	6.3	29.8	.758	55.2	23	1.42267	139.9		
6	347	6.1	35.9	.773	51.6	23	1.43139	141.9		
7	392	5.2	41.1	.785	48.8	22	1.43778	141.2		
8	437	5.1	46.2	.797	46.0	23	1.44410	139.9		
9	482	5.4	51.6	.810	43.2	23	1.45132	144.3		
10	527	5.6	57.2	.824	40.2	25	1.45886	148.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.7	61.9	0.832	38.6	25	1.46656	152.2	39	10
12	437	5.6	67.5	.844	36.2	27	1.46850	166.1	46	35
13	482	5.2	72.7	.859	33.2	31	1.47654	154.4	60	60
14	527	4.8	77.5	.869	31.3	32	1.48100	-	84	75
15	572	5.1	82.6	.878	29.7	34		130	95	
Residuum		16.0	98.6	.918	22.6					

Carbon residue, Conradson Residuum 3.3 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.5	0.685	75.0	
Total gasoline and naphtha	41.1	0.734	61.4	
Kerosine distillate	16.1	.811	43.0	
Gas oil	9.0	.837	37.5	
Nonviscous lubricating distillate	10.6	.848-.872	35.3-30.7	50-100
Medium lubricating distillate	5.8	.872-.883	30.7-28.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.0	.918	22.6	
Distillation loss	1.4			

Bureau of Mines Sample
 Item 399
 Bartlesville 54135
 Laboratory

IDENTIFICATION

Foster field
 Grayburg, Permian
 4,300 feet

Texas
 Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.854 Gravity, ° API, 34.2 Pour point, ° F, 20
 Sulfur, percent 1.53 Color brownish black
 Viscosity, Saybolt Universal at 100° F, 44 sec. Nitrogen, percent, 0.074

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
 First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.638	90.3					
2	167	3.0	4.6	.672	79.1	8.4	1.37350	124.0		
3	212	5.0	9.6	.716	66.1	19	1.39947	128.2		
4	257	5.9	15.5	.745	58.4	24	1.41490	132.7		
5	302	5.8	21.3	.771	52.0	29	1.42857	139.8		
6	347	5.7	27.0	.790	47.6	31	1.43761	137.4		
7	392	4.6	31.6	.800	45.4	30	1.44485	141.5		
8	437	4.7	36.3	.815	42.1	31	1.45174	144.1		
9	482	5.3	41.6	.829	39.2	32	1.46003	146.7		
10	527	6.5	48.1	.845	36.0	35	1.46856	152.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.1	52.2	0.861	32.8	39	1.47906	161.3	41	15
12	437	5.0	57.2	.870	31.1	39	1.48329	161.4	47	40
13	482	4.8	62.0	.882	28.9	42	1.48918	161.6	58	55
14	527	4.7	66.7	.894	26.8	44	1.49529	160.3	84	70
15	572	6.3	73.0	.903	25.2	46			145	85
Residuum		26.5	99.5	.964	15.3					

Carbon residue, Conradson Residuum 7.4 percent crude 2.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.6	0.689	73.9	
Total gasoline and naphtha	31.6	0.749	57.4	
Kerosine distillate	4.7	.815	42.1	
Gas oil	19.9	.849	35.2	
Nonviscous lubricating distillate	9.7	.873-.896	30.6-26.4	50 100
Medium lubricating distillate	7.1	.896-.908	26.4-24.3	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.5	.964	15.3	
Distillation loss	5			

Bureau of Mines Sample
 Item 400
 Bartlesville 54136
 Laboratory

IDENTIFICATION

Fuhrman-Mascho field
 Grayburg, Permian
 4,542 feet

Texas
 Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.869 Gravity, ° API, 31.3 Pour point, ° F, 15
 Sulfur, percent, 2.06 Color brownish black
 Viscosity, Saybolt Universal at 100° F., 47 sec. Nitrogen, percent, 0.085

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm Hg
 First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.665	81.3					
2	167	2.8	3.9	.686	74.8	15	1.37799	127.1		
3	212	6.1	10.0	.727	63.1	25	1.40360	135.4		
4	257	7.4	17.4	.758	55.2	30	1.41983	140.4		
5	302	6.2	23.6	.780	49.9	33	1.43199	144.7		
6	347	5.3	28.9	.791	47.4	32	1.43868	145.4		
7	392	4.2	33.1	.802	44.9	31	1.44449	144.7		
8	437	5.5	38.6	.817	41.7	32	1.45181	143.9		
9	482	4.2	42.8	.836	37.8	36	1.46110	150.8		
10	527	5.9	48.7	.854	34.2	40	1.47205	160.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.9	51.6	0.868	31.5	42	1.48334	164.0	40	10
12	437	6.1	57.7	.881	29.1	45	1.48886	172.7	46	30
13	482	4.3	62.0	.893	27.0	47	1.49740	182.5	59	50
14	527	4.0	66.0	.910	24.0	52	1.50435	184.9	83	65
15	572	6.1	72.1	.922	22.0	55			155	80
Residuum		27.7	99.8	1.000	10.0					

Carbon residue, Conradson Residuum 8.4 percent, crude 2.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.0	0.709	68.1	
Total gasoline and naphtha	33.1	0.758	55.2	
Kerosine distillate	5.5	.817	41.7	
Gas oil	17.7	.858	33.4	
Nonviscous lubricating distillate	8.9	.884-.913	28.6-23.5	50-100
Medium lubricating distillate	6.9	.913-.929	23.5-20.8	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.7	1.000	10.0	
Distillation loss	.2			

Bureau of Mines
Sample

Item 401
Bartlesville
63065

Laboratory

IDENTIFICATION

Fullerton field
Devonian
8,580-8,640 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.803 Gravity, ° API, 44.7 Pour point, ° F, below 5
Sulfur, percent, 0.26 Color, green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, 0.033

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 79° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	5.3	5.3	0.638	90.3					
2	167	3.5	8.8	.670	79.7	7.5	1.37663	126.0		
3	212	6.2	15.0	.709	68.1	16	1.39616	128.1		
4	257	7.4	22.4	.737	60.5	20	1.41058	131.1		
5	302	7.0	29.4	.757	55.4	22	1.42296	138.2		
6	347	5.7	35.1	.775	51.1	24	1.43253	141.6		
7	392	5.3	40.4	.791	47.4	25	1.43924	139.8		
8	437	5.0	45.4	.803	44.7	25	1.44593	140.7		
9	482	5.2	50.6	.815	42.1	26	1.45302	142.8		
10	527	5.6	56.2	.825	40.0	26	1.46008	149.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	352	3.7	59.9	0.843	36.4	30	1.46640	149.6	40	10
12	437	5.2	65.1	.849	35.2	29	1.47009	150.1	47	30
13	482	5.6	70.7	.860	33.0	31	1.47654	153.0	61	55
14	527	4.0	74.7	.871	31.0	33			83	75
15	572	5.1	79.8	.879	29.5	34			150	90
Residuum		17.3	97.1	.922	22.0					

Carbon residue, Conradson Residuum 2.9 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	15.0	0.675	78.2	
Total gasoline and naphtha	40.4	0.730	62.4	
Kerosene distillate	15.8	.815	42.2	
Gas oil	7.5	.846	35.8	
Nonviscous lubricating distillate	10.2	.851-.873	34.7-30.6	50 100
Medium lubricating distillate	5.9	.873-.883	30.6-28.7	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.3	.922	22.0	
Distillation loss	2.9			

Bureau of Mines
Sample

Item 402
Bartlesville
62019

Laboratory

IDENTIFICATION

Fullerton field
Clear Fork, Permian
6,970-7,072 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.827 Gravity, ° API, 39.6 Pour point, ° F, below 5
Sulfur, percent, 0.47 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 86° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2	0.645	87.9					
2	167	2.6	3.8	.686	74.8	15	1.37790	126.4		
3	212	5.8	9.6	.711	67.5	17	1.39692	131.5		
4	257	8.4	18.0	.739	60.0	21	1.41123	135.8		
5	302	6.1	24.1	.759	54.9	23	1.42227	140.0		
6	347	6.3	30.4	.776	50.9	24	1.43190	141.3		
7	392	4.7	35.1	.790	47.6	25	1.43857	141.1		
8	437	5.3	40.4	.803	44.7	25	1.44549	141.2		
9	482	5.6	46.0	.817	41.7	27	1.45285	144.2		
10	527	6.0	52.0	.833	38.4	30	1.46027	147.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.2	55.2	0.850	35.0	33	1.46845	164.2	40	20
12	437	5.4	60.6	.856	33.8	33	1.47337	153.3	45	45
13	482	5.3	65.9	.865	32.1	34	1.47967	-	57	50
14	527	5.1	71.0	.879	29.5	37			82	75
15	572	5.5	76.5	.891	27.3	40			140	90
Residuum		21.0	97.5	.938	19.4					

Carbon residue, Conradson Residuum 5.8 percent, crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.6	0.696	71.8	
Total gasoline and naphtha	35.1	0.744	58.7	
Kerosene distillate	10.9	.810	43.2	
Gas oil	14.2	.845	36.0	
Nonviscous lubricating distillate	10.0	.860-.883	33.0-28.8	50 100
Medium lubricating distillate	6.2	.883-.896	28.8-26.4	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.0	.938	19.4	
Distillation loss	2.5			

Item 403
Bureau of Mines Bartlesville Laboratory
Sample 62006

IDENTIFICATION

Fulton Beach field
Frio B-3-8, Oligocene
7,136-7,139 feet

Texas
Aransas County

GENERAL CHARACTERISTICS

Gravity, specific, 0.815 Gravity, ° API, 42.1 Pour point, ° F, 15
Sulfur, percent, less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 743 mm Hg
First drop, 86° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F
1	122									
2	167	3.4	3.4	0.691	73.3	-	1.38944	124.6		
3	212	4.7	8.1	.715	66.4	19	1.39905	124.9		
4	257	6.7	14.8	.738	60.2	21	1.41141	130.2		
5	302	6.5	21.3	.756	55.7	22	1.42145	136.6		
6	347	7.4	28.7	.771	52.0	22	1.42916	140.9		
7	392	7.2	35.9	.784	49.0	22	1.43626	141.7		
8	437	9.1	45.0	.798	45.8	24	1.44360	140.9		
9	482	11.3	56.3	.817	41.7	27	1.45394	145.8		
10	527	13.1	69.4	.835	38.0	31	1.46428	150.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.8	75.2	0.857	33.6	37	1.47389	155.5	41	20
12	437	7.6	82.8	.869	31.3	39	1.47633	154.5	46	40
13	482	5.6	88.4	.876	30.0	39	1.48426	161.1	59	65
14	527									
15	572									
Residuum		10.2	98.6	.946	18.1					

Carbon residue, Conradson: Residuum, 2.0 percent; crude, 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.1	0.705	69.2	
Total gasoline and naphtha	35.9	0.750	57.2	
Kerosene distillate	20.4	.809	43.4	
Gas oil	24.7	.847	35.6	
Nonviscous lubricating distillate	7.4	.871-.879	31.0-29.5	50-100
Medium lubricating distillate				100-200
Viscous lubricating distillate				Above 200
Residuum	10.2	.946	18.1	
Distillation loss	1.4			

1/ Distillation discontinued at 482° F.

Item 404
Bureau of Mines Bartlesville Laboratory
Sample 48032

IDENTIFICATION

Garza field
San Andres, Permian
2,935-3,032 feet

Texas
Garza County

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 Gravity, ° API, 36.4 Pour point, ° F, 15
Sulfur, percent, 0.51 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen, percent, 7

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 751 mm Hg
First drop, 82° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F
1	122	2.0	2.0	0.642	88.9					
2	167	2.7	4.7	.682	76.0	13	1.38359	132.3		
3	212	6.4	11.1	.730	62.3	26	1.40426	132.0		
4	257	8.1	19.2	.752	56.7	27	1.41488	131.3		
5	302	5.7	24.9	.768	52.7	27	1.42331	130.4		
6	347	5.0	29.9	.785	48.8	29	1.43240	131.4		
7	392	4.6	34.5	.801	45.2	30	1.44172	133.5		
8	437	5.0	39.5	.816	41.9	32	1.45010	135.8		
9	482	4.8	44.3	.828	39.4	32	1.45730	140.3		
10	527	6.2	50.5	.838	37.4	32	1.46376	145.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	54.1	0.851	34.8	34			42	20
12	437	5.7	59.8	.859	33.2	34			47	35
13	482	4.4	64.2	.873	30.6	37			60	50
14	527	4.9	69.1	.889	27.7	42			91	70
15	572	6.0	75.1	.901	25.6	45			190	80
Residuum		23.9	99.0	.950	17.5					

Carbon residue, Conradson: Residuum, 8.2 percent; crude, 2.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.1	0.702	70.1	
Total gasoline and naphtha	34.5	0.750	57.2	
Kerosene distillate	5.0	.816	41.9	
Gas oil	18.8	.843	36.4	
Nonviscous lubricating distillate	8.9	.863-.890	32.5-27.5	50-100
Medium lubricating distillate	5.5	.890-.902	27.5-25.4	100-200
Viscous lubricating distillate	2.4	.902-.908	25.4-24.3	Above 200
Residuum	23.9	.950	17.5	
Distillation loss	1.0			

Bureau of Mines Item 405
Sample Bartlesville
61164 Laboratory

IDENTIFICATION

Geraldine-Ford field
Delaware, Permian
2,584-2,608 feet

Texas
Culberson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.815 Gravity, ° API, 42.1 Pour point, ° F, below 5
Sulfur, percent, 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 756 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.672	79.1					
2	167	3.4	6.6	.679	76.9	12	1.37916	124.8		
3	212	6.4	13.0	.718	65.6	20	1.39788	129.1		
4	257	8.4	21.4	.744	58.7	24	1.41165	130.8		
5	302	6.5	27.9	.762	54.2	25	1.42140	134.6		
6	347	5.1	33.0	.779	50.1	26	1.43064	136.9		
7	392	5.6	38.6	.793	46.9	26	1.43761	137.5		
8	437	5.2	43.8	.803	44.7	25	1.44460	138.8		
9	482	5.4	49.2	.816	41.9	26	1.45187	141.6		
10	527	6.2	55.4	.829	39.2	28	1.45870	147.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.8	58.2	0.848	35.4	33	1.46677	146.8	41	20
12	437	6.0	64.2	.852	34.6	31	1.46872	159.9	46	35
13	482	5.0	69.2	.859	33.2	31	1.47540	151.0	58	55
14	527	4.5	73.7	.874	30.4	35	1.48085	149.9	83	70
15	572	5.2	78.9	.881	29.1	35			140	90
Residium		19.3	98.2	.920	22.3					

Carbon residue, Conradson Residium 2.6 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.0	0.696	71.8	
Total gasoline and naphtha	38.6	0.743	58.9	
Kerosine distillate	10.6	.810	43.2	
Gas oil	14.0	.841	36.8	
Nonviscous lubricating distillate	9.8	.854-.876	34.2-30.0	50-100
Medium lubricating distillate	5.9	.876-.885	30.0-28.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residium	19.3	.920	22.3	
Distillation loss	1.8			

Bureau of Mines Item 406
Sample Bartlesville
50060 Laboratory

IDENTIFICATION

Gillock, South field
Big Gas sand, Frio, Oligocene
9,504-9,588 feet

Texas
Galveston County

GENERAL CHARACTERISTICS

Gravity, specific 0.835 Gravity, ° API, 38.0 Pour point, ° F, below 5
Sulfur, percent, 0.11 Color, dark green
Viscosity, Saybolt Universal at 100° F, 38 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3							
2	167	1.8	3.1	0.657	83.9	-	1.37080	126.2		
3	212	3.9	7.0	.717	65.9	20	1.39945	127.5		
4	257	5.5	12.5	.743	58.9	23	1.41278	131.5		
5	302	5.2	17.7	.762	54.2	25	1.42389	136.1		
6	347	5.0	22.7	.781	49.7	27	1.43388	140.9		
7	392	5.6	28.3	.798	45.8	29	1.44245	139.5		
8	437	7.3	35.6	.811	43.0	29	1.44971	140.4		
9	482	8.1	43.7	.826	39.8	31	1.45771	144.0		
10	527	12.4	56.1	.843	36.4	34	1.46683	149.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.8	63.9	0.854	34.2	36			42	25
12	437	7.3	71.2	.859	33.2	34			48	40
13	482	5.1	76.3	.872	30.8	37			61	55
14	527	5.1	81.4	.884	28.6	40			94	70
15	572	6.1	87.5	.889	27.7	39			200	90
Residium		12.2	99.7	.947	17.9					

Carbon residue, Conradson Residium 6.0 percent, crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.690	73.6	
Total gasoline and naphtha	28.3	0.751	56.9	
Kerosine distillate	7.3	.811	43.0	
Gas oil	32.8	.844	36.2	
Nonviscous lubricating distillate	10.9	.861-.885	32.8-28.4	50-100
Medium lubricating distillate	5.2	.885-.889	28.4-27.7	100-200
Viscous lubricating distillate	3.0	.889-.892	27.7-27.1	Above 200
Residium	12.2	.947	17.9	
Distillation loss	.3			

Item 407
Bureau of Mines Bartlesville
Sample 52062 Laboratory

IDENTIFICATION

Goldsmith field
Upper Clear Fork, Permian
5,622-5,722 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.835 Gravity, ° API, 38.0 Pour point ° F below 5
Sulfur, percent, 0.52 Color, greenish black
Viscosity, Saybolt Universal at 100° F 46 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.8	0.8							
2	167	2.2	3.0	0.675	78.1	-	1.38060	126.3		
3	212	5.0	8.0	.711	67.5	17	1.39774	126.4		
4	257	6.7	14.7	.737	60.5	20	1.41009	129.6		
5	302	6.2	20.9	.756	55.7	22	1.42088	135.7		
6	347	4.9	25.8	.773	51.6	23	1.43024	140.3		
7	392	4.6	30.4	.787	48.3	23	1.43794	139.7		
8	437	5.4	35.8	.801	45.2	24	1.44564	139.8		
9	482	5.3	41.1	.815	42.1	26	1.45365	141.4		
10	527	5.2	47.3	.829	39.2	28	1.46179	149.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.0	50.3	0.848	35.4	33			39	10
12	437	6.2	56.5	.853	34.4	31			45	30
13	482	4.9	61.4	.864	32.3	33			56	50
14	527	5.3	66.7	.878	30.4	37			80	65
15	572	6.1	72.8	.903	25.2	46			150	80
Residuum		24.1	96.9	.944	18.2					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.0	0.697	71.5	
Total gasoline and naphtha	30.4	0.744	58.7	
Kerosene distillate	10.7	.808	43.6	
Gas oil	15.0	.842	36.6	
Nonviscous lubricating distillate	10.1	.858-.884	33.4-28.6	50-100
Medium lubricating distillate	6.6	.884-.913	28.6-23.5	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.1	.944	18.2	
Distillation loss	3.1			

Item 408
Bureau of Mines Bartlesville
Sample 52063 Laboratory

IDENTIFICATION

Goldsmith field
Tubb, Clear Fork, Permian
6,295-6,500 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific, 0.835 Gravity, ° API, 38.0 Pour point, ° F, below 5
Sulfur, percent, 0.57 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6							
2	167	1.5	3.1	0.659	83.2	-	1.37387	127.1		
3	212	3.8	6.9	.707	68.6	15	1.39528	125.8		
4	267	6.7	13.6	.735	61.0	19	1.40912	128.9		
5	302	6.1	19.7	.754	56.2	21	1.41998	133.3		
6	347	5.3	25.0	.771	52.0	22	1.42944	138.3		
7	392	5.2	30.2	.786	48.5	23	1.43760	137.7		
8	437	6.6	36.8	.801	45.2	24	1.44553	136.8		
9	482	5.1	41.9	.814	42.3	25	1.45310	141.9		
10	527	6.3	48.2	.829	39.2	28	1.46114	145.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.4	51.6	0.845	36.0	31			39	10
12	437	5.6	57.2	.851	34.8	30			44	30
13	482	6.4	63.6	.865	32.1	34			56	50
14	527	5.1	68.7	.879	29.7	37			81	70
15	572	5.0	73.7	.891	27.1	40			145	85
Residuum		24.6	98.3	.938	19.4					

Carbon residue, Conradson Residuum 5.1 percent, crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.9	0.685	75.1	
Total gasoline and naphtha	30.2	0.743	58.9	
Kerosene distillate	11.7	.807	43.8	
Gas oil	15.5	.841	36.8	
Nonviscous lubricating distillate	10.2	.852-.882	34.6-28.9	50-100
Medium lubricating distillate	6.1	.882-.897	28.9-26.3	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.6	.938	19.4	
Distillation loss	1.7			

Bureau of Mines Item 409
Sample Bartlesville
58029 Laboratory

IDENTIFICATION

Goldsmith field
San Andres, Permian
4,234-4,290 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.833 Gravity, ° API 38.4 Pour point, ° F, below 5
Sulfur, percent, 1.16 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.079

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.7	3.7	0.642	88.9					
2	167	3.1	6.8	.677	77.5	11	1.38190	126.5		
3	212	6.1	12.9	.726	63.4	24	1.40452	134.5		
4	257	6.8	19.7	.753	56.4	28	1.41885	139.9		
5	302	5.7	25.4	.772	51.8	29	1.42931	144.8		
6	347	5.1	30.5	.785	48.8	29	1.43686	142.6		
7	392	4.9	35.4	.797	46.0	28	1.44355	140.7		
8	437	4.5	39.9	.812	42.8	30	1.45088	142.1		
9	482	4.8	44.7	.827	39.6	31	1.45933	148.7		
10	527	6.0	50.7	.844	36.2	35	1.46877	154.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.2	53.9	0.855	34.0	36	1.47834	160.3	41	20
12	437	4.5	58.4	.867	31.7	38	1.48165	164.4	46	34
13	482	5.1	63.5	.879	29.5	40	1.48883	172.6	58	50
14	527	4.0	67.5	.892	27.1	43	1.49546	171.8	84	70
15	572	6.1	73.6	.915	23.1	51		160		80
Residuum		21.7	95.3	.964	15.3					

Carbon residue, Conradson Residuum 6.7 percent, crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.9	0.690	73.6	
Total gasoline and naphtha	35.4	0.744	58.7	
Kerosine distillate	4.5	.812	42.8	
Gas oil	18.1	.846	35.8	
Nonviscous lubricating distillate	8.6	.871-.896	31.0-26.4	50-100
Medium lubricating distillate	6.7	.896-.927	26.4-21.1	100-200
Viscous lubricating distillate	3	.927-.929	21.1-20.8	Above 200
Residuum	21.7	.964	15.3	
Distillation loss	4.7			

Bureau of Mines Item 410
Sample Bartlesville
55056 Laboratory

IDENTIFICATION

Goose Creek field
Miocene and Prio, Oligocene
4,432-4,466 feet

Texas
Harris County

GENERAL CHARACTERISTICS

Gravity, specific 0.850 Gravity, ° API 35.0 Pour point, ° F 10
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen, percent, 0.028

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7							
2	167	1.2	1.9	0.670	79.7	-				
3	212	3.1	5.0	.725	63.7	24	1.40231	134.2		
4	257	3.8	8.8	.753	56.4	28	1.41940	138.9		
5	302	4.1	12.9	.771	52.0	29	1.42756	138.3		
6	347	4.5	17.4	.786	48.5	29	1.43770	144.2		
7	392	4.7	22.1	.800	45.4	30	1.44418	143.0		
8	437	6.1	28.2	.813	42.6	30	1.45174	147.5		
9	482	8.1	36.3	.829	39.2	32	1.46137	151.5		
10	527	10.8	47.1	.848	35.4	37	1.47082	156.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	8.0	55.1	0.860	33.0	38	1.47744	156.4	40	10
12	437	8.3	63.4	.872	30.8	40	1.47900	155.3	47	30
13	482	7.3	70.7	.878	29.7	40	1.48461	153.2	62	50
14	527	5.1	75.8	.889	27.7	42			98	65
15	572	6.3	82.1	.900	25.7	44			185	80
Residuum		17.7	99.8	.936	19.7					

Carbon residue, Conradson Residuum 4.3 percent, crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.0	0.704	69.5	
Total gasoline and naphtha	22.1	0.762	54.2	
Kerosine distillate	6.1	.813	42.6	
Gas oil	32.6	.850	35.0	
Nonviscous lubricating distillate	12.6	.873-.889	30.6-27.7	50-100
Medium lubricating distillate	6.6	.889-.901	27.7-25.6	100-200
Viscous lubricating distillate	2.1	.901-.904	25.6-25.0	Above 200
Residuum	17.7	.936	19.7	
Distillation loss	.2			

Item 411
Bureau of Mines Bartlesville
Sample 55025 Laboratory

IDENTIFICATION

Government Wells, North field
Jackson, Eocene
2,284-2,303 feet

Texas
Duval County

GENERAL CHARACTERISTICS

Gravity, specific 0.924 Gravity, ° API, 21.6 Pour point, ° F, below 5
Sulfur percent 0.22 Color, green
Viscosity, Saybolt Universal at 77°F., 135 sec., at 100°F., 82 sec. Nitrogen, percent, 0.043

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 757 mm Hg
First drop 255 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392	2.0	2.0	0.843	36.4	-	1.45565	122.4		
8	437	5.4	7.4	.859	33.2	52	1.46538	129.1		
9	482	12.3	19.7	.880	29.3	57	1.47657	137.9		
10	527	21.2	40.9	.895	26.6	59	1.48787	146.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.2	46.1	0.913	23.5	64	1.49929	157.5	47	Below 5
12	437	9.5	55.6	.922	22.0	64	1.50474	157.7	56	do.
13	482	9.5	65.1	.933	20.2	66	1.51246	170.1	95	do.
14	527	6.6	71.7	.950	17.5	71		290	do.	
15	572	9.1	80.8	.967	14.8	76		over 400	do.	
Residuum		19.2	100.0	.989	11.6					

Carbon residue, Conradson Residuum 3.1 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosine distillate				
Gas oil	46.0	0.886	28.2	
Nonviscous lubricating distillate	14.5	.916-.933	23.0-20.2	50-100
Medium lubricating distillate	4.3	.933-.942	20.2-18.7	100-200
Viscous lubricating distillate	16.0	.942-.977	18.7-13.3	Above 200
Residuum	19.2	.989	11.6	
Distillat on loss	0			

Item 412
Bureau of Mines Bartlesville
Sample 62192 Laboratory

IDENTIFICATION

Greta field
Greta, Frio, Oligocene
4,400 feet

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific 0.912 Gravity, ° API, 23.7 Pour point, ° F, below 5
Sulfur, percent 0.17 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 100 sec., at 100°F., 66 sec. Nitrogen, percent, 0.038

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 754 mm Hg
First drop 302 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U viso 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347	2.2	2.2	0.820	41.1	-	1.44532	125.7		
7	392	3.3	5.5	.838	37.4	48	1.45503	128.4		
8	437	6.8	12.3	.858	33.4	51	1.46523	132.7		
9	482	12.5	24.8	.873	30.6	53	1.47514	138.8		
10	527	13.7	38.5	.885	28.4	54	1.48370	147.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	13.2	51.7	0.905	24.9	60	1.49246	155.8	47	Below 5
12	437	10.3	62.0	.916	23.0	61	1.50048	164.1	72	do.
13	482	7.3	69.3	.925	21.5	62	1.50778	-	110	do.
14	527	8.8	78.1	.950	17.4	71			330	do.
15	572	6.4	84.5	.962	15.6	73			over 400	do.
Residuum		15.3	99.8	.991	11.3					

Carbon residue, Conradson Residuum 4.0 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	5.5	0.831	38.8	
Kerosine distillate	-	-	-	
Gas oil	41.0	.880	29.2	
Nonviscous lubricating distillate	16.8	.906-.923	24.6-21.9	50-100
Medium lubricating distillate	5.6	.923-.935	21.9-19.8	100-200
Viscous lubricating distillate	15.6	.935-.967	19.8-14.8	Above 200
Residuum	15.3	.991	11.3	
Distillation loss	2			

1/ Distillation discontinued at 518° F.

Bureau of Mines Item 413
Bartlesville
Sample 50072 Laboratory

IDENTIFICATION

Hankamer field
Miocene
4,258-4,294 feet

Texas
Liberty County

GENERAL CHARACTERISTICS

Gravity, specific 0.893 Gravity, ° API, 27.0 Pour point, ° F, below 5
Sulfur, percent, 0.22 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 115 sec., at 100°F, 74 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 140 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.4	0.4							
4	257	.7	1.1				1.41350	139.6		
5	302	.7	1.8	0.761	54.4	-	1.42942	145.7		
6	347	1.9	3.7	.801	45.2	36	1.43727	147.4		
7	392	3.2	6.9	.829	39.2	43	1.44332	147.0		
8	437	6.4	13.3	.847	35.6	46	1.45181	148.9		
9	482	9.2	22.5	.860	33.0	47	1.46208	154.4		
10	527	11.3	33.8	.874	30.4	49	1.47027	158.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.5	40.3	0.881	29.1	48	1.47470	157.5	45	Below 5
12	437	10.2	50.5	.887	28.0	47	1.47483	153.0	54	do.
13	482	8.8	59.3	.897	26.3	49	1.47962	151.9	76	do.
14	527	6.4	65.7	.906	24.7	50			150	do.
15	572	7.8	73.5	.915	23.1	51			320	do.
Residuum		25.4	98.9	.941	18.9					

Carbon residue, Conradson Residuum 4.5 percent, crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.4	-	-	
Total gasoline and naphtha	3.7	0.782	49.5	
Kerosene distillate	-	-	-	
Gas oil	38.2	.864	32.3	
Nonviscous lubricating distillate	15.5	.885-.900	28.4-25.7	50-100
Medium lubricating distillate	7.2	.900-.909	25.7-24.2	100-200
Viscous lubricating distillate	8.9	.909-.920	24.2-22.3	Above 200
Residuum	25.4	.941	18.9	
Distillation loss	1.1			

Bureau of Mines Item 414
Bartlesville
Sample 56049 Laboratory

IDENTIFICATION

Harper field
San Andres, Permian
4,211 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.854 Gravity, ° API, 34.2 Pour point, ° F, below 5
Sulfur, percent, 1.18 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 44 sec. Nitrogen, percent, 0.098

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.668	80.3					
2	167	2.6	3.9	.683	75.7	14	1.38266	126.6		
3	212	4.3	8.2	.725	63.7	27	1.40396	130.8		
4	257	6.7	14.9	.751	56.9	29	1.41733	139.6		
5	302	6.8	21.7	.771	52.0	29	1.42911	135.5		
6	347	5.0	26.7	.786	48.5	29	1.43663	140.3		
7	392	5.0	31.7	.798	45.8	29	1.44299	140.0		
8	437	5.0	36.7	.811	43.0	29	1.44982	142.9		
9	482	5.3	42.0	.825	40.0	31	1.45832	144.5		
10	527	6.1	48.1	.842	36.6	34	1.46738	148.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	51.4	0.860	33.0	38	1.47724	160.9	40	10
12	437	5.8	57.2	.867	31.7	38	1.48126	161.4	46	30
13	482	5.1	62.3	.884	28.6	43	1.48908	163.3	58	50
14	527	4.6	66.9	.897	26.3	46	1.49573	160.9	83	65
15	572	6.0	72.9	.904	25.0	46			150	80
Residuum		26.2	99.1	.964	15.3					

Carbon residue, Conradson Residuum 7.7 percent, crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.2	0.703	69.8	
Total gasoline and naphtha	31.7	0.756	55.7	
Kerosene distillate	10.3	.818	41.5	
Gas oil	14.3	.855	34.0	
Nonviscous lubricating distillate	9.7	.873-.899	30.6-25.9	50-100
Medium lubricating distillate	6.9	.899-.908	25.9-24.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.2	.964	15.3	
Distillation loss	.9			

Item 415
Bureau of Mines Bartlesville
Sample 63056 Laboratory

IDENTIFICATION

Harris field
Clear Fork and San Angelo, Permian
5,930-5,988 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific 0.878 Gravity, ° API, 29.7 Pour point, ° F 5
Sulfur, percent, 2.38 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 49 sec. Nitrogen, percent, 0.136

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.646	87.5					
2	167	2.9	4.7	.681	76.3	13	1.38340	132.6		
3	212	4.7	9.4	.728	62.9	25	1.40698	140.2		
4	257	6.4	15.8	.758	55.2	30	1.42342	150.5		
5	302	6.0	21.8	.782	49.4	34	1.43660	155.4		
6	347	4.0	25.8	.795	46.5	33	1.44335	154.6		
7	392	4.7	30.5	.810	43.2	34	1.45088	152.5		
8	437	4.1	34.6	.824	40.2	35	1.45854	154.5		
9	482	4.1	38.7	.838	37.4	37	1.46634	160.9		
10	527	5.5	44.2	.856	33.8	40	1.47752	171.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	47.9	0.878	29.7	47	1.48718	178.5	40	15
12	437	5.2	53.1	.892	27.1	50	1.49428	180.1	48	40
13	482	5.2	58.3	.905	24.9	52	1.50389	-	66	65
14	527	3.7	62.0	.917	22.8	55	1.51130	-	99	80
1/15	572	2.7	64.7	.920	22.3	54			140	95
Residuum		33.0	97.7	1.005	9.3					

Carbon residue, Conradson Residuum 6.0 percent crude 2.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.4	0.698	71.3	
Total gasoline and naphtha	30.5	0.757	55.4	
Kerosene distillate	4.1	.824	40.2	
Gas oil	16.5	.863	32.5	
Nonviscous lubricating distillate	9.1	.893-.917	26.9-22.8	50 100
Medium lubricating distillate	4.5	.917-.921	22.8-22.1	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	33.0	1.005	9.3	
Distillation loss	2.3			

1/ Distillation discontinued at 538° F.

Item 416
Bureau of Mines Bartlesville
Sample 62066 Laboratory

IDENTIFICATION

Hastings, East field
Frio, Oligocene
6,020-6,050 feet

Texas
Brazoria County

GENERAL CHARACTERISTICS

Gravity, specific 0.871 Gravity, ° API, 31.0 Pour point, ° F, below 5
Sulfur, percent, 0.15 Color, greenish black
Viscosity, Saybolt Universal at 77° F., 62 sec., at 100° F., 55 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 145 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.1	1.1	0.748	57.7	-	1.40061	126.1		
3	212	1.8	2.9	.753	56.4	37	1.40946	129.6		
4	257	1.7	4.6	.757	55.4	30	1.41686	131.3		
5	302	2.7	7.3	.770	52.3	28	1.42613	139.7		
6	347	3.4	10.7	.789	47.8	31	1.43860	142.8		
7	392	5.1	15.8	.813	42.6	36	1.45011	147.6		
8	437	5.9	21.7	.829	39.2	38	1.45805	149.8		
9	482	9.8	31.5	.846	35.8	41	1.46806	153.5		
10	527	10.7	42.2	.860	33.0	42	1.47690	158.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.4	46.6	0.871	31.0	44	1.48289	158.7	42	Below 5
12	437	8.7	55.3	.880	29.3	44	1.48436	156.3	49	do.
13	482	6.7	62.0	.891	27.3	46	1.48938	155.1	68	do.
14	527	5.9	67.9	.904	25.0	49	1.49414	153.0	110	do.
15	572	6.6	74.5	.910	24.0	49			225	10
Residuum		23.0	97.5	.942	18.7					

Carbon residue, Conradson Residuum 4.3 percent, crude 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.751	56.9	
Total gasoline and naphtha	15.8	0.783	49.2	
Kerosene distillate	-	-	-	
Gas oil	35.6	.855	34.0	
Nonviscous lubricating distillate	12.1	.880-.901	29.3-25.6	50 100
Medium lubricating distillate	6.4	.901-.908	25.6-24.3	100 200
Viscous lubricating distillate	4.6	.908-.913	24.3-23.5	Above 200
Residuum	23.0	.942	18.7	
Distillation loss	2.5			

Item 417
Bureau of Mines Bartlesville Laboratory
Sample 53016

IDENTIFICATION

Hastings, West field
Frio, Oligocene

Texas
Brazoria County

GENERAL CHARACTERISTICS

Gravity, specific, 0.867 Gravity, ° API, 31.7 Pour point, ° F., below 5
Sulfur, percent, 0.24 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, .

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 744 mm. Hg
First drop, 86 ° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp gr., 60/60° F	° API, 60° F	C. I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test, ° F
1	122	1.0	1.0							
2	167	1.0	2.0							
3	212	3.0	5.0	0.705	69.2		1.39283	124.4		
4	257	3.4	8.4	.757	55.4	30	1.41815	130.0		
5	302	2.9	11.3	.773	51.6	30	1.42924	133.4		
6	347	3.9	15.2	.799	45.6	35	1.44195	141.8		
7	392	4.6	19.8	.818	41.5	38	1.45221	141.9		
8	437	6.5	26.3	.835	38.0	41	1.46098	146.3		
9	482	8.9	35.2	.849	35.2	42	1.46930	151.6		
10	527	12.3	47.5	.865	32.1	43	1.47786	156.9		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	3.5	51.0	0.877	29.9	46			41	Below 5
12	437	10.1	61.1	.879	29.5	44			48	do.
13	482	5.7	66.8	.889	27.7	45			69	do.
14	527	5.3	72.1	.900	25.7	47			115	10
15	572	7.0	79.1	.913	23.5	50			270	25
Residue		20.9	100.0	.943	18.6					

Carbon residu, Conradson: Residuum, 4.5 percent; crude, 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr.	° API	Viscosity
Light gasoline	5.0	0.705	69.2	
Total gasoline and naphtha	19.8	0.769	52.5	
Kerosene distillate				
Gas oil	37.1	.859	33.2	
Nonviscous lubricating distillate	10.8	.880-.896	29.3-26.4	50-100
Medium lubricating distillate	5.1	.896-.907	26.4-24.5	100-200
Viscous lubricating distillate	6.3	.907-.920	24.5-22.3	Above 200
Residuum	20.9	.943	18.6	
Distillation loss	.0			

Item 418
Bureau of Mines Bartlesville Laboratory
Sample 58008

IDENTIFICATION

Hawkins field
Sub-Clarksville, Upper Cretaceous
4,100-4,180 feet

Texas
Wood County

GENERAL CHARACTERISTICS

Gravity, specific, 0.894 Gravity, ° API, 26.8 Pour point, ° F., below 5
Sulfur, percent, 2.19 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 135 sec., at 130° F., 84 sec. Nitrogen, percent, 0.076

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 744 mm. Hg
First drop, 86 ° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp gr., 60/60° F	° API, 60° F	C. I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test, ° F
1	122	1.3	1.3	0.634	91.7					
2	167	2.1	3.4	.663	81.9	4.2				
3	212	3.1	6.5	.698	71.2	11	1.37978	126.8		
4	257	3.3	9.8	.721	64.8	13	1.40384	128.0		
5	302	3.7	13.5	.742	59.2	15	1.41473	130.2		
6	347	3.7	17.2	.760	54.7	17	1.42504	129.9		
7	392	3.5	20.7	.778	50.4	19	1.43383	131.4		
8	437	3.3	24.0	.795	46.3	22	1.44218	136.2		
9	482	4.0	28.0	.811	43.0	24	1.45141	137.1		
10	527	5.4	33.4	.832	38.6	29	1.46255	144.0		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.8	36.2	0.851	34.8	34	1.47420	-	40	10
12	437	5.0	41.2	.866	31.9	37	1.48070	-	45	24
13	482	4.3	45.5	.883	28.8	42	1.49013	-	57	44
14	527	4.6	50.1	.902	25.4	48	1.50043	-	85	56
15	572	6.0	56.1	.913	23.5	50	1.50885	-	155	70
Residue		43.1	99.2	1.005	9.3					

Carbon residu, Conradson: Residuum, 6.0 percent; crude, 2.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr.	° API	Viscosity
Light gasoline	6.5	0.674	78.4	
Total gasoline and naphtha	20.7	0.727	63.1	
Kerosene distillate	7.3	.804	44.5	
Gas oil	12.7	.848	35.4	
Nonviscous lubricating distillate	8.3	.873-.905	30.6-24.9	50-100
Medium lubricating distillate	7.1	.905-.922	24.9-22.0	100-200
Viscous lubricating distillate				Above 200
Residuum	43.1	1.005	9.3	
Distillation loss	.8			

Bureau of Mines Sample Item 419 Bartlesville 59010 Laboratory

IDENTIFICATION

Headlee field
Ellenburger, Cambro-Ordovician
13,106 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific, 0.775 Gravity, ° API, 51.1 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, 0.083

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 752 mm Hg
First drop 84° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.629	93.5	-	1.37092	121.5		
2	167	5.0	8.2	.653	85.2	-	1.38957	128.4		
3	212	6.0	14.2	.685	75.1	4.7	1.40168	131.3		
4	257	7.4	21.6	.714	66.7	9.4	1.41138	134.7		
5	302	7.3	28.9	.734	61.3	11	1.41946	132.3		
6	347	7.6	36.5	.754	56.2	12	1.42555	131.0		
7	392	6.5	43.0	.760	54.7	11	1.43161	131.3		
8	437	7.0	50.0	.774	51.3	12	1.43718	142.8		
9	482	7.5	57.5	.784	49.0	11	1.44480	132.3		
10	527	7.8	65.3	.800	45.4	14				

STAGE 2—Distillation continued at 40 mm. Hg

11	392	4.4	69.7	0.815	42.1	17	1.45313	133.5	38	20
12	437	6.3	76.0	.820	41.1	16	1.45598	131.9	41	30
13	482	4.9	80.9	.831	38.8	18	1.46182	136.0	47	36
14	527	4.1	85.8	.844	36.2	21	1.46748	136.2	58	54
15	572	3.8	88.8	.856	33.8	23	1.47283	-	81	70
Residuum		9.8	98.6	.897	26.3					

Carbon residue, Conradson Residuum 1.5 percent, crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	14.2	0.661	82.6	
Total gasoline and naphtha	43.0	0.713	67.0	
Kerosine distillate	22.3	.786	48.5	
Gas oil	14.7	.824	40.2	
Nonviscous lubricating distillate	8.8	.835-.861	38.0-32.8	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	9.8	.897	26.3	
Distillation loss	1.4			

Bureau of Mines Sample Item 420 Bartlesville 54137 Laboratory

IDENTIFICATION

Hendrick field
Yates, Permian
2,900 feet

Texas
Winkler County

GENERAL CHARACTERISTICS

Gravity, specific, 0.902 Gravity, ° API, 25.4 Pour point, ° F, below 5
Sulfur, percent, 1.73 Color, brownish black
Viscosity, Saybolt Universal at 77° F 150 sec., at 100° F 89 sec. Nitrogen, percent, 0.094

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 754 mm Hg
First drop 138° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.8	0.8	0.688	74.2	-				
4	257	1.9	2.7	.733	61.5	18				
5	302	3.4	6.1	.758	55.2	23	1.41209	123.3		
6	347	4.3	10.4	.783	49.2	28	1.43321	132.9		
7	392	4.5	14.9	.806	44.1	32	1.44557	138.3		
8	437	5.5	20.4	.825	40.0	36	1.45595	141.5		
9	482	6.2	26.6	.844	36.2	40	1.46544	147.3		
10	527	7.8	34.4	.863	32.5	44	1.47834	160.9		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	5.0	39.4	0.887	28.0	51	1.49080	168.3	43	Below 5
12	437	6.7	46.1	.899	25.9	53	1.49757	177.6	53	do.
13	482	6.8	52.9	.914	23.3	57	1.50631	182.0	78	do.
14	527	6.3	59.2	.925	21.5	59			145	do.
15	572	6.9	66.1	.932	20.3	59			330	do.
Residuum		33.8	99.9	.975	13.6					

Carbon residue, Conradson Residuum 9.6 percent, crude 3.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	0.8	0.688	74.2	
Total gasoline and naphtha	14.9	0.773	51.6	
Kerosine distillate	5.5	.825	40.0	
Gas oil	20.9	.866	31.9	
Nonviscous lubricating distillate	10.4	.896-.917	26.4-22.8	50-100
Medium lubricating distillate	6.3	.917-.926	22.8-21.3	100-200
Viscous lubricating distillate	8.1	.926-.936	21.3-19.7	Above 200
Residuum	33.8	.975	13.6	
Distillation loss	.1			

Item 421
Bureau of Mines Bartlesville
Sample 55057 Laboratory

IDENTIFICATION

High island field
Miocene
4,487-4,509 feet

Texas
Galveston County

GENERAL CHARACTERISTICS

Gravity, specific 0.891 Gravity, ° API, 27.3 Pour point, ° F, below 5
Sulfur, percent, 0.26 Color, brownish green
Viscosity, Saybolt Universal at 77°F., 94 sec. at 100°F., 79 sec. Nitrogen, percent, 0.048

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 735 mm Hg
First drop 136 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
1	122									
2	167	0.1	0.1)							
3	212	.8	.9)							
4	257	1.3	2.2)	0.735	61.0	-				
5	302	1.4	3.6	.784	49.0	35	1.41815	131.7		
6	347	2.5	6.1	.799	45.6	35	1.43927	133.7		
7	392	4.0	10.1	.822	40.6	40	1.45014	133.0		
8	437	7.4	17.5	.843	36.4	44	1.46091	135.5		
9	482	8.7	26.2	.856	33.8	45	1.46917	140.5		
10	527	13.9	40.1	.870	31.1	47	1.47713	145.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.4	44.5	0.885	28.4	50	1.48459	149.0	45	Below 5
12	437	10.1	54.6	.888	27.9	48	1.48703	147.7	51	15
13	482	7.3	61.9	.894	26.8	47	1.49130	144.4	72	40
14	527	6.2	68.1	.908	24.2	51			125	55
15	572	10.7	78.8	.922	22.0	55			360	75
Residuum		21.0	99.8	.961	15.7					

Carbon residue, Conradson Residuum 6.2 percent, crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.9	-	-	
Total gasoline and naphtha	10.1	0.792	47.2	
Kerosine distillate	-	-	-	
Gas oil	38.6	.865	32.1	
Nonviscous lubricating distillate	13.2	.887-.901	28.0-25.6	50 100
Medium lubricating distillate	5.9	.901-.913	25.6-23.5	100 200
Viscous lubricating distillate	11.0	.913-.931	23.5-20.5	Above 200
Residuum	21.0	.961	15.7	
Distillation loss	.2			

Item 422
Bureau of Mines Bartlesville
Sample 55027 Laboratory

IDENTIFICATION

Hoffman field
Government Wells, Eocene
2,766-2,768 feet

Texas
Duval County

GENERAL CHARACTERISTICS

Gravity, specific 0.928 Gravity, ° API 21.0 Pour point, ° F, below 5
Sulfur, percent, 0.26 Color, green
Viscosity, Saybolt Universal at 77°F., 150 sec. at 100°F., 91 sec. Nitrogen, percent, 0.052

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 756 mm Hg
First drop 334 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392	3.4	3.4	0.842	36.6	-	1.45563	124.2		
8	437	4.6	8.0	.860	33.0	52	1.46622	130.8		
9	482	13.0	21.0	.876	30.0	55	1.47834	138.6		
10	527	19.3	40.3	.894	26.8	59	1.48962	151.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.6	47.9	0.915	23.1	64	1.50059	160.5	47	Below 5
12	437	8.4	56.3	.926	21.3	66	1.50818	170.1	60	do.
13	482	7.3	63.6	.936	19.7	67	1.51504	174.7	110	do.
14	527	6.7	70.3	.953	17.0	72			350	do.
15	572	8.1	78.4	.979	13.0	82			over 400	do.
Residuum		21.5	99.9	.991	11.3					

Carbon residue, Conradson Residuum 3.5 percent, crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosine distillate				
Gas oil	46.1	0.884	28.6	
Nonviscous lubricating distillate	12.3	.917-.934	22.8-20.0	50 100
Medium lubricating distillate	4.2	.934-.942	20.0-18.7	100 200
Viscous lubricating distillate	15.8	.942-.988	18.7-11.7	Above 200
Residuum	21.5	.991	11.3	
Distillation loss	.1			

Bureau of Mines
Sample

Item 423
Bartlesville
63068

Laboratory

IDENTIFICATION

Howard-Glasscock field
Yates, Permian
1,255-1,278 feet

Texas
Howard County

GENERAL CHARACTERISTICS

Gravity, specific 0.883 Gravity, ° API, 28.7 Pour point, ° F, 25
Sulfur, percent 1.92 Color brownish black
Viscosity, Saybolt Universal at 77°F, 68 sec, at 100°F, 57 sec, Nitrogen percent, 0.096

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 113 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167	1.4	1.4	0.727	63.1	-	1.40887	113.4		
3	212	3.2	4.6	.704	59.5	14	1.39402	127.3		
4	257	4.9	9.5	.738	50.2	21	1.41165	137.6		
5	302	3.2	12.7	.764	53.7	26	1.42411	140.3		
6	347	4.0	16.7	.783	49.2	28	1.43514	144.4		
7	392	4.4	21.1	.800	45.4	30	1.44460	148.0		
8	437	4.6	25.7	.818	41.5	32	1.45448	149.1		
9	482	5.5	31.2	.832	38.6	34	1.46252	155.8		
10	527	9.5	40.7	.849	35.2	37	1.47295	166.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
11	392	1.0	41.7	0.874	30.4	45	1.48304	170.1	40	35
12	437	6.2	47.9	.883	28.7	45	1.48803	174.8	49	40
13	482	5.7	53.6	.891	27.3	46	1.49458	-	62	60
14	527	5.8	59.4	.909	24.2	51			94	75
15	572	6.1	65.5	.916	23.0	52			160	100
Residuum		32.7	98.2	.983	12.4					

Carbon residue, Conradson Residuum 7.8 percent crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.6	0.711	67.5	
Total gasoline and naphtha	21.1	0.758	55.3	
Kerosine distillate	4.6	.818	41.5	
Gas oil	19.6	.851	34.8	
Nonviscous lubricating distillate	11.8	.884-.910	28.6-24.1	50-100
Medium lubricating distillate	8.4	.910-.920	24.1-22.4	100-200
Viscous lubricating distillate				Above 200
Residuum	32.7	.983	12.4	
Distillation loss	1.8			

Bureau of Mines
Sample

Item 424
Bartlesville
55059

Laboratory

IDENTIFICATION

Hull field
Caprock, Miocene
1,651-1,705 feet

Texas
Liberty County

GENERAL CHARACTERISTICS

Gravity, specific 0.870 Gravity, ° API, 31.1 Pour point, ° F, below 5
Sulfur, percent 0.35 Color, green
Viscosity, Saybolt Universal at 100° F, 41 sec, Nitrogen, percent, 0.037

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 151 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.6	2.6	0.714	66.7	-	1.40171	120.0		
4	257	6.1	8.7	.746	58.2	25	1.41297	122.4		
5	302	10.0	18.7	.766	53.2	27	1.42244	124.0		
6	347	7.5	26.2	.786	48.5	29	1.43341	129.2		
7	392	7.2	33.4	.810	43.2	34	1.44637	134.0		
8	437	6.9	40.3	.841	36.8	43	1.46281	142.9		
9	482	7.7	48.0	.870	31.1	52	1.48044	171.8		
10	527	9.8	57.8	.896	26.4	59	1.49818	181.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
11	392	3.0	60.8	0.917	22.8	65	1.50669	188.3	43	Below 5
12	437	5.9	66.7	.923	21.8	64	1.51050	187.8	52	do.
13	482	5.4	72.1	.936	19.7	67	1.51512	184.5	79	do.
14	527	4.4	76.5	.943	18.6	67			170	do.
15	572	5.5	82.1	.950	17.5	68			over 400	do
Residuum		17.5	99.5	.956	16.5					

Carbon residue, Conradson Residuum 3.7 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.714	66.7	
Total gasoline and naphtha	33.4	0.772	51.8	
Kerosine distillate	-	-	-	
Gas oil	29.5	.880	29.3	
Nonviscous lubricating distillate	7.7	.921-.937	22.1-19.5	50-100
Medium lubricating distillate	4.4	.937-.944	19.5-18.4	100-200
Viscous lubricating distillate	7.0	.944-.954	18.4-16.8	Above 200
Residuum	17.5	.956	16.5	
Distillation loss	.5			

Item 425
Bureau of Mines Bartlesville Laboratory
Sample 54130

IDENTIFICATION

Hull-Silk-Sikes field
4,300', Strawn, Pennsylvanian
4,338-4,400 feet

Texas
Archer County

GENERAL CHARACTERISTICS

Gravity, specific, 0.847 Gravity, ° API, 35.6 Pour point, ° F, 35
Sulfur, percent, 0.61 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, 0.083

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 743 mm. Hg
First drop, 82° F

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr, 60/60° F	° API 60° F	C. I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test, ° F
1	122	0.1	0.1	0.652	85.5					
2	167	1.3	1.4	.676	77.8	10				
3	212	3.4	4.8	.709	68.1	16	1.39640	129.3		
4	257	5.9	10.7	.737	60.5	20	1.40994	126.7		
5	302	6.6	17.3	.760	54.7	24	1.42096	127.5		
6	347	7.0	24.3	.778	50.4	25	1.43173	134.2		
7	392	8.0	32.3	.797	46.0	28	1.44209	133.7		
8	437	4.2	36.5	.812	42.8	30	1.45025	140.5		
9	482	6.2	42.7	.824	40.2	30	1.45679	146.3		
10	527	7.0	49.7	.838	38.2	32	1.46531	151.6		

Stage 2—Distillation continued at 40 mm. Hg

11	392	3.5	53.2	0.852	34.6	35	1.47454	156.8	40	15
12	437	7.2	60.4	.860	33.0	35	1.47628	157.2	45	25
13	482	4.9	65.3	.871	31.0	37	1.48334	156.9	57	45
14	527	6.2	71.5	.884	28.6	40	1.49063	156.0	83	70
15	572	5.1	76.6	.900	25.7	44			150	85
Residium		23.0	99.6	.961	15.7					

Carbon residue, Conradson: Residium, 8.4 percent; crude, 2.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.8	0.699	70.9	
Total gasoline and naphtha	32.3	0.760	54.7	
Kerosine distillate	10.4	.819	41.3	
Gas oil	16.7	.849	35.2	
Nonviscous lubricating distillate	10.5	.865-.888	32.1-27.9	50-100
Medium lubricating distillate	6.7	.888-.909	27.9-24.2	100-200
Viscous lubricating distillate				Above 200
Residium	23.0	.961	15.7	
Distillation loss	.4			

Item 426
Bureau of Mines Bartlesville Laboratory
Sample 62068

IDENTIFICATION

Humble (Light) field
Yegua, Eocene
4,392-4,408 feet

Texas
Harris County

GENERAL CHARACTERISTICS

Gravity, specific, 0.799 Gravity, ° API, 45.6 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 34 sec. Nitrogen, percent, less than 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 743 mm. Hg
First drop, 82° F

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr, 60/60° F	° API 60° F	C. I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test, ° F
1	122	2.2	2.2	0.663	81.9					
2	167	3.4	5.6	.665	81.3	5.1	1.37526	132.0		
3	212	8.8	14.4	.710	67.8	17	1.39743	132.5		
4	257	10.0	24.4	.744	58.7	24	1.41435	137.0		
5	302	9.6	34.0	.764	53.7	26	1.42619	145.3		
6	347	9.8	43.8	.778	50.4	25	1.43428	146.0		
7	392	6.6	50.4	.791	47.4	25	1.44070	145.1		
8	437	7.1	57.5	.808	43.6	28	1.44919	144.7		
9	482	6.7	64.2	.830	39.0	33	1.46016	152.4		
10	527	8.1	72.3	.850	35.0	38	1.47155	157.3		

Stage 2—Distillation continued at 40 mm. Hg

11	392	5.7	78.0	0.866	31.9	41	1.48172	159.3	45	Below 5
12	437	3.1	81.1	.880	29.3	44	1.48471	157.1	55	do.
13	482	4.3	85.4	.898	26.1	49	1.49216		90	25
14	527	3.5	88.9	.913	23.5	53			270	40
15	572	2.3	91.2	.926	21.3	56			over 400	55
Residium		4.8	96.0	.951	17.3					

Carbon residue, Conradson: Residium, 6.0 percent; crude, 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.4	0.692	73.0	
Total gasoline and naphtha	50.4	0.746	58.2	
Kerosine distillate	7.1	.808	43.6	
Gas oil	19.9	.847	35.6	
Nonviscous lubricating distillate	6.1	.873-.899	30.6-25.9	50-100
Medium lubricating distillate	2.1	.899-.907	25.9-24.5	100-200
Viscous lubricating distillate	5.6	.907-.931	24.5-20.5	Above 200
Residium	4.8	.951	17.3	
Distillation loss	4.0			

1/ Distillation discontinued at 554° F.

Bureau of Mines
Sample
Item 427
Bartlesville
59014
Laboratory

IDENTIFICATION

Hutex field
Devonian
12,509 feet

Texas
Andrews county

GENERAL CHARACTERISTICS

Gravity, specific 0.814 Gravity, ° API, 42.3 Pour point, ° F, below 5
Sulfur percent 0.19 Color, dark green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, 0.051

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 752 mm Hg
First drop 100 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.9	0.9	0.657	83.9					
2	167	3.7	4.6	.662	82.2	3.7	1.37397	120.2		
3	212	6.2	10.8	.700	70.6	12	1.39100	121.4		
4	257	8.4	19.2	.725	63.7	15	1.40413	123.3		
5	302	6.9	26.1	.749	57.4	18	1.41587	127.2		
6	347	7.1	33.2	.767	53.0	20	1.42774	132.4		
7	392	5.4	38.6	.783	49.2	22	1.43683	135.3		
8	437	5.4	44.0	.797	46.0	23	1.44358	135.7		
9	482	6.1	50.1	.812	42.8	24	1.45058	139.6		
10	527	6.7	56.8	.827	39.6	27	1.45873	145.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.4	62.2	0.841	36.8	29	1.46730	147.9	40	20
12	437	5.3	67.5	.847	35.6	28	1.47071	150.1	46	35
13	482	4.8	72.3	.856	33.8	29	1.47613	153.8	56	50
14	527	5.5	77.8	.867	31.7	31	1.48108	153.9	76	60
15	572	6.3	84.1	.878	29.7	34			135	75
Residuum		15.5	99.6	.919	22.5					

Carbon residue, Conradson Residuum 3.5 percent crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.8	0.683	75.7	
Total gasoline and naphtha	38.6	0.733	61.5	
Kerosine distillate	11.5	.805	44.3	
Gas oil	16.8	.838	37.4	
Nonviscous lubricating distillate	10.6	.851-.871	34.8-31.0	50 100
Medium lubricating distillate	6.6	.871-.884	31.0-28.6	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.5	.917	22.5	
Distillation loss	.4			

Bureau of Mines
Sample
Item 428
Bartlesville
62062
Laboratory

IDENTIFICATION

I.A.B. field
Menielle and Canyon, Pennsylvanian
5,624-5,812 feet

Texas
Coke County

GENERAL CHARACTERISTICS

Gravity, specific 0.795 Gravity, ° API 46.5 Pour point, ° F, below 5
Sulfur percent less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.6	3.6	0.638	93.8					
2	167	4.4	8.0	.657	83.9	1.3	1.37111	125.6		
3	212	7.4	15.4	.701	70.4	12	1.39151	128.8		
4	257	8.8	24.2	.732	61.8	18	1.40811	132.9		
5	302	6.9	31.1	.752	56.7	20	1.41992	137.2		
6	347	5.7	36.8	.769	52.5	21	1.42885	136.2		
7	392	5.0	41.8	.782	49.5	21	1.43558	140.5		
8	437	5.0	46.8	.796	46.3	22	1.44237	140.4		
9	482	5.5	52.3	.810	43.2	23	1.45009	138.7		
10	527	5.8	58.1	.823	40.4	25	1.45789	140.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	61.1	0.843	36.4	30	1.46664	144.1	41	15
12	437	4.7	65.8	.851	34.8	30	1.46940	147.7	46	30
13	482	4.5	70.3	.856	33.8	29	1.47425	150.1	56	45
14	527	4.3	74.6	.868	31.5	32	1.47926	150.6	78	65
15	572	4.6	79.2	.878	29.7	34			130	85
Residuum		16.0	95.2	.911	23.8					

Carbon residue, Conradson Residuum 1.8 percent crude 0.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.4	0.674	78.4	
Total gasoline and naphtha	41.8	0.725	63.7	
Kerosine distillate	16.3	.810	43.2	
Gas oil	7.3	.847	35.6	
Nonviscous lubricating distillate	9.0	.853-.872	34.4-30.8	50-100
Medium lubricating distillate	4.8	.872-.883	30.8-28.8	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.0	.911	23.8	
Distillation loss	4.8			

Bureau of Mines
Sample
Item 429
Bartlesville
54140
Laboratory

IDENTIFICATION

Iatan, East Howard field
Clear Fork, Permian
2,550 feet

Texas
Howard County

GENERAL CHARACTERISTICS

Gravity, specific 0.868 Gravity, ° API 31.5 Pour point, ° F, 10
Sulfur, percent, 1.47 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen, percent, 0.120

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122	2.6	2.6	0.658	83.6					
2	167	3.0	5.6	.690	73.6	17	1.38505	131.1		
3	212	5.4	11.0	.741	59.5	31	1.40970	145.6		
4	257	6.4	17.4	.770	52.3	36	1.42667	147.4		
5	302	5.8	23.2	.782	47.8	37	1.43709	165.7		
6	347	4.2	27.4	.801	45.2	36	1.44426	152.7		
7	392	4.3	31.7	.811	43.0	35	1.44930	149.3		
8	437	4.6	36.3	.826	39.8	36	1.45589	150.5		
9	482	5.1	41.4	.844	36.2	40	1.46581	157.6		
10	527	5.9	47.3	.862	32.7	43	1.47687	166.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.2	51.5	0.877	29.9	46	1.48908	178.0	41	15
12	437	5.2	56.7	.889	27.7	48	1.49541	185.2	48	40
13	482	4.7	61.4	.901	25.6	51	1.50125	195.0	63	60
14	527	5.0	66.4	.913	23.5	53			100	75
15	572	5.0	71.4	.920	22.3	54			190	85
Residuum		27.0	98.4	.995	10.7					

Carbon residue, Conradson Residuum 8.3 percent, crude 2.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.0	0.707	68.6	
Total gasoline and naphtha	31.7	0.761	54.4	
Kerosene distillate	-	-	-	
Gas oil	23.1	.857	33.6	
Nonviscous lubricating distillate	9.1	.890-.913	29.3-23.5	50 100
Medium lubricating distillate	5.6	.913-.921	23.5-22.1	100 200
Viscous lubricating distillate	1.9	.921-.924	22.1-21.6	Above 200
Residuum	27.0	.995	10.7	
Distillation loss	1.6			

Bureau of Mines
Sample
Item 430
Bartlesville
63105
Laboratory

IDENTIFICATION

Inez field
Ellenburger, Cambro-Ordovician

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.779 Gravity, ° API 50.1 Pour point, ° F, below 5
Sulfur, percent, 0.01 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 36 sec. Nitrogen, percent, 0.007

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco, 100° F	Cloud test ° F
1	122	2.9	2.9	0.634	91.7					
2	167	4.4	7.3	.662	82.2	3.7	1.37347	125.9		
3	212	6.3	13.6	.694	72.4	8.9	1.39005	128.7		
4	257	7.2	20.8	.717	65.9	11	1.40198	132.0		
5	302	7.5	28.3	.735	61.0	12	1.41188	134.2		
6	347	8.0	36.3	.751	56.9	13	1.41983	133.1		
7	392	6.9	43.2	.762	54.2	12	1.42613	131.8		
8	437	7.4	50.6	.776	50.8	13	1.43270	131.7		
9	482	7.8	58.4	.789	47.8	13	1.43919	133.4		
10	527	7.4	65.8	.801	45.2	14	1.44521	132.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.9	70.7	0.819	41.3	19	1.45291	134.1	40	25
12	437	6.7	77.4	.827	39.6	19	1.45708	135.5	45	30
13	482	4.9	82.3	.838	37.4	21	1.46331	142.0	52	40
14	527	3.6	85.9	.855	34.0	26	1.47029	-	67	60
15	572	3.8	89.7	.864	32.3	27			96	75
Residuum		9.0	98.7	.904	25.0					

Carbon residue, Conradson Residuum 2.3 percent, crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.6	0.671	79.4	
Total gasoline and naphtha	43.2	0.719	65.3	
Kerosene distillate	22.6	.789	47.9	
Gas oil	12.4	.825	40.1	
Nonviscous lubricating distillate	10.1	.835-.865	38.0-32.0	50 100
Medium lubricating distillate	1.4	.865-.869	32.0-31.4	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	9.0	.904	25.0	
Distillation loss	1.3			

Bureau of Mines
Sample

Item 431
Bartlesville
58108

Laboratory

IDENTIFICATION

Jameson field
Strawn, Pennsylvanian
6,062 feet

Texas
Coke County

GENERAL CHARACTERISTICS

Gravity, specific 0.821 Gravity, ° API, 40.9 Pour point, ° F, below 5
Sulfur percent, less than 0.10 Color green
Viscosity, Saybolt Universal at 100° F., 34 sec. Nitrogen, percent, 0.037

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2	0.649	86.5					
2	167	1.7	2.9	.678	77.2	11	1.38371	126.6		
3	212	3.1	6.0	.716	66.1	19	1.39965	126.5		
4	257	7.4	13.4	.738	60.2	20	1.41215	133.7		
5	302	8.0	21.4	.755	55.9	21	1.42261	136.6		
6	347	7.4	28.8	.773	51.6	23	1.43199	138.5		
7	392	7.5	36.3	.787	48.3	23	1.43930	138.3		
8	437	5.5	41.8	.804	44.5	26	1.44552	137.5		
9	482	8.0	49.8	.816	41.9	26	1.45316	141.3		
10	527	5.3	55.1	.830	39.0	28	1.46041	142.7		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.7	59.8	0.839	37.2	28	1.46711	147.3	41	6
12	437	7.1	66.9	.851	34.8	30	1.47029	146.4	47	30
13	482	5.5	72.4	.858	33.4	30	1.47561	153.7	61	56
14	527	4.6	77.0	.869	31.3	32	1.48078	151.3	86	70
15	572	4.9	81.9	.874	30.4	32			140	86
Residuum		17.1	99.0	.912	23.7					

Carbon residue, Conradson Residuum 1.6 percent crude 0.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.0	0.692	73.0	
Total gasoline and naphtha	36.3	0.751	56.9	
Kerosene distillate	13.5	.811	43.0	
Gas oil	15.0	.832	38.6	
Nonviscous lubricating distillate	11.2	.853-.870	34.4-31.1	50-100
Medium lubricating distillate	5.9	.870-.877	31.1-29.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.1	.912	23.7	
Distillation loss	1.0			

Bureau of Mines
Sample

Item 432
Bartlesville
58104

Laboratory

IDENTIFICATION

Jameson field
Strawn Reef, Pennsylvanian
6,360 feet

Texas
Coke County

GENERAL CHARACTERISTICS

Gravity, specific 0.805 Gravity, ° API, 44.3 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 36 sec. Nitrogen, percent, 0.030

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.642	88.9					
2	167	3.4	5.1	.667	80.6	6.1	1.37601	123.6		
3	212	6.9	12.0	.709	68.1	16	1.39710	126.6		
4	257	9.2	21.2	.736	60.8	20	1.41206	131.6		
5	302	8.2	29.4	.757	55.4	22	1.42250	136.5		
6	347	6.8	36.2	.774	51.3	23	1.43190	140.5		
7	392	5.5	41.7	.786	48.5	23	1.43712	151.7		
8	437	5.7	47.4	.799	45.6	24	1.44418	137.7		
9	482	5.7	53.1	.814	42.3	25	1.45113	139.6		
10	527	6.6	59.7	.823	40.4	25	1.45830	143.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.7	62.4	0.837	37.6	28	1.46595	139.7	40	16
12	437	5.7	68.1	.842	36.6	26	1.46838	140.2	44	24
13	482	5.2	73.3	.853	34.4	28	1.47254	148.9	55	44
14	527	4.1	77.4	.864	32.3	30	1.47735	150.1	75	64
15	572	5.2	82.6	.872	30.8	31	1.48277	144.6	120	80
Residuum		15.6	98.2	.904	25.0					

Carbon residue, Conradson Residuum 1.3 percent, crude 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.0	0.688	74.2	
Total gasoline and naphtha	41.7	0.739	60.0	
Kerosene distillate	18.0	.813	42.6	
Gas oil	8.6	.842	36.6	
Nonviscous lubricating distillate	9.7	.848-.868	35.4-31.5	50-100
Medium lubricating distillate	4.6	.868-.876	31.5-30.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	15.6	.904	25.0	
Distillation loss	1.8			

Item 433
Bureau of Mines Bartlesville
Sample - 56056 Laboratory

IDENTIFICATION

Jo-Mill field
Spraberry, Permian
7,300 feet

Texas
Borden County

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API 37.4 Pour point, ° F below 5
Sulfur percent, 0.11 Color green
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen percent 0.118

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.642	88.9					
2	167	2.6	4.2	.676	77.8	10	1.38619	127.4		
3	212	6.7	10.9	.724	63.9	23	1.40103	126.1		
4	257	7.2	18.1	.750	57.2	27	1.41206	127.5		
5	302	5.3	23.4	.768	52.7	27	1.42487	132.3		
6	347	4.7	28.1	.785	48.8	29	1.43437	139.9		
7	392	4.5	32.6	.801	45.2	30	1.44307	138.9		
8	437	4.5	37.1	.817	41.7	32	1.45017	141.3		
9	482	5.1	42.2	.830	39.0	33	1.45785	144.4		
10	527	5.4	47.6	.843	36.4	34	1.46640	151.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	51.2	0.856	33.8	37	1.47462	147.4	40	15
12	437	4.3	55.5	.862	32.7	36	1.47721	147.3	46	25
13	482	5.3	60.8	.877	29.9	39	1.48368	146.2	60	50
14	527	4.0	64.8	.888	27.9	41	1.48848	-	91	65
15	572	5.1	69.9	.889	27.7	39			160	75
Residuum		27.8	97.7	.935	19.8					

Carbon residue, Conradson Residuum 3.7 percent crude 1.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.9	0.701	70.4	
Total gasoline and naphtha	32.6	0.748	57.7	
Kerosene distillate	4.5	.817	41.7	
Gas oil	17.6	.846	35.8	
Nonviscous lubricating distillate	8.7	.866-.888	31.9-27.9	50 100
Medium lubricating distillate	6.5	.888-.890	27.9-27.5	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.8	.935	19.8	
Distillation loss	2.3			

Item 434
Bureau of Mines Bartlesville
Sample 54141 Laboratory

IDENTIFICATION

Jordan field
San Andres, Permian
3,600 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity specific 0.859 Gravity ° API 33.2 Pour point ° F below 5
Sulfur percent 1.48 Color brownish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen percent 0.100

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 753 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	0.8	0.8	0.648	86.9					
2	167	1.7	2.5	.674	78.4	9.4				
3	212	4.3	6.8	.720	65.0	21	1.39215	133.7		
4	257	6.0	12.8	.745	58.4	24	1.41388	134.4		
5	302	6.4	19.2	.766	53.2	27	1.42573	140.9		
6	347	6.3	25.5	.785	48.8	29	1.43514	140.5		
7	392	4.2	29.7	.798	45.8	29	1.44296	136.9		
8	437	5.1	34.8	.811	43.0	29	1.45006	142.7		
9	482	6.0	40.8	.826	39.8	31	1.45822	146.4		
10	527	6.1	46.9	.841	36.8	33	1.46703	154.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	50.3	0.857	33.6	37	1.47649	160.2	40	20
12	437	6.7	57.0	.871	31.0	40	1.48149	159.5	47	30
13	482	4.7	61.7	.885	28.4	43	1.48986	168.1	62	55
14	527	4.8	66.5	.895	26.6	45	1.49549	-	91	70
15	572	7.0	73.5	.906	24.7	47			175	85
Residuum		26.4	99.9	.969	14.5					

Carbon residue, Conradson Residuum 9.4 percent crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.8	0.700	70.6	
Total gasoline and naphtha	29.7	0.755	55.9	
Kerosene distillate	5.1	.811	43.0	
Gas oil	20.1	.845	36.0	
Nonviscous lubricating distillate	9.9	.874-.896	30.4-26.4	50 100
Medium lubricating distillate	7.0	.896-.909	26.4-24.2	100 200
Viscous lubricating distillate	1.7	.909-.913	24.2-23.5	Above 200
Residuum	26.4	.969	14.5	
Distillation loss	.1			

Item 435
Bureau of Mines Bartlesville Laboratory
Sample 52042

IDENTIFICATION

Katz field
Strawn, Pennsylvanian
4,878-4,900 feet

Texas
Stonewall County

GENERAL CHARACTERISTICS

Gravity, specific, 0.865 Gravity, ° API, 32.1 Pour point, ° F., 125
Sulfur, percent, 0.46 Color, brownish black
Viscosity, Saybolt Universal at 180° F., 52 sec. Nitrogen, percent, 0.066

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop, 86 ° F

Fraction No.	Cut temp ° F.	Percent	Sum percent	Sp. gr. 60/60° F.	° API 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1	122	1.3	1.3							
2	167	1.9	3.2	0.653	85.2	-	1.37191	125.0		
3	212	4.0	7.2	.708	68.4	16	1.39474	126.0		
4	257	5.1	12.3	.738	60.2	21	1.40930	128.3		
5	302	4.8	17.1	.757	55.4	22	1.42117	134.1		
6	347	4.4	21.5	.778	50.4	25	1.43195	137.2		
7	392	3.9	25.4	.792	47.2	26	1.44004	139.3		
8	437	4.5	29.9	.805	44.3	26	1.44776	141.1		
9	482	4.3	34.2	.821	40.9	29	1.45565	144.4		
10	527	5.3	39.5	.836	37.8	-	1.46365	150.2		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	3.0	42.5	0.850	35.0	-			41	15
12	437	4.6	47.1	.856	33.8	33			45	30
13	482	4.3	51.4	.866	31.9	34			56	50
14	527	3.9	55.3	.882	28.9	39			-	-
15	572	4.2	59.5	.898	26.1	43			-	-
Residuum		39.5	99.0	.963	15.4					

Carbon residue, Conradson. Residuum, 5.7 percent; crude, 2.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.2	0.684	75.4	
Total gasoline and naphtha	25.4	0.741	59.5	
Kerosine distillate	8.8	.813	42.6	
Gas oil	12.7	.846	35.8	
Nonviscous lubricating distillate	-	-	-	50-100
Medium lubricating distillate	12.6	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	39.5	.963	15.4	
Distillation loss	1.0			

1/ Distillation discontinued at 516° F.

Item 436
Bureau of Mines Bartlesville Laboratory
Sample 63045

IDENTIFICATION

Kelly-Snyder field
Canyon, Pennsylvanian
6,997 - 7,019 feet

Texas
Scurry County

GENERAL CHARACTERISTICS

Gravity, specific, 0.832 Gravity, ° API, 38.6 Pour point, ° F., below 5
Sulfur, percent, 0.29 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen, percent, 0.066

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 747 mm. Hg
First drop, 88 ° F.

Fraction No.	Cut temp ° F.	Percent	Sum percent	Sp. gr. 60/60° F.	° API 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1	122	0.9	0.9	0.656	84.2					
2	167	3.0	3.9	.686	74.8	15	1.38408	126.6		
3	212	8.5	12.4	.725	63.7	24	1.40273	130.2		
4	257	8.8	21.2	.748	57.7	26	1.41499	134.1		
5	302	7.1	28.3	.767	53.0	27	1.42653	141.0		
6	347	6.0	34.3	.786	48.5	29	1.43699	143.7		
7	392	5.2	39.5	.801	45.2	30	1.44515	145.4		
8	437	5.4	44.9	.816	41.9	32	1.45302	146.1		
9	482	5.7	50.6	.829	39.2	32	1.46094	151.6		
10	527	6.8	57.4	.842	36.6	34	1.46872	158.1		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	3.4	60.8	0.854	34.2	36	1.47467	161.5	40	15
12	437	5.6	66.4	.864	32.3	36	1.47834	161.3	46	40
13	482	5.2	71.6	.872	30.8	37	1.48491	-	62	60
14	527	4.7	76.3	.885	28.4	40	1.48896	-	92	75
15	572	5.4	81.7	.895	26.6	42			175	95
Residuum		18.3	100.0	.945	18.2					

Carbon residue, Conradson. Residuum, 6.6 percent; crude, 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.4	0.711	67.6	
Total gasoline and naphtha	39.5	0.752	56.6	
Kerosine distillate	5.4	.816	41.9	
Gas oil	19.5	.844	36.2	
Nonviscous lubricating distillate	10.0	.865-.886	32.1-28.2	50-100
Medium lubricating distillate	6.1	.886-.898	28.2-26.1	100-200
Viscous lubricating distillate	1.2	.898-.900	26.1-25.7	Above 200
Residuum	18.3	.945	18.2	
Distillation loss	.0			

Item 437
Bureau of Mines Bartlesville Laboratory
Sample 52086

IDENTIFICATION

Kelsey Deep field
Frio, Oligocene
6 085-6,095 feet

Texas
Brooks County

GENERAL CHARACTERISTICS

Gravity specific 0.822 Gravity ° API 40.6 Pour point ° F 25
Sulfur percent 0.13 Color brownish green
Viscosity Saybolt Universal at 100° F., 35 sec. Nitrogen, percent -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 751 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	3.7	3.7	0.653	85.2	-	1.37049	128.4		
3	212	5.7	9.4	.716	66.1	19	1.39933	131.0		
4	267	8.3	17.7	.745	58.4	24	1.41448	133.5		
5	302	7.0	24.7	.762	54.2	25	1.42444	137.4		
6	347	7.1	31.8	.777	50.6	25	1.43299	138.5		
7	392	6.7	38.5	.792	47.2	26	1.44012	140.9		
8	437	6.3	44.8	.868	43.6	28	1.44809	140.5		
9	482	8.8	53.6	.828	39.4	32	1.45749	142.7		
10	527	13.1	66.7	.849	35.2	37	1.46860	143.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.3	74.0	0.861	32.8	39			41	15
12	437	6.0	80.0	.862	32.7	36			47	40
13	482	4.9	84.9	.874	30.4	38			62	60
14	527	4.0	88.9	.898	26.1	46			110	75
15	572	3.4	92.3	.923	21.8	60			over 400	90
Residuum		6.8	99.1	1.001	9.9					

Carbon residue, Conradson Residuum 8.9 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.4	0.691	73.3	
Total gasoline and naphtha	38.5	0.749	57.4	
Kerosine distillate	6.3	.808	43.6	
Gas oil	33.4	.848	35.4	
Nonviscous lubricating distillate	7.8	.865-.893	32.1-27.0	50-100
Medium lubricating distillate	2.1	.893-.909	27.0-24.2	100-200
Viscous lubricating distillate	4.2	.909-.949	24.2-17.6	Above 200
Residuum	6.8	1.001	9.9	
Distillation loss	.9			

Item 438
Bureau of Mines Bartlesville Laboratory
Sample 54142

IDENTIFICATION

Kermit field
Yates, Permian
3,000 feet

Texas
Winkler County

GENERAL CHARACTERISTICS

Gravity specific 0.842 Gravity ° API 36.6 Pour point ° F below 5
Sulfur percent 0.94 Color greenish black
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen, percent, 0.092

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.0	3.0	0.641	89.3					
2	167	3.0	6.0	.668	80.3	6,5	1.37582	121.6		
3	212	5.3	11.3	.710	67.8	17	1.39598	126.1		
4	267	6.2	17.5	.738	60.2	21	1.41070	125.5		
5	302	6.3	23.8	.763	54.0	25	1.42429	137.4		
6	347	5.8	29.6	.783	49.2	28	1.43573	140.6		
7	392	5.2	34.8	.800	45.4	30	1.44424	141.8		
8	437	5.0	39.8	.816	41.9	32	1.45163	139.8		
9	482	5.4	45.2	.830	39.0	33	1.46024	147.5		
10	527	6.0	51.2	.847	35.6	36	1.47022	155.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.5	54.7	0.864	32.3	40	1.47906	160.8	41	Below 5
12	437	5.0	59.7	.875	30.2	42	1.48398	162.1	47	5
13	482	5.1	64.8	.888	27.9	45	1.49171	-	62	20
14	527	5.1	69.9	.895	26.6	45	1.49847	-	98	40
15	572	5.9	75.8	.908	24.3	48	1.50387	-	220	55
Residuum		22.8	98.6	.958	18.2					

Carbon residue, Conradson Residuum 7.2 percent, crude 1.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.3	0.681	76.3	
Total gasoline and naphtha	34.8	0.741	59.5	
Kerosine distillate	5.0	.816	41.9	
Gas oil	18.5	.850	35.0	
Nonviscous lubricating distillate	9.2	.877-.896	29.9-26.4	50-100
Medium lubricating distillate	4.5	.896-.905	26.4-24.9	100-200
Viscous lubricating distillate	3.8	.905-.915	24.9-23.1	Above 200
Residuum	22.8	.958	16.2	
Distillation loss	1.4			

Item 439
Bureau of Mines Bartlesville Laboratory
Sample 52081

IDENTIFICATION

Keystone (Colby) field
Queen, Permian
3,343-3,513 feet

Texas
Winkler County

GENERAL CHARACTERISTICS

Gravity, specific, 0.854 Gravity, ° API, 34.2 Pour point, ° F., below 5
Sulfur, percent, 0.95 Color, green
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent,

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 743 mm Hg
First drop, 158 ° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp gr., 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc., 100° F	Cloud test, ° F
1.	122									
2.	167									
3.	212	2.1	2.1							
4.	257	5.2	7.3	0.727	63.1	-	1.40634	123.5		
5.	302	6.4	13.7	.759	54.9	23	1.42279	138.8		
6.	347	7.5	21.2	.778	50.4	25	1.43325	141.1		
7.	392	4.9	26.1	.794	46.7	27	1.44088	141.7		
8.	437	6.2	32.3	.807	43.8	27	1.44762	139.9		
9.	482	6.4	38.7	.823	40.4	30	1.45582	144.1		
10.	527	7.3	46.0	.838	37.4	32	1.46479	152.0		

STAGE 2—Distillation continued at 40 mm. Hg

11.	392	3.3	49.2	0.850	35.0	34			39	5
12.	437	6.5	55.8	.858	33.4	34			44	20
13.	482	5.2	61.0	.873	30.6	37			57	40
14.	527	5.7	66.7	.884	28.6	40			82	55
15.	572	5.6	72.3	.894	26.8	41			135	70
Residuum		26.7	99.0	.949	17.6					

Carbon residue, Conradson. Residuum 5.7 percent, crude, 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.1	-	-	
Total gasoline and naphtha	26.1	0.762	54.2	
Kerosene distillate	12.6	.815	42.1	
Gas oil	16.7	.848	35.4	
Nonviscous lubricating distillate	10.4	.865-.887	32.1-28.0	50-100
Medium lubricating distillate	6.5	.887-.899	28.0-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.7	.949	17.6	
Distillation loss	1.0			

Item 440
Bureau of Mines Bartlesville Laboratory
Sample 59177

IDENTIFICATION

Keystone (Ellenburger) field
Ellenburger, Cambro-Ordovician
9,879-9,903 feet

Texas
Winkler County

GENERAL CHARACTERISTICS

Gravity, specific, 0.815 Gravity, ° API, 42.1 Pour point, ° F., below 5
Sulfur, percent, 0.13 Color, green
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.042

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 740 mm. Hg
First drop, 84 ° F

Fraction No.	Cut temp ° F	Percent	Sum, percent	Sp gr., 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc., 100° F	Cloud test, ° F
1.	122	2.1	2.1	0.647	87.2					
2.	167	2.7	4.8	.658	83.6	1.8	1.37669	124.0		
3.	212	3.9	8.7	.700	70.6	12	1.39330	129.5		
4.	257	5.4	14.1	.726	63.4	15	1.40674	129.2		
5.	302	4.8	18.9	.745	58.4	17	1.46131	129.3		
6.	347	5.6	24.5	.759	54.9	16	1.42337	135.2		
7.	392	5.5	30.0	.770	52.3	15	1.43028	131.5		
8.	437	5.9	35.9	.784	49.0	16	1.43730	135.0		
9.	482	6.4	42.3	.800	45.4	19	1.44480	133.0		
10.	527	7.8	50.1	.811	43.0	18	1.45187	137.7		

STAGE 2—Distillation continued at 40 mm. Hg

11.	392	4.4	54.5	0.827	39.6	23	1.46062	144.7	39	14
12.	437	8.4	62.9	.833	38.4	22	1.46489	144.8	43	30
13.	482	6.0	68.9	.849	35.2	26	1.47194	154.1	51	40
14.	527	5.1	74.0	.865	32.1	31	1.47996	153.7	69	50
15.	572	5.5	79.5	.876	30.0	33	1.48547	-	105	64
Residuum		19.1	98.6	.917	22.8					

Carbon residue, Conradson: Residuum, 2.3 percent; crude, 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.7	0.674	78.4	
Total gasoline and naphtha	30.0	0.728	62.9	
Kerosene distillate	20.1	.800	45.4	
Gas oil	15.0	.836	37.8	
Nonviscous lubricating distillate	11.0	.847-.874	35.6-30.4	50-100
Medium lubricating distillate	3.4	.874-.881	30.4-29.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.1	.917	22.8	
Distillation loss	1.4			

Bureau of Mines **Item 441**
Bartlesville
Sample 52080 Laboratory

IDENTIFICATION

Keystone (Holt) field
San Angelo, Permian
4,777-4,827 feet

Texas
Winkler County

GENERAL CHARACTERISTICS

Gravity, specific 0.836 Gravity ° API 37.8 Pour point, ° F below 5
Sulfur percent 0.63 Color green
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.6	0.6							
2	167	1.8	2.4	0.657	83.9	-	1.37377	139.6		
3	212	4.0	6.4	.710	67.8	17	1.39654	128.0		
4	257	6.5	12.9	.737	60.5	20	1.41065	134.2		
5	302	6.3	19.2	.757	55.4	22	1.42160	139.8		
6	347	6.6	25.8	.773	51.6	23	1.43050	138.5		
7	392	5.9	31.7	.787	48.3	23	1.43703	144.1		
8	437	6.2	37.9	.801	45.2	24	1.44464	139.5		
9	482	5.6	43.5	.815	42.1	26	1.45256	140.8		
10	527	7.0	50.5	.831	38.8	29	1.46109	149.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	54.1	0.844	36.2	31			39	5
12	437	6.1	60.2	.851	34.8	30			43	25
13	482	5.0	65.2	.864	32.3	33			55	45
14	527	4.9	70.1	.880	29.3	38			77	60
15	572	5.9	76.0	.890	27.5	39			135	75
Residue		23.3	99.3	.944	18.4					

Carbon residue, Conradson Residue 5.1 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.4	0.690	73.6	
Total gasoline and naphtha	31.7	0.748	57.7	
Kerosine distillate	11.8	.808	43.6	
Gas oil	17.1	.842	36.6	
Nonviscous lubricating distillate	9.3	.859-.882	33.2-28.9	50-100
Medium lubricating distillate	6.1	.882-.895	28.9-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	23.3	.944	18.4	
Distillation loss	.7			

Bureau of Mines **Item 442**
Bartlesville
Sample 54129 Laboratory

IDENTIFICATION

KMA field
KMA, Strawn, Pennsylvanian
3,794-3,885 feet

Texas
Wichita County

GENERAL CHARACTERISTICS

Gravity specific 0.825 Gravity ° API 40.0 Pour point ° F below 5
Sulfur percent 0.31 Color dark green
Viscosity, Saybolt Universal at 100° F, 39 sec. Nitrogen percent, 0.068

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.654	84.9					
2	167	2.6	4.3	.664	81.6	4.6	1.37477	121.4		
3	212	5.8	10.1	.714	66.7	18	1.40108	126.3		
4	257	7.8	17.9	.742	59.2	23	1.41053	127.6		
5	302	6.7	24.6	.761	54.4	24	1.42201	133.7		
6	347	6.7	31.3	.780	49.9	26	1.43253	132.9		
7	392	5.6	36.9	.796	46.3	28	1.44140	140.4		
8	437	5.9	42.8	.809	43.4	28	1.44886	142.4		
9	482	5.5	48.3	.822	40.6	29	-	-		
10	527	6.5	54.8	.838	37.4	32	1.46123	152.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.3	59.1	0.851	34.8	34	1.47322	156.7	40	15
12	437	6.1	65.2	.858	33.4	34	1.47752	160.2	46	25
13	482	4.9	70.1	.871	31.0	37	1.48451	163.3	59	45
14	527	4.6	74.7	.885	28.4	40	1.49053	162.8	86	60
15	572	4.8	79.5	.895	26.6	42			150	75
Residue		18.7	98.2	.945	18.2					

Carbon residue, Conradson Residue 6.3 percent crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.1	0.691	73.3	
Total gasoline and naphtha	36.9	0.747	57.9	
Kerosine distillate	11.4	.815	42.1	
Gas oil	15.7	.848	35.4	
Nonviscous lubricating distillate	9.5	.862-.887	32.7-28.0	50-100
Medium lubricating distillate	6.0	.887-.900	28.0-25.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	18.7	.945	18.2	
Distillation loss	1.8			

Bureau of Mines
Sample
Item 443
Bartlesville
61050
Laboratory

IDENTIFICATION

Lake Pasture field
Greta H-440, Oligocene
4,519-4,526 feet

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific 0.912 Gravity, ° API, 23.7 Pour point ° F, below 5
Sulfur percent, 0.20 Color, green
Viscosity, Saybolt Universal at 77°F., 82 sec., at 100°F., 60 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 273 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347	2.8	2.8	0.810	43.2	-	1.44209	129.4		
7	392	3.8	6.6	.835	38.0	46	1.45471	129.7		
8	437	7.3	13.9	.854	34.2	50	1.46539	138.5		
9	482	14.1	28.0	.872	30.8	53	1.47654	139.9		
10	527	17.5	45.5	.888	27.9	56	1.48828	155.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	11.5	57.0	0.905	24.9	60	1.49917	164.8	47	Below 5
12	437	9.5	66.5	.921	22.1	64	1.50698	170.8	65	10
13	482	9.4	75.9	.936	19.7	67	1.51567	169.1	145	30
14	527	5.5	81.4	.958	16.2	75	1.52486	187.9	over 400	40
15	572	6.0	87.4	.968	14.7	76	1.52561	200.1	over 400	55
Residuum		12.1	99.5	1.001	9.9					

Carbon residue, Conradson Residuum 5.3 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	2.8	0.810	43.2	
Kerosene distillate	-	-	-	
Gas oil	50.3	.876	30.0	
Nonviscous lubricating distillate	12.6	.904-.927	25.0-21.1	50 100
Medium lubricating distillate	21.7	.927-.973	21.1-13.9	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	12.1	1.001	9.9	
Distillation loss	.5			

Bureau of Mines
Sample
Item 444
Bartlesville
54143
Laboratory

IDENTIFICATION

Lea field
Ellenburger, Cambro-Ordovician
8,275-8,357 feet

Texas
Crane County

GENERAL CHARACTERISTICS

Gravity, specific 0.821 Gravity, ° API 40.9 Pour point ° F, below 5
Sulfur percent, 0.29 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 40 sec. Nitrogen, percent, 0.047

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.4	3.4	0.631	92.8					
2	167	3.8	7.2	.660	82.9	2.7	1.37281	122.4		
3	212	4.3	11.5	.698	71.2	11	1.39030	125.3		
4	257	5.1	16.6	.720	65.0	12	1.40285	127.2		
5	302	4.9	21.5	.739	60.0	14	1.41324	126.7		
6	347	5.0	26.5	.755	55.9	14	1.42137	128.8		
7	392	6.1	32.6	.769	52.5	15	1.42928	132.2		
8	437	5.9	38.5	.787	48.3	18	1.43860	137.1		
9	482	6.8	45.3	.801	45.2	19	1.44703	140.7		
10	527	6.7	52.0	.814	42.3	21	1.45399	146.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.2	56.2	0.829	39.2	24	1.46128	147.8	38	20
12	437	6.5	62.7	.838	37.4	24	1.46712	149.5	42	30
13	482	5.4	68.1	.860	33.0	31	1.47803	157.7	51	45
14	527	4.3	72.4	.876	30.0	36	1.48873	158.8	70	55
15	572	4.7	77.1	.892	27.1	40	1.49681	-	110	70
Residuum		22.6	99.7	.945	18.2					

Carbon residue, Conradson Residuum 7.2 percent, crude 1.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.5	0.666	81.0	
Total gasoline and naphtha	32.6	0.718	65.6	
Kerosene distillate	19.4	.801	45.2	
Gas oil	12.8	.841	36.8	
Nonviscous lubricating distillate	8.9	.857-.888	33.6-27.9	50 100
Medium lubricating distillate	3.4	.888-.900	27.9-25.9	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.6	.945	18.2	
Distillation loss	.3			

Bureau of Mines Sample
 Item 445
 Bartlesville
 59139
 Laboratory

IDENTIFICATION

Levelland field
 San Andres, Permian
 4,707-4,818 feet

Texas
 Hockley County

GENERAL CHARACTERISTICS

Gravity, specific 0.870 Gravity, ° API 31.1 -- -- Pour point ° F below 5
 Sulfur percent 2.12 Color, greenish black
 Viscosity, Saybolt Universal at 100° F., 48 sec., Nitrogen percent, 0.136

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
 First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc, 100° F	Cloud test ° F
1	122	1.8	1.8	0.666	81.0					
2	167	3.0	4.8	.698	71.2	21	1.39151	143.3		
3	212	4.9	9.7	.745	58.4	33	1.41654	152.6		
4	257	6.4	16.1	.766	53.2	34	1.42751	152.9		
5	302	5.5	21.6	.779	50.1	33	1.43514	152.6		
6	347	4.8	26.4	.790	47.6	31	1.44006	149.1		
7	392	4.6	31.0	.801	45.2	30	1.44560	145.2		
8	437	4.2	35.2	.814	42.3	31	1.45277	148.5		
9	482	4.9	40.1	.832	38.6	34	1.46244	152.8		
10	527	5.2	45.3	.851	34.8	38	1.47189	160.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	48.6	0.866	31.9	45	1.48309	168.1	40	20
12	437	5.1	53.7	.876	30.0	42	1.48761	171.7	46	36
13	482	5.6	59.3	.894	26.8	47	1.49492	173.0	58	50
14	527	5.2	64.5	.908	24.3	51			89	70
15	572	5.6	70.1	.918	22.6	-			175	90
Residuum		28.3	98.4	.997	10.4					

Carbon residue, Conradson Residuum 8.6 percent crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.7	0.716	66.1	
Total gasoline and naphtha	31.0	0.762	54.2	
Kerosene distillate	4.2	.814	42.3	
Gas oil	17.8	.855	34.0	
Nonviscous lubricating distillate	9.6	.882-.910	28.9-24.0	50-100
Medium lubricating distillate	6.4	.910-.921	24.0-22.1	100-200
Viscous lubricating distillate	1.1	.921-.923	22.1-21.8	Above 200
Residuum	28.3	.997	10.4	
Distillation loss	1.6			

/ Distillation discontinued at 567° F

Bureau of Mines Sample
 Item 446
 Bartlesville
 63150
 Laboratory

IDENTIFICATION

Liberty, South field
 Yegua 7, Eocene
 9,352-9,390 feet

Texas
 Liberty County

GENERAL CHARACTERISTICS

Gravity specific 0.836 Gravity ° API 37.8 Pour point ° F 5
 Sulfur percent 0.14 Color, greenish black
 Viscosity, Saybolt Universal at 100° F., 44 sec., Nitrogen percent, 0.044

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
 First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc, 100° F	Cloud test ° F
1	122	1.6	1.6	0.647	87.2					
2	167	3.1	4.7	.676	77.8	10	1.38014	127.4		
3	212	4.8	9.5	.719	65.3	21	1.40150	131.6		
4	257	7.7	17.2	.745	58.4	24	1.41487	136.3		
5	302	5.9	23.1	.764	53.7	26	1.42596	141.5		
6	347	6.1	29.2	.781	49.7	27	1.43468	138.9		
7	392	3.9	33.1	.794	46.7	27	1.44095	140.0		
8	437	5.0	38.1	.807	43.8	27	1.44764	139.7		
9	482	5.4	43.5	.821	40.9	29	1.45552	144.1		
10	527	5.3	48.8	.835	38.0	31	1.46289	148.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.8	53.6	0.850	35.0	34	1.46919	147.9	41	10
12	437	5.6	59.2	.860	33.0	35	1.47275	148.3	47	30
13	482	6.0	65.2	.867	31.7	35	1.47849	146.0	63	55
14	527	5.0	70.2	.880	29.3	38			89	70
15	572									
Residuum		27.7	97.9	.942	18.7					

Carbon residue, Conradson Residuum 6.3 percent crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.5	0.693	72.7	
Total gasoline and naphtha	33.1	0.746	58.2	
Kerosene distillate	10.4	.814	42.3	
Gas oil	14.0	.847	35.6	
Nonviscous lubricating distillate	12.5	.861-.886	32.8-28.3	50-100
Medium lubricating distillate	.2	.886-.887	28.3-28.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.7	.942	18.7	
Distillation loss	2.1			

/ Distillation discontinued at 516° F.

Bureau of Mines **Item 447**
Bartlesville
 Sample **58133** Laboratory

IDENTIFICATION

Lolita field
 Marginulina, Frio, Oligocene

Texas
 Jackson County

GENERAL CHARACTERISTICS

Gravity, specific, **0.893** Gravity, ° API, **27.0** Pour point, ° F., **below 5**
 Sulfur, percent, **0.17** Color, **green**
 Viscosity, Saybolt Universal at 77°F., **71 sec.**; at 100°F., **55 sec.** Nitrogen, percent, **0.043**

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, **750** mm Hg
 First drop **189** ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. Visc 100° F	Cloud test, ° F
1	122									
2	167									
3	212	0.7	0.7	0.735	61.0		1.40393	122.3		
4	257	.7	1.4	.740	59.7	22	1.41511	124.2		
5	302	1.9	3.3	.783	49.2	35	1.42782	123.1		
6	347	2.9	6.2	.803	44.7	37	1.44101	129.4		
7	392	5.3	11.5	.826	39.8	42	1.45241	133.0		
8	437	7.1	18.6	.846	35.8	46	1.46294	138.2		
9	482	11.9	30.5	.866	31.9	50	1.47253	155.3		
10	527	15.0	45.5	.883	28.8	53	1.48547	155.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.1	50.6	0.894	26.8	55	1.49394	162.0	45	Below 5
12	437	8.3	58.9	.899	25.9	53	1.49727	161.2	52	do.
13	482	7.9	66.8	.912	23.7	56	1.50269	168.1	73	do.
14	527	6.3	73.1	.925	21.5	59	1.50905		145	do.
15	572	7.9	81.0	.937	19.5	62			over 400	do.
Residuum		18.0	99.0	.959	16.0					

Carbon residue, Conradson. Residuum, **3.7** percent; crude, **0.7** percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	0.7	0.735	61.0	
Total gasoline and naphtha	6.2	0.782	49.5	
Kerosine distillate				
Gas oil	46.7	.868	31.5	
Nonviscous lubricating distillate	14.8	.897-.921	27.1-22.1	50-100
Medium lubricating distillate	3.9	.921-.927	22.1-21.1	100-200
Viscous lubricating distillate	9.4	.927-.943	21.1-18.6	Above 200
Residuum	18.0	.959	16.0	
Distillation loss	1.0			

Bureau of Mines **Item 448**
Bartlesville
 Sample **54122** Laboratory

IDENTIFICATION

Luling-Branyon field
 Edwards, Lower Cretaceous
 2,100-2,200 feet

Texas
 Caldwell County

GENERAL CHARACTERISTICS

Gravity, specific, **0.884** Gravity, ° API, **28.6** Pour point, ° F., **below 5**
 Sulfur, percent, **0.86** Color, **greenish black**
 Viscosity, Saybolt Universal at 77°F., **135 sec.**; at 100°F., **90 sec.** Nitrogen, percent, **0.110**

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, **754** mm Hg
 First drop, **172** ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. Visc 100° F	Cloud test, ° F
1	122									
2	167									
3	212	0.7	0.7	0.727	63.1					
4	257	1.7	2.4	.733	61.5	18				
5	302	3.1	5.5	.761	54.4	24	1.41280	122.1		
6	347	3.4	8.9	.782	49.5	27	1.42976	124.2		
7	392	3.8	12.7	.801	45.2	30	1.43967	125.7		
8	437	4.8	17.5	.819	41.3	33	1.44933	129.3		
9	482	6.6	24.1	.833	38.4	34	1.45788	133.8		
10	527	7.4	31.5	.847	35.6	36	1.46611	143.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.8	36.3	0.861	32.8	39	1.47545	148.2	41	Below 5
12	437	7.1	43.4	.869	31.3	39	1.47998	150.5	47	do.
13	482	8.0	51.4	.883	28.8	42	1.48818	153.0	59	5
14	527	6.5	57.9	.896	26.4	45	1.49478	154.1	96	15
15	572	6.7	64.6	.907	24.5	47	1.49861	150.2	170	25
Residuum		35.4	100.0	.947	17.9					

Carbon residue, Conradson. Residuum, **6.6** percent; crude, **2.5** percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	0.7	0.727	63.1	
Total gasoline and naphtha	12.7	0.773	51.6	
Kerosine distillate	4.8	.819	41.3	
Gas oil	24.4	.851	34.8	
Nonviscous lubricating distillate	13.2	.872-.897	30.8-26.3	50-100
Medium lubricating distillate	9.0	.897-.911	26.3-23.8	100-200
Viscous lubricating distillate	.5	.911-.912	23.8-23.7	Above 200
Residuum	35.4	.947	17.9	
Distillation loss	.0			

Bureau of Mines
Sample Item 449
Bartlesville
48034

Laboratory

IDENTIFICATION

Mabee field
Permian
4,654-4,700 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity specific 0.866 Gravity, ° API 31.9 Pour point ° F below 5
Sulfur percent 2.19 Color greenish black
Viscosity, Saybolt Universal at 100° F., 47 sec. Nitrogen percent -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum p rec t	Sp gr 60/60° F	° API (0° F)	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	2.6	2.6	0.639	89.9					
2	167	2.6	5.2	.666	81.0	5.6	1.37495	128.4		
3	212	4.5	9.7	.715	66.4	19	1.39879	132.8		
4	257	5.7	15.4	.748	57.7	26	1.41635	140.2		
5	302	5.6	21.0	.773	51.6	30	1.43015	149.4		
6	347	4.7	25.7	.789	47.8	31	1.43895	149.8		
7	392	4.3	30.0	.800	45.4	30	1.44475	147.5		
8	437	4.2	34.2	.813	42.6	30	1.45166	148.2		
9	482	5.0	39.2	.829	39.2	32	1.46028	152.2		
10	527	5.8	45.0	.849	35.2	37	1.47208	162.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum p rec t	Sp gr 60/60° F	° API (0° F)	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
11	392	2.2	47.2	0.870	31.1	43			41	15
12	437	5.8	53.0	.879	29.5	44			45	30
13	482	5.1	58.1	.896	26.4	48			56	50
14	527	4.8	62.9	.909	24.2	51			82	70
15	572	5.7	68.6	.918	22.6	53			150	85
Residuum		29.3	97.9	0.993	11.0					

Carbon residue, Conradson Residuum 12.5 percent crude 4.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.7	0.681	76.3	
Total gasoline and naphtha	30.0	0.745	58.4	
Kerosene distillate	4.2	.813	42.6	
Gas oil	18.4	.856	33.8	
Nonviscous lubricating distillate	9.3	.887-.911	28.0-23.8	50-100
Medium lubricating distillate	6.7	.911-.923	23.8-21.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.3	.993	11.0	
Distillation loss	2.1			

Bureau of Mines
Sample Item 450
Bartlesville
55062

Laboratory

IDENTIFICATION

Magnet-Withers field
Frio, Oligocene
5,535-5,547 feet

Texas
Wharton County

GENERAL CHARACTERISTICS

Gravity specific 0.903 Gravity, ° API 25.2 Pour point ° F below 5
Sulfur percent 0.19 Color brownish green
Viscosity, Saybolt Universal at 77° F, 83 sec., at 100° F., 62 sec. Nitrogen percent 0.033

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 219 ° F

Fraction No	Cut temp ° F	Percent	Sum p rec t	Sp gr 60/60° F	° API (0° F)	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	0.2	0.2							
5	302	1.0	1.2							
6	347	1.7	2.9	0.796	46.3	-	1.43485	126.5		
7	392	3.0	5.9	.834	38.2	46	1.45506	137.3		
8	437	6.6	12.5	.855	34.0	50	1.46790	145.3		
9	482	12.8	25.3	.875	30.2	54	1.48003	158.0		
10	527	17.3	42.6	.893	27.0	58	1.49333	169.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum p rec t	Sp gr 60/60° F	° API (0° F)	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
11	392	9.7	52.3	0.906	24.7	60	1.49994	172.5	45	Below 5
12	437	8.6	60.9	.914	23.3	60	1.50205	170.5	57	do.
13	482	5.8	66.7	.920	22.3	60	1.50515	168.4	85	do.
14	527	5.3	72.0	.924	21.6	58			150	do.
15	572	7.4	79.4	.933	20.2	60			400	do.
Residuum		20.4	99.8	.943	18.6					

Carbon residue, Conradson Residuum 2.9 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	2.9	0.796	46.3	
Kerosene distillate	-	-	-	
Gas oil	48.5	.882	28.9	
Nonviscous lubricating distillate	13.7	.909-.921	24.2-22.1	50-100
Medium lubricating distillate	5.6	.921-.926	22.1-21.3	100-200
Viscous lubricating distillate	8.7	.926-.938	21.3-19.4	Above 200
Residuum	20.4	.943	18.6	
Distillation loss	.2			

Bureau of Mines
Sample
Item 451
Bartlesville
54146
Laboratory

IDENTIFICATION

Magutex field
Devonian

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.824 Gravity, ° API 40.2 Pour point, ° F below 5
Sulfur percent 0.30 Color greenish black
Viscosity Saybolt Universal at 100° F., 38 sec. Nitrogen percent, 0.054

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 739 mm Hg
First drop 86 ° F

Fraction No.	Cut temp ° F	Percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	0.639	89.9					
2	147	4.0	.676	77.8	10	1.37422	124.5		
3	212	6.0	.715	66.4	19	1.39959	131.4		
4	237	7.8	.742	59.2	23	1.41426	135.0		
5	262	6.4	.762	54.2	25	1.42472	137.7		
6	317	6.9	.780	49.9	26	1.43508	140.6		
7	332	5.7	.796	46.3	28	1.44282	140.0		
8	437	5.1	.807	43.8	27	1.44962	140.8		
9	482	5.9	.820	41.1	28	1.45692	145.5		
10	527	6.3	.833	38.4	30	1.46390	154.0		

Fraction No.	Cut temp ° F	Percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	332	4.9	0.845	36.0	31	1.47043	155.1	40	15
12	337	4.6	.851	34.8	30	1.47397	154.1	46	35
13	482	5.3	.862	32.7	32	1.47988	152.9	56	50
14	27	4.9	.874	30.4	35	1.48511	-	76	70
15	7	5.4	.883	28.8	36			125	85
Residue	18.9	99.8	.929	20.8					

Carbon residue, Conradson Residue 4.3 percent, crude 0.9 percent

APPROXIMATE SUMMARY

Light gasoline	Percent	Sp gr	° API	Viscosity
Light gasoline	11.7	0.691	73.3	
Total gasoline and naphtha	38.5	0.745	58.4	
Kerosene distillate	11.0	.814	42.3	
Gas oil	15.6	.842	36.6	
Non-viscous lubricating distillate	10.6	.855-.878	34.0-29.7	50-100
Medium lubricating distillate	5.2	.878-.887	29.7-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	18.9	.929	20.8	
Distillation loss	2.2			

Bureau of Mines
Sample
Item 452
Bartlesville
62070
Laboratory

IDENTIFICATION

Manvel field
Oligocene
5,115-5,135 feet

Texas
Brazoria County

GENERAL CHARACTERISTICS

Gravity, specific 0.892 Gravity, ° API 27.1 Pour point, ° F below 5
Sulfur percent, 0.16 Color, greenish black
Viscosity, Saybolt Universal at 77° F., 103 sec., at 100° F., 76 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 250 ° F

Fraction No.	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	267									
5	302	1.3	1.3	0.778	50.4	-	1.42279	130.6		
6	347	2.7	4.0	.796	46.3	34	1.43347	134.1		
7	392	3.6	7.6	.822	40.3	40	1.45201	141.2		
8	437	5.9	13.5	.842	36.6	44	1.46393	144.9		
9	482	8.1	21.6	.863	32.5	49	1.47514	153.3		
10	527	12.4	34.0	.878	29.7	51	1.48511	162.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No.	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	6.5	40.5	0.891	27.3	53	1.49241	162.2	45	Below 5
12	437	8.2	48.7	.899	25.9	53	1.49379	162.8	57	do.
13	482	7.6	56.3	.905	24.9	53	1.49652	155.9	86	do.
14	527	7.7	64.0	.912	23.7	53	1.50002	154.2	180	do.
15	572	8.9	72.9	.919	22.5	53			over 400	do.
Residue		24.4	97.3	.934	20.0					

Carbon residue, Conradson Residue 2.6 percent, crude 0.7 percent

APPROXIMATE SUMMARY

Light gasoline	Percent	Sp gr	° API	Viscosity
Light gasoline	7.6	0.805	44.3	
Total gasoline and naphtha	-	-	-	
Kerosene distillate	32.8	.870	31.1	
Gas oil	13.3	.894-.906	26.8-24.7	50-100
Non-viscous lubricating distillate	7.2	.906-.913	24.7-23.5	100-200
Medium lubricating distillate	12.0	.913-.923	23.5-21.8	Above 200
Viscous lubricating distillate	24.4	.934	20.0	
Residue	2.7			
Distillation loss				

Item 453
Bureau of Mines Bartlesville Laboratory
Sample 49023

IDENTIFICATION

Markham, North field
Frio, Oligocene
7,700 feet

Texas
Matagorda County

GENERAL CHARACTERISTICS

Gravity, specific, 0.851 Gravity, ° API, 34.8 -- Pour point, ° F, 35
Sulfur, percent, 0.11 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 42 sec. -- Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 129 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U vac 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.8	1.8	0.731	62.1	-	1.40735	135.8		
4	257	2.5	4.3	.758	55.2	30	1.42233	145.1		
5	302	2.7	7.0	.775	51.1	31	1.43334	151.6		
6	347	3.3	10.3	.787	48.3	30	1.44046	151.2		
7	392	4.2	14.5	.801	45.2	30	1.44603	148.3		
8	437	6.2	20.7	.813	42.6	30	1.45280	149.9		
9	482	11.7	32.4	.828	39.4	32	1.46085	152.5		
10	527	15.9	48.3	.841	36.8	33	1.46781	154.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	8.6	56.9	0.850	35.0	34			41	25
12	437	11.1	68.0	.856	33.8	33			45	40
13	482	7.2	75.2	.869	31.3	36			57	55
14	527	6.4	81.6	.881	29.1	38			85	70
15	572	5.9	87.5	.894	26.8	41			160	90
Residuum		12.3	99.8	.938	19.4					

Carbon residue, Conradson Residuum 3.4 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.8	0.731	62.3	
Total gasoline and naphtha	14.5	0.777	50.6	
Kerosine distillate	6.2	.813	42.6	
Gas oil	45.8	.843	36.4	
Nonviscous lubricating distillate	13.2	.863-.883	32.5-28.8	50-100
Medium lubricating distillate	7.8	.883-.900	28.8-25.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	12.3	.938	19.4	
Distillation loss	.2			

Item 454
Bureau of Mines Bartlesville Laboratory
Sample 63111

IDENTIFICATION

Martin field
Ellenburger, Cambro-Ordovician
8,900-9,050 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.813 Gravity, ° API, 42.5 Pour point, ° F, below 5
Sulfur, percent, 0.32 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 39 sec. -- Nitrogen, percent, 0.040

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 729 mm. Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U vac 100° F	Cloud test ° F
1	122	4.0	4.0	0.632	92.4					
2	167	3.3	7.3	.658	83.5	1.8	1.37297	123.7		
3	212	4.6	11.9	.699	70.9	11	1.39172	128.5		
4	257	5.6	17.5	.723	64.2	14	1.40475	133.9		
5	302	5.3	22.8	.739	60.0	14	1.41511	137.4		
6	347	5.2	28.0	.756	55.7	15	1.42291	136.7		
7	392	4.9	32.9	.768	52.7	14	1.42962	135.5		
8	437	5.8	38.7	.784	49.0	16	1.43755	139.9		
9	482	6.1	44.8	.799	45.6	18	1.44571	141.3		
10	527	5.2	50.0	.810	43.2	19	1.45187	145.8		

1/

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.5	55.5	0.832	38.6	25	1.45870	147.1	39	25
12	437	6.7	62.2	.840	37.0	25	1.46518	150.1	45	30
13	482	4.8	67.0	.857	33.6	30	1.47746	161.9	54	45
14	527	4.0	71.0	.876	30.0	36	1.48793	-	75	60
15	572	3.9	74.9	.887	28.0	38			125	80
Residuum		21.5	96.4	.951	17.3					

Carbon residue, Conradson Residuum 9.0 percent, crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.9	0.665	81.2	
Total gasoline and naphtha	32.9	0.717	66.0	
Kerosine distillate	17.1	.797	46.0	
Gas oil	12.1	.837	37.6	
Nonviscous lubricating distillate	8.9	.849-.882	35.1-29.0	50-100
Medium lubricating distillate	3.9	.882-.892	29.0-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.5	.951	17.3	
Distillation loss	3.6			

1/ Distillation discontinued at 518° F.

Item 455
Bureau of Mines Bartlesville
Sample 54162 Laboratory

IDENTIFICATION

Mary Ellen O'Connor field
Frio FQ-40, Oligocene
5,913-5,920 feet
Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific 0.834 Gravity, ° API 38.2 Pour point, ° F below 5
Sulfur percent 0.16 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, 0.038

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 751 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.5	1.5	0.650	86.2					
2	167	2.6	4.1	.675	78.1	9.8	1.37591	130.0		
3	212	6.7	10.8	.723	64.2	23	1.40144	127.8		
4	257	7.2	18.0	.750	57.2	27	1.41607	128.0		
5	302	6.1	24.1	.771	52.0	29	1.42814	136.5		
6	347	6.2	30.3	.790	47.6	31	1.43800	138.2		
7	392	6.5	36.8	.805	44.3	32	1.44554	139.2		
8	437	7.1	43.9	.816	41.9	32	1.45206	139.7		
9	482	10.4	54.3	.835	38.0	35	1.46139	144.5		
10	527	12.4	66.7	.856	33.8	41	1.47332	151.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.1	73.8	0.874	30.4	45	1.48344	152.8	43	20
12	437	5.8	79.6	.882	28.9	45	1.48783	158.9	50	35
13	482	4.8	84.4	.899	25.9	50	1.49676	158.8	70	50
14	527	4.2	88.6	.917	22.8	55	1.51027	-	150	65
15	572	5.0	93.6	.961	15.7	73			over 400	80
Residuum		6.2	99.8	.997	10.4					

Carbon residue, Conradson Residuum 6.3 percent, crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.8	0.701	70.4	
Total gasoline and naphtha	36.8	0.756	55.7	
Kerosene distillate	7.1	.816	41.9	
Gas oil	32.8	.855	34.0	
Nonviscous lubricating distillate	7.0	.882-.905	28.9-24.9	50-100
Medium lubricating distillate	5.6	.905-.944	24.9-18.4	100-200
Viscous lubricating distillate	4.3	.944-.988	18.4-11.7	Above 200
Residuum	6.2	.997	10.4	
Distillation loss	.2			

Item 456
Bureau of Mines Bartlesville
Sample 54176 Laboratory

IDENTIFICATION

McCaney field
Grayburg, Permian
2,100 feet
Texas
Upton County

GENERAL CHARACTERISTICS

Gravity, specific 0.898 Gravity, ° API 26.1 Pour point, ° F 15
Sulfur, percent, 2.26 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 155 sec., at 100° F., 93 sec. Nitrogen, percent, 0.139

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.4	0.4							
2	167	1.2	1.6							
3	212	1.3	2.9	0.684	75.4	-	1.39762	128.9		
4	257	2.9	5.8	.737	60.5	20	1.40927	121.6		
5	302	3.6	9.4	.763	54.0	25	1.42271	125.7		
6	347	3.8	13.2	.785	48.8	29	1.43410	132.9		
7	392	4.2	17.4	.802	44.9	31	1.44467	139.0		
8	437	3.6	21.0	.823	40.4	35	1.45365	144.6		
9	482	5.5	26.5	.838	37.4	37	1.46317	145.2		
10	527	7.0	33.5	.857	33.6	41	1.47372	153.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	37.2	0.883	28.8	49	1.48464	158.5	43	Below 5
12	437	6.7	43.9	.890	27.5	49	1.48987	164.8	49	do.
13	482	5.8	49.7	.906	24.7	53	1.49846	174.9	70	do.
14	527	5.5	55.2	.918	22.6	56			120	do.
15	572	7.0	62.2	.924	21.6	55			250	do.
Residuum		37.1	99.3	.981	12.7					

Carbon residue, Conradson Residuum 11.5 percent, crude 4.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.684	75.4	
Total gasoline and naphtha	17.4	0.760	54.7	
Kerosene distillate	3.6	.823	40.4	
Gas oil	20.1	.863	32.5	
Nonviscous lubricating distillate	9.2	.891-.914	27.3-25.3	50-100
Medium lubricating distillate	6.1	.914-.923	25.3-21.8	100-200
Viscous lubricating distillate	5.8	.923-.930	21.8-20.7	Above 200
Residuum	37.1	.981	12.7	
Distillation loss	.7			

Bureau of Mines Item 457
Sample Bartlesville
 58030 Laboratory

IDENTIFICATION

McElroy field
Grayburg, Permian
2,750-3,050 feet

Texas
Crane and Upton
Counties

GENERAL CHARACTERISTICS

Gravity, specific 0.868 Gravity ° API, 31.5 Pour point, ° F, 20
Sulfur, percent, 2.37 Color, brownish green
Viscosity, Saybolt Universal at 77°F, 62 sec. at 100°F, 53 sec. Nitrogen, percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.645	87.9					
2	167	1.8	3.8	.667	80.6	6.1				
3	212	3.3	7.1	.715	66.4	19	1.38530	127.4		
4	257	4.6	11.7	.745	58.4	24	1.41297	129.7		
5	302	5.0	16.7	.769	52.5	28	1.42707	137.0		
6	347	4.0	20.7	.788	48.1	30	1.43646	139.9		
7	392	4.0	24.7	.804	44.5	32	1.44485	139.9		
8	437	4.4	29.1	.816	41.9	32	1.45247	140.8		
9	482	5.1	34.2	.829	39.2	32	1.45984	147.5		
10	527	7.1	41.3	.846	35.8	36	1.46943	157.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	44.7	0.860	33.0	38	1.47986	163.3	41	20
12	437	6.4	51.1	.876	30.0	42	1.48395	166.9	47	40
13	482	6.6	57.7	.886	28.2	44	1.49246	174.9	62	54
14	527	4.9	62.6	.899	25.9	47			95	70
15	572	6.2	68.8	.911	23.8	49			175	90
Residuum		29.6	98.4	.977	13.3					

Carbon residue, Conradson Residuum 10.5 percent crude 3.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.1	0.683	75.7	
Total gasoline and naphtha	24.7	0.749	57.4	
Kerosene distillate	4.4	.816	41.9	
Gas oil	20.2	.850	35.0	
Nonviscous lubricating distillate	11.3	.878-.890	29.7-27.5	50 100
Medium lubricating distillate	7.1	.890-.915	27.5-23.1	100 200
Viscous lubricating distillate	1.1	.915-.917	23.1-22.8	Above 200
Residuum	29.6	.977	13.3	
Distillation loss	1.6			

Bureau of Mines Item 458
Sample Bartlesville
 62187 Laboratory

IDENTIFICATION

McFaddin, North field
6,000' Frio, Oligocene
5,972 feet

Texas
Victoria County

GENERAL CHARACTERISTICS

Gravity, specific 0.817 Gravity ° API 41.7 Pour point ° F below 5
Sulfur, percent 0.14 Color green
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen, percent, 0.017

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.654	84.9					
2	167	3.2	4.6	.680	76.6	12	1.38088	127.9		
3	212	7.9	12.5	.726	63.4	24	1.40360	128.8		
4	257	9.6	22.1	.752	56.7	27	1.41744	134.8		
5	302	8.5	30.6	.774	51.3	30	1.43053	144.9		
6	347	7.2	37.8	.794	46.7	33	1.44132	146.8		
7	392	6.7	44.5	.805	44.3	32	1.44869	146.9		
8	437	6.9	51.4	.823	40.4	35	1.45573	145.9		
9	482	8.9	60.3	.842	36.6	39	1.46491	147.5		
10	527	11.1	71.4	.859	33.2	42	1.47462	152.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.0	76.4	0.871	31.0	44	1.48070	156.1	44	Below 5
12	437	5.8	82.2	.881	29.1	45	1.48365	155.3	53	10
13	482	3.9	86.1	.891	27.3	46	1.49275	-	77	35
14	527	3.1	89.2	.913	23.5	53	1.50226	-	155	50
15	572	1.2	90.4	.926	21.3	56			295	60
Residuum		7.3	97.7	.967	14.8					

Carbon residue, Conradson Residuum 1.4 percent crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.5	0.706	68.9	
Total gasoline and naphtha	44.5	0.758	55.2	
Kerosene distillate	6.9	.823	40.4	
Gas oil	26.1	.856	33.8	
Nonviscous lubricating distillate	7.7	.878-.897	29.7-26.2	50 100
Medium lubricating distillate	3.1	.897-.917	26.2-22.8	100 200
Viscous lubricating distillate	2.1	.917-.930	22.8-20.7	Above 200
Residuum	7.3	.967	14.8	
Distillation loss	2.3			

1/ Distillation discontinued at 543° F.

Item 459
Bureau of Mines Bartlesville Laboratory
Sample 56061

IDENTIFICATION

McFarland field
Queen, Permian
4,680 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, .0.870 Gravity, ° API, 31.1 Pour point, ° F., below 5
Sulfur, percent, 1.38 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 79 sec.; at 100°F., 61 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 745 mm Hg
First drop, 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc 100° F	Cloud test, ° F
1	122	2.2	2.2	0.643	88.6	12	1.38156	125.9		
2	167	4.5	6.7	.680	76.6	22	1.40366	127.9		
3	212	2.5	9.2	.722	64.5	21	1.41221	133.9		
4	257	5.2	14.4	.739	60.0	25	1.42452	137.2		
5	302	5.8	20.2	.762	54.2	26	1.43358	138.2		
6	347	4.4	24.6	.779	50.1	25	1.44076	140.4		
7	392	4.2	28.8	.791	47.4	26	1.44789	141.2		
8	437	4.6	33.4	.805	44.3	28	1.45660	148.2		
9	482	4.9	38.3	.819	41.3	32	1.46645	155.2		
10	527	6.2	44.5	.837	37.6					

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	47.5	0.852	34.6	35	1.47420	160.8	40	25
12	437	4.7	52.2	.864	32.3	37	1.47834	161.0	45	45
13	482	5.0	57.2	.878	29.7	40	1.48550	167.7	57	55
14	527	3.8	61.0	.895	26.6	45	1.49278	163.5	78	70
15	572	4.9	65.9	.897	26.3	43			135	80
Residuum		32.5	98.4	1.009	8.7					

Carbon residue, Conradson Residuum, 5.1 percent, crude, 1.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.2	0.683	75.7	
Total gasoline and naphtha	28.8	0.739	60.0	
Kerosene distillate	9.5	.812	42.8	
Gas oil	13.8	.849	35.2	
Nonviscous lubricating distillate	8.7	.870-.896	31.1-26.4	50-100
Medium lubricating distillate	5.1	.896-.898	26.4-26.1	100-200
Viscous lubricating distillate				Above 200
Residuum	32.5	1.009	8.7	
Distillation loss	1.6			

Item 460
Bureau of Mines Bartlesville Laboratory
Sample 54148

IDENTIFICATION

Means field
Grayburg, Permian
4,439-4,535 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.876 Gravity, ° API, 30.0 Pour point, ° F., 25
Sulfur, percent, 2.40 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 73 sec.; at 100°F., 54 sec. Nitrogen, percent, 0.145

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 738 mm Hg
First drop, 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc 100° F	Cloud test, ° F
1	122	1.6	1.6	0.639	89.9	11	1.38307	123.3		
2	167	2.6	4.2	.678	77.2	24	1.40452	127.2		
3	212	4.8	9.0	.725	62.7	29	1.41946	140.5		
4	257	6.1	15.1	.753	55.9	30	1.43153	144.3		
5	302	5.6	20.7	.774	51.3	30	1.43880	145.9		
6	347	4.7	25.4	.788	48.1	30	1.44496	144.5		
7	392	4.3	29.7	.800	45.4	31	1.45181	144.1		
8	437	4.3	34.0	.814	42.3	33	1.46115	147.9		
9	482	4.7	38.7	.831	38.8	38	1.47228	159.9		
10	527	6.3	45.0	.851	34.8					

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	48.3	0.871	31.0	44	1.48342	163.9	40	15
12	437	4.5	52.8	.882	28.9	45	1.48836	168.7	45	40
13	482	5.3	58.1	.896	26.4	48	1.49715	172.3	58	55
14	527	4.3	62.4	.911	23.8	52	1.50416	-	85	65
15	572	5.8	68.2	.920	22.3	54			150	80
Residuum		30.9	99.1	1.001	9.9					

Carbon residue, Conradson Residuum, 8.5 percent; crude, 3.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	9.0	0.696	71.8	
Total gasoline and naphtha	29.7	0.752	56.7	
Kerosene distillate	4.3	.814	42.3	
Gas oil	18.6	.857	33.6	
Nonviscous lubricating distillate	8.8	.887-.913	28.0-23.5	50-100
Medium lubricating distillate	6.8	.913-.925	23.5-21.5	100-200
Viscous lubricating distillate				Above 200
Residuum	30.9	1.001	9.9	
Distillation loss	.9			

Item 461
Bureau of Mines Bartlesville
Sample 61141 Laboratory

IDENTIFICATION

Means field
Queen, Permian
3,987-4,031 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.847 Gravity, ° API, 35.6 Pour point, ° F, below 5
Sulfur, percent, 1.11 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen, percent, 0.06

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 738 mm. Hg
First drop 84° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vis. 100° F	Cloud test ° F
1	122	3.0	3.0	0.673	78.8					
2	167	2.8	5.8	.674	78.4	9.4	1.38058	123.0		
3	212	4.9	10.7	.716	66.1	19	1.39920	131.2		
4	257	5.3	16.0	.739	60.0	21	1.41135	135.8		
5	302	5.6	21.6	.759	54.9	23	1.42267	140.9		
6	347	5.0	26.6	.774	51.3	23	1.43167	142.5		
7	392	4.7	31.3	.789	47.8	24	1.43885	143.7		
8	437	4.9	36.2	.803	44.7	25	1.44615	143.6		
9	482	5.3	41.5	.817	41.7	27	1.45476	148.0		
10	527	6.2	47.7	.835	38.0	31	1.46428	155.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	0.9	48.6	0.853	34.4	35	1.47342	158.5	40	35
12	437	5.2	53.8	.860	33.0	35	1.47628	158.5	44	40
13	482	5.3	59.1	.871	31.0	37	1.48324	164.6	55	55
14	527	4.7	63.8	.885	28.4	40	1.49048	168.6	77	75
15	572	5.4	69.2	.896	26.4	42			135	95
Residuum		28.5	97.7	.973	13.9					

Carbon residue, Conradson Residuum 11.8 percent, crude 3.9 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.7	0.693	72.7	
Total gasoline and naphtha	31.3	0.740	59.7	
Kerosene distillate	10.2	.810	43.2	
Gas oil	12.6	.847	35.6	
Nonviscous lubricating distillate	9.4	.866-.889	31.9-27.7	50-100
Medium lubricating distillate	5.7	.889-.902	27.7-25.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	28.5	.973	13.9	
Distillation loss	2.3			

Item 462
Bureau of Mines Bartlesville
Sample 55064 Laboratory

IDENTIFICATION

Merchant field
Yegua EY-1B, Eocene
9,080-9,090 feet

Texas
Liberty County

GENERAL CHARACTERISTICS

Gravity, specific, 0.880 Gravity, ° API, 29.3 Pour point, ° F, below 5
Sulfur, percent, 0.36 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 150 sec., at 100° F., 105 sec. Nitrogen, percent, 0.107

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 86° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vis. 100° F	Cloud test ° F
1	122	0.7	0.7							
2	167	.9	1.6							
3	212	1.9	3.5	0.687	74.5	-	1.39983	131.2		
4	257	2.4	5.9	.744	58.7	24	1.41499	132.4		
5	302	2.6	8.5	.767	53.0	27	1.42501	132.2		
6	347	2.7	11.2	.787	48.3	30	1.43454	131.5		
7	392	3.2	14.4	.803	44.7	31	1.44346	133.7		
8	437	3.3	17.7	.818	41.5	33	1.45083	133.8		
9	482	3.9	21.6	.828	39.4	32	1.45670	135.9		
10	527	7.7	29.3	.840	37.0	33	1.46262	141.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.2	35.5	0.856	33.8	37	1.47022	138.3	43	Below 5
12	437	6.8	42.3	.865	32.1	37	1.47522	138.1	52	do
13	482	6.7	49.0	.878	29.7	40	1.48251	141.0	76	10
14	527	6.2	55.2	.890	27.5	42			130	20
15	572	5.8	61.0	.902	25.4	45			270	30
Residuum		37.3	98.3	.956	16.5					

Carbon residue, Conradson Residuum 8.2 percent, crude 3.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.5	0.687	74.5	
Total gasoline and naphtha	14.4	0.755	55.9	
Kerosene distillate	3.3	.818	41.5	
Gas oil	19.9	.846	35.8	
Nonviscous lubricating distillate	11.0	.863-.883	32.5-28.8	50-100
Medium lubricating distillate	6.6	.883-.896	28.8-26.4	100-200
Viscous lubricating distillate	5.8	.896-.907	26.4-24.5	Above 200
Residuum	37.3	.956	16.5	
Distillation loss	1.7			

Item 463
Bureau of Mines Bartlesville
Sample 56033 Laboratory

IDENTIFICATION

Midland Farms field
Wolfcamp, Permian
8,540 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity specific 0.827 Gravity, ° API 39.6 Pour point ° F 20
Sulfur percent 0.13 Color green
Viscosity, Saybolt Universal at 77°F 52 sec., at 100°F 40 sec., Nitrogen percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.649	86.5					
2	167	2.6	4.6	.686	74.8	15	1.41280	141.0		
3	212	7.4	12.0	.728	62.9	25	1.40461	126.7		
4	257	7.9	19.9	.752	56.7	27	1.41710	132.6		
5	302	6.1	26.0	.769	52.5	28	1.42727	133.2		
6	347	5.5	31.5	.786	48.5	29	1.43606	135.8		
7	392	5.1	36.6	.798	45.8	29	1.44299	134.8		
8	437	4.9	41.5	.812	42.8	30	1.45025	138.5		
9	482	5.4	46.9	.825	40.0	31	1.45789	144.8		
10	527	6.0	52.9	.837	37.6	32	1.46457	148.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	2.9	55.8	0.852	34.6	35	1.47082	150.1	40	10
12	437	5.4	61.2	.855	34.0	32	1.47394	152.1	46	30
13	482	4.5	65.7	.867	31.7	35	1.47962	152.0	57	50
14	527	4.7	70.4	.878	29.7	37	1.48476	150.9	81	60
15	572	5.5	75.9	.887	28.0	38			140	75
Residuum		22.1	98.0	.926	21.3					

Carbon residue, Conradson Residuum 3.1 percent crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.0	0.706	68.9	
Total gasoline and naphtha	36.6	0.751	56.9	
Kerosene distillate	10.3	.819	41.3	
Gas oil	13.5	.847	35.6	
Nonviscous lubricating distillate	9.3	.859-.881	33.2-29.1	50-100
Medium lubricating distillate	6.2	.881-.891	29.1-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	22.1	.926	21.3	
Distillation loss	2.0			

Item 464
Bureau of Mines Bartlesville
Sample 56093 Laboratory

IDENTIFICATION

Mustang Island field
Frio 6, Oligocene
7,682-7,694 feet

Texas
Nueces County

GENERAL CHARACTERISTICS

Gravity, specific 0.830 Gravity, ° API 39.0 Pour point, ° F 20
Sulfur percent less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F 37 sec., Nitrogen percent, 0.027

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 751 mm Hg
First drop 136 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.8	0.8	0.676	77.8	-				
3	212	2.4	3.2	.712	67.2	18	1.39460	132.7		
4	257	4.3	7.5	.741	59.5	22	1.41367	131.1		
5	302	3.7	11.2	.757	55.4	22	1.42371	135.3		
6	347	5.5	16.7	.770	52.3	22	1.43030	130.8		
7	392	6.5	23.2	.784	49.0	22	1.43697	136.7		
8	437	8.1	31.3	.798	45.8	23	1.44402	135.3		
9	482	12.1	43.4	.816	41.9	26	1.45296	138.9		
10	527	14.6	58.0	.833	38.4	30	1.46158	141.9		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	9.8	67.8	0.847	35.6	32	1.46888	154.0	40	20
12	437	10.0	77.8	.852	34.6	31	1.47212	151.4	45	45
13	482	6.6	84.4	.864	32.3	33	1.47868	147.0	56	65
14	527	4.8	89.2	.880	29.3	38			81	85
15	572	4.2	93.4	.903	25.2	46			170	95
Residuum		6.2	99.6	.958	16.2					

Carbon residue, Conradson Residuum 3.1 percent, crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.2	0.703	69.8	
Total gasoline and naphtha	23.2	0.757	55.4	
Kerosene distillate	20.2	.809	43.4	
Gas oil	33.2	.844	36.2	
Nonviscous lubricating distillate	11.2	.861-.885	32.8-28.4	50-100
Medium lubricating distillate	5.2	.885-.911	28.4-23.8	100-200
Viscous lubricating distillate	.4	.911-.913	23.8-23.5	Above 200
Residuum	6.2	.958	16.2	
Distillation loss	.4			

Bureau of Mines ^{Item 465}
Sample Bartlesville
59158 Laboratory

IDENTIFICATION

Neches field
Woodbine, Upper Cretaceous
4,656-4,680 feet

Texas
Anderson County

GENERAL CHARACTERISTICS

Gravity, specific 0.820 Gravity, ° API, 41.1 Pour point, ° F, below 5
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.083

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 737 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.644	88.2					
2	167	3.5	6.7	.671	79.4	8.0	1.37808	122.8		
3	212	5.6	12.3	.720	65.0	21	1.40052	124.6		
4	257	6.9	19.2	.747	57.9	25	1.41531	136.7		
5	302	4.9	24.1	.767	53.0	27	1.42756	138.7		
6	347	5.5	29.6	.784	49.0	28	1.43686	144.0		
7	392	4.4	34.0	.798	45.8	29	1.44410	145.0		
8	437	4.2	38.2	.810	43.2	29	1.45110	146.7		
9	482	5.3	43.5	.824	40.2	30	1.45908	153.3		
10	527	6.6	50.1	.837	37.6	32	1.46687	156.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.6	53.7	0.844	36.2	31	1.47249	157.7	41	24
12	437	4.2	57.9	.851	34.8	30	1.47524	160.3	47	44
13	482	5.1	63.0	.864	32.3	33	1.48039	157.6	55	60
14	527	4.9	67.9	.874	30.4	35			76	70
15	572	6.8	74.7	.885	28.4	37			135	90
Residuum		19.7	94.4	.941	18.9					

Carbon residue, Conradson Residuum 9.7 percent, crude 2.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.3	0.686	74.8	
Total gasoline and naphtha	34.0	0.741	59.5	
Kerosene distillate	9.5	.818	41.5	
Gas oil	14.1	.843	36.4	
Nonviscous lubricating distillate	10.3	.855-.879	34.0-29.5	50 100
Medium lubricating distillate	6.8	.879-.891	29.5-27.3	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.7	.941	18.9	
Distillation loss	5.6			

Bureau of Mines ^{Item 466}
Sample Bartlesville
59077 Laboratory

IDENTIFICATION

Nena Lucia field
Strawn, Pennsylvania
6,950-6,975 feet

Texas
Nolan County

GENERAL CHARACTERISTICS

Gravity, specific 0.802 Gravity, ° API, 44.9 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen percent, 0.041

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.1	4.1	0.642	88.9					
2	167	4.9	9.0	.670	79.7	7.5	1.37725	125.6		
3	212	7.1	16.1	.712	67.2	18	1.39914	125.0		
4	257	9.1	25.2	.737	60.5	20	1.41038	128.1		
5	302	7.5	32.7	.757	55.4	22	1.42140	134.7		
6	347	5.5	38.2	.771	52.0	22	1.43039	137.8		
7	392	6.0	44.2	.787	48.3	23	1.43742	137.0		
8	437	5.1	49.3	.798	45.8	23	1.44393	137.2		
9	482	5.5	54.8	.811	43.0	24	1.45077	141.1		
10	527	5.7	60.5	.822	40.6	24	1.45785	140.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	64.0	0.836	37.8	27	1.46618	144.4	39	10
12	437	5.8	69.8	.846	35.8	28	1.46953	146.8	45	30
13	482	3.7	73.5	.856	33.8	29	1.47475	148.6	56	50
14	527	3.8	77.3	.867	31.7	31	1.47919	150.1	77	66
15	572	4.3	81.6	.874	30.4	32	1.48504	-	135	84
Residuum		16.9	98.5	.913	23.5					

Carbon residue, Conradson Residuum 2.0 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	16.1	0.681	76.3	
Total gasoline and naphtha	44.2	0.731	62.1	
Kerosene distillate	16.3	.811	43.0	
Gas oil	8.7	.842	36.6	
Nonviscous lubricating distillate	7.8	.851-.869	34.8-31.3	50 100
Medium lubricating distillate	4.6	.869-.878	31.3-29.7	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.9	.913	23.5	
Distillation loss	1.5			

Bureau of Mines
Sample

Item 467
Bartlesville
55066

Laboratory

IDENTIFICATION

Old Ocean field
Armstrong, Frio, Oligocene
12,204-10,208 feet

Texas
Brazoria County

GENERAL CHARACTERISTICS

Gravity, specific 0.841 Gravity, ° API 36.8 Pour point, ° F below 5
Sulfur percent, 0.14 Color, dark green
Viscosity, Saybolt Universal at 77°F., 47 sec., at 100°F., 43 sec. Nitrogen percent, 0.029

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 751 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.1	2.1	0.670	79.7	-				
3	212	3.2	5.3	.723	64.2	23	1.39574	131.0		
4	257	4.4	9.7	.750	57.2	27	1.41678	136.5		
5	302	4.6	14.3	.769	52.5	28	1.42727	141.3		
6	347	5.0	19.3	.783	49.2	28	1.43567	144.7		
7	392	5.5	24.8	.795	46.5	27	1.44165	142.9		
8	437	6.3	31.1	.808	43.6	28	1.44820	142.2		
9	482	7.5	38.6	.824	40.2	30	1.45606	144.4		
10	527	10.9	49.5	.839	37.2	32	1.46491	149.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.4	55.9	0.857	33.6	37	1.47218	150.5	40	Below 5
12	437	7.0	62.9	.858	33.4	34	1.47428	149.7	46	30
13	482	5.9	68.8	.868	31.5	35	1.47875	149.7	58	45
14	527	5.4	74.2	.881	29.1	38			85	55
15	572	5.6	79.8	.892	27.1	40			150	70
Residuum		19.6	99.4	.937	19.5					

Carbon residuo, Conradson Residuum 4.6 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.702	70.1	
Total gasoline and naphtha	24.8	0.760	54.7	
Kerosene distillate	13.8	.817	41.7	
Gas oil	23.0	.850	35.0	
Nonviscous lubricating distillate	11.2	.861-.883	32.8-28.8	50 100
Medium lubricating distillate	7.0	.883-.897	28.8-26.3	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.6	.937	19.5	
Distillation loss	.6			

Bureau of Mines
Sample

Item 468
Bartlesville
46132

Laboratory

IDENTIFICATION

Oyster Bayou field
Oyster Bayou, Frio, Oligocene
8,375 feet

Texas
Chambers County

GENERAL CHARACTERISTICS

Gravity, specific 0.842 Gravity, ° API 36.6 Pour point, ° F below 5
Sulfur percent, 0.18 Color dark green
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.6	0.6							
2	167	.9	1.5	0.676	77.8	-				
3	212	2.2	3.7	.710	67.8	19	1.38953	134.7		
4	257	3.2	6.9	.743	58.9	23	1.41436	138.7		
5	302	3.5	10.4	.763	54.0	25	1.42536	142.8		
6	347	4.8	15.2	.779	50.1	26	1.43345	142.7		
7	392	4.5	19.7	.793	46.9	26	1.44035	140.7		
8	437	6.1	25.8	.806	44.1	27	1.44707	140.8		
9	482	8.2	34.0	.821	40.9	29	1.45482	143.8		
10	527	11.2	45.2	.836	37.8	31	1.46301	147.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.1	52.3	0.846	35.8	32			41	20
12	437	9.7	62.0	.853	34.4	31			46	40
13	482	7.0	69.0	.863	32.5	33			58	60
14	527	6.0	75.0	.873	30.6	34			82	70
15	572	6.4	81.4	.885	28.4	37			155	90
Residuum		17.3	98.7	.937	19.5					

Carbon residuo, Conradson Residuum 5.1 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.7	0.696	71.8	
Total gasoline and naphtha	19.7	0.758	55.2	
Kerosene distillate	14.3	.815	42.1	
Gas oil	26.0	.844	36.2	
Nonviscous lubricating distillate	13.6	.856-.876	33.8-30.0	50 100
Medium lubricating distillate	7.8	.876-.891	30.0-27.3	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.3	.937	19.5	
Distillation loss	1.3			

Item 469
Bureau of Mines Bartlesville
Sample 58031 Laboratory

IDENTIFICATION

Panhandle field Texas
Moore County limestone, Permian Hutchinson County
2,991-3,060 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.823 Gravity, ° API, 40.4 Pour point, ° F, 50
Sulfur, percent, 0.55 Color, dark green
Viscosity, Saybolt Universal at 100° F., 47 sec. Nitrogen, percent, 0.067

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.2	2.2	0.646	87.5					
2	167	3.1	5.3	.666	81.0	5.6	1.37493	114.1		
3	212	5.8	11.1	.711	67.5	17	1.39523	120.8		
4	257	6.8	17.9	.737	60.5	20	1.40837	125.2		
5	302	4.9	22.8	.755	55.9	21	1.41946	134.5		
6	347	5.6	28.4	.776	50.9	24	1.43104	138.7		
7	392	2.7	31.1	.790	47.6	25	1.43953	137.8		
8	437	4.3	35.4	.802	44.9	25	1.44532	138.6		
9	482	4.4	39.8	.814	42.3	25	1.45277	142.5		
10	527	5.5	45.3	.826	39.8	26	1.45943	142.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	48.9	0.834	38.2	26	1.46643	145.5	40	30
12	437	4.6	53.5	.840	37.0	25	1.46806	151.6	46	44
13	482	5.6	59.1	.851	34.8	27	1.47252	144.4	56	64
14	527	4.9	64.0	.864	32.3	30			78	80
15	572	5.5	69.5	.868	31.5	29			120	94
Residuum		27.2	96.7	.934	20.0					

Carbon residue, Conradson Residuum 5.6 percent, crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.686	74.8	
Total gasoline and naphtha	31.1	0.733	61.5	
Kerosene distillate	8.7	.808	43.6	
Gas oil	13.6	.833	38.4	
Nonviscous lubricating distillate	10.9	.845-.866	36.0-31.9	50-100
Medium lubricating distillate	5.2	.866-.870	31.9-31.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.2	.934	20.0	
Distillation loss	3.3			

Item 470
Bureau of Mines Bartlesville
Sample 61136 Laboratory

IDENTIFICATION

Pecos Valley (High gravity) field Texas
Yates, Permian Pecos County
1,516-1,531 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.826 Gravity, ° API, 39.8 Pour point ° F, below 5
Sulfur, percent, 0.97 Color, dark green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.06

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 752 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.4	4.4	0.655	84.5					
2	167	4.3	8.7	.666	81.0	5.6	1.37490	128.3		
3	212	6.2	14.9	.708	68.4	16	1.39538	131.6		
4	257	7.1	22.0	.736	60.8	20	1.41053	133.2		
5	302	6.8	28.8	.760	54.7	24	1.42342	140.1		
6	347	5.0	33.8	.778	50.4	25	1.43349	143.7		
7	392	4.0	37.8	.792	47.2	26	1.44053	144.2		
8	437	5.1	42.9	.808	43.6	28	1.44858	143.9		
9	482	4.4	47.3	.821	40.9	29	1.45584	147.6		
10	527	5.9	53.2	.839	37.2	32	1.46597	154.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.4	55.6	0.859	33.2	38	1.47684	162.0	40	5
12	437	5.2	60.8	.868	31.5	38	1.48151	164.5	46	30
13	482	4.9	65.7	.884	28.6	43	1.49013	171.6	58	50
14	527	4.4	70.1	.900	25.7	47	1.49742	176.3	88	60
15	572	4.8	74.9	.906	24.7	47			160	80
Residuum		21.6	96.5	.960	15.9					

Carbon residue, Conradson Residuum 7.2 percent crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.9	0.680	76.6	
Total gasoline and naphtha	37.8	0.730	62.3	
Kerosene distillate	9.5	.814	42.3	
Gas oil	12.7	.853	34.4	
Nonviscous lubricating distillate	8.7	.874-.901	30.4-25.6	50-100
Medium lubricating distillate	6.2	.901-.909	25.6-24.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.6	.960	15.9	
Distillation loss	3.5			

Item 471
Bureau of Mines Bartlesville
Sample 62135 Laboratory

IDENTIFICATION

Pegasus field
Ellenburger, Cambro-Ordovician
9,946-13,100 feet

Texas
Midland and Upton
Counties

GENERAL CHARACTERISTICS

Gravity specific 0.766 Gravity ° API, 53.2 Pour point, ° F below 5
Sulfur percent, less than 0.01 Color, NPA 4
Viscosity, Saybolt Universal at 100° F., 33 sec. Nitrogen percent, 0.000

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.2	4.2	0.650	86.2					
2	167	4.3	8.5	.652	85.5	-	1.36955	128.8		
3	212	6.4	14.9	.680	76.6	2,3	1.38469	129.6		
4	257	7.9	22.8	.708	68.4	6,6	1.39749	133.7		
5	302	6.8	29.6	.728	62.9	8,5	1.40958	135.8		
6	347	7.2	36.8	.744	58.7	9,2	1.41704	134.5		
7	392	7.0	43.8	.757	55.4	9,2	1.42337	132.4		
8	437	7.0	50.8	.770	52.3	9,7	1.42956	130.6		
9	482	6.8	57.6	.781	49.7	9,7	1.43505	131.2		
10	527	7.3	64.9	.795	46.5	12	1.44215	131.9		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	7.9	72.8	0.821	40.9	20	1.45266	131.5	40	30
12	437	4.8	77.6	.829	39.2	20	1.45789	136.7	45	40
13	482	4.7	82.3	.842	36.6	23	1.46459	137.0	56	60
14	527	4.2	86.5	.860	33.0	28	1.47119	138.4	83	70
15	572	4.1	90.6	.870	31.1	30			155	100
Residuum		4.6	95.2	.906	24.7					

Carbon residue, Conradson Residuum 2.6 percent, crude 0.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.9	0.663	81.8	
Total gasoline and naphtha	43.8	0.710	67.9	
Kerosene distillate	21.1	.782	49.4	
Gas oil	12.5	.824	40.2	
Nonviscous lubricating distillate	8.0	.835-.862	38.0-32.6	50-100
Medium lubricating distillate	5.2	.862-.875	32.6-30.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	4.6	.906	24.7	
Distillation loss	4.8			

Item 472
Bureau of Mines Bartlesville
Sample 61167 Laboratory

IDENTIFICATION

Penwell field
Glorieta, Permian
4,650-4,680 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.856 Gravity, ° API, 33.8 Pour point, ° F, below 5
Sulfur, percent, 1.44 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 47 sec. Nitrogen, percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.674	78.4					
2	167	2.6	4.7	.683	75.7	14	1.38286	132.7		
3	212	3.9	8.6	.722	64.5	22	1.40282	135.4		
4	257	6.1	14.7	.749	57.4	26	1.41686	143.9		
5	302	6.0	20.7	.768	52.7	27	1.42739	147.1		
6	347	5.1	25.8	.780	49.9	26	1.43440	147.9		
7	392	4.9	30.7	.794	46.7	27	1.44143	146.2		
8	437	5.1	35.8	.809	43.4	28	1.44902	147.7		
9	482	6.3	42.1	.828	39.4	32	1.45973	153.3		
10	527	6.4	48.5	.847	35.6	36	1.47029	162.0		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	0.4	48.9	0.865	32.1	41	1.47919	165.9	41	20
12	437	4.2	53.8	.874	30.4	41	1.48441	164.5	45	35
13	482	5.8	59.6	.887	28.0	44	1.49201	174.3	56	50
14	527	5.5	65.1	.903	25.2	49			82	75
15	572	5.7	70.8	.916	23.0	52			145	90
Residuum		26.4	97.2	.976	13.5					

Carbon residue, Conradson Residuum 9.4 percent, crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.6	0.698	71.2	
Total gasoline and naphtha	30.7	0.751	56.9	
Kerosene distillate	5.1	.809	43.4	
Gas oil	18.1	.848	35.4	
Nonviscous lubricating distillate	10.1	.881-.907	29.1-24.5	50-100
Medium lubricating distillate	6.8	.907-.923	24.5-21.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.4	.976	13.5	
Distillation loss	2.8			

1/ Distillation discontinued at 554° F.

Bureau of Mines
Sample

Item 473
Bartlesville
56039

Laboratory

IDENTIFICATION

Penwell field
San Andres, Permian
3,600 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.859 Gravity ° API, 33.2 Pour point, ° F., 15
Sulfur percent 1.69 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen, percent, 0.111

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 88° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.659	83.2					
2	167	2.1	3.2	.679	76.9	12	1.39342	135.4		
3	212	5.0	8.2	.722	64.5	22	1.40273	132.9		
4	257	6.3	14.5	.749	57.4	26	1.41818	139.7		
5	302	6.7	21.2	.771	52.0	29	1.42865	141.5		
6	347	5.6	26.8	.786	48.5	29	1.43691	143.7		
7	392	4.2	31.0	.798	45.8	29	1.44382	144.0		
8	437	4.9	35.9	.811	43.0	29	1.45055	139.8		
9	482	5.5	41.4	.826	39.8	31	1.45927	147.0		
10	527	6.1	47.5	.842	36.6	34	1.46883	153.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.9	50.4	0.859	33.2	38	1.47787	155.2	40	Below 5
12	437	6.0	56.4	.867	31.7	38	1.48192	156.5	45	30
13	482	5.4	61.8	.883	28.8	42	1.49003	163.9	58	55
14	527	4.3	66.1	.900	25.7	47	1.49737	174.6	83	70
15	572	6.0	72.1	.913	23.5	50			145	85
Residue		27.7	99.8	.965	15.1					

Carbon residue, Conradson Residue 8.3 percent crude 2.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.2	0.703	69.8	
Total gasoline and naphtha	31.0	0.755	55.9	
Kerosene distillate	4.9	.811	43.0	
Gas oil	19.8	.847	35.6	
Nonviscous lubricating distillate	9.0	.873-.902	30.6-25.4	50-100
Medium lubricating distillate	7.4	.902-.920	25.4-22.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	27.7	.965	15.1	
Distillation loss	.2			

Bureau of Mines
Sample

Item 474
Bartlesville
62039

Laboratory

IDENTIFICATION

Person field
Upper Edwards, Lower Cretaceous
10,930-10,940 feet

Texas
Karnes County

GENERAL CHARACTERISTICS

Gravity, specific 0.817 Gravity ° API 41.7 Pour point ° F., below 5
Sulfur, percent 0.20 Color, green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen percent, less than 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 750 mm Hg
First drop 81° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.668	80.3					
2	167	2.8	4.2	.694	72.4	19	1.38286	129.8		
3	212	4.9	9.1	.710	67.8	17	1.39893	131.9		
4	257	6.2	15.3	.739	60.0	21	1.41464	140.5		
5	302	6.2	21.5	.759	54.9	23	1.42653	148.7		
6	347	5.5	27.0	.775	51.1	24	1.43349	148.0		
7	392	4.8	31.8	.785	48.8	23	1.43706	157.7		
8	437	5.0	36.8	.794	46.7	21	1.44282	141.4		
9	482	5.5	42.3	.807	43.8	22	1.44936	145.5		
10	527	6.5	48.8	.819	41.3	23	1.45562	148.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	52.6	0.838	37.4	28	1.46470	148.1	40	20
12	437	6.8	59.4	.845	36.0	28	1.46730	148.2	44	45
13	482	6.5	65.9	.854	34.2	28	1.47218	149.8	54	70
14	527	6.3	72.2	.862	32.7	29			70	80
15	572	6.7	78.9	.866	31.9	28			105	100
Residue		20.1	99.0	.902	25.4					

Carbon residue, Conradson Residue 1.6 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.1	0.699	70.9	
Total gasoline and naphtha	31.8	0.745	58.4	
Kerosene distillate	17.0	.808	43.6	
Gas oil	11.2	.843	36.4	
Nonviscous lubricating distillate	14.6	.850-.865	35.0-32.1	50-100
Medium lubricating distillate	4.3	.865-.868	32.1-31.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	20.1	.902	25.4	
Distillation loss	1.0			

Item 475
Bureau of Mines Bartlesville
Sample 51075 Laboratory

IDENTIFICATION

Pierce Junction field
Frio, Oligocene
4,784-4,792 feet

Texas
Harris County

GENERAL CHARACTERISTICS

Gravity specific 0.839 Gravity, ° API, 37.2 Pour point, ° F, below 5
Sulfur percent 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 748 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.636	91.0					
2	167	2.7	3.7	.677	77.5	11	1.37814	125.6		
3	212	6.7	10.4	.735	61.0	28	1.40738	134.6		
4	257	9.4	19.8	.761	54.4	32	1.42105	137.4		
5	302	7.3	27.1	.780	49.9	33	1.43238	147.0		
6	347	6.8	33.9	.794	46.7	33	1.44035	144.8		
7	392	6.1	40.0	.806	44.1	32	1.44727	145.9		
8	437	6.7	46.7	.824	40.2	35	1.45771	152.4		
9	482	6.8	53.5	.845	36.0	40	1.47015	162.1		
10	527	8.3	61.8	.862	32.7	43	1.48060	172.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.7	66.5	0.873	30.6	45			43	Below 5
12	437	5.0	71.5	.878	29.7	43			52	10
13	482	4.2	75.7	.895	26.6	48			65	30
14	527	4.0	79.7	.905	24.9	49			110	45
15	572	6.0	85.7	.921	22.1	54			220	65
Residuum		14.3	100.0	.950	17.5					

Carbon residue, Conradson Residuum 5.6 percent crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.4	0.710	67.8	
Total gasoline and naphtha	40.0	0.764	53.7	
Kerosene distillate	6.7	.824	40.2	
Gas oil	21.5	.860	33.0	
Nonviscous lubricating distillate	8.6	.877-.903	29.9-25.2	50 100
Medium lubricating distillate	5.0	.903-.918	25.2-22.6	100 200
Viscous lubricating distillate	3.9	.918-.931	22.6-20.5	Above 200
Residuum	14.3	.950	17.5	
Distillation loss	.0			

Item 476
Bureau of Mines Bartlesville
Sample 59110 Laboratory

IDENTIFICATION

Plymouth field
Main Greta, Frio, Oligocene
4,663-4,668 feet

Texas
San Patricio County

GENERAL CHARACTERISTICS

Gravity specific 0.883 Gravity, ° API, 28.8 Pour point, ° F, below 5
Sulfur percent, 0.15 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, 0.049

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 740 mm Hg
First drop 149 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.5	0.5	0.708	68.4	-	1.39257	128.3		
3	212	2.1	2.6	.718	65.6	20	1.40019	128.7		
4	257	3.3	5.9	.746	58.2	25	1.41382	132.2		
5	302	3.9	9.8	.766	53.2	27	1.42467	133.7		
6	347	4.4	14.2	.789	47.8	30	1.43612	134.9		
7	392	5.6	19.8	.813	42.6	36	1.44742	136.2		
8	437	7.0	26.8	.840	37.0	43	1.46019	139.4		
9	482	11.2	38.0	.859	33.2	47	1.47231	144.2		
10	527	16.5	54.5	.885	28.4	54	1.48562	156.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	9.8	64.3	0.901	25.6	58	1.49839	167.7	46	24
12	437	6.7	71.0	.917	22.8	62	1.50515	163.1	59	40
13	482	8.0	79.0	.928	21.0	64	1.51334	-	110	54
14	527	4.2	83.2	.949	17.6	70	1.51907	-	390	64
15	572	5.3	88.5	.980	12.9	82			over 400	76
Residuum		9.8	98.3	1.006	9.2					

Carbon residue, Conradson Residuum 5.8 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.716	66.1	
Total gasoline and naphtha	19.8	0.775	51.1	
Kerosene distillate	-	-	-	
Gas oil	42.3	.873	30.6	
Nonviscous lubricating distillate	11.5	.906-.926	24.7-21.3	50 100
Medium lubricating distillate	4.7	.926-.939	21.3-19.2	100 200
Viscous lubricating distillate	10.2	.939-.988	19.2-11.7	Above 200
Residuum	9.8	1.006	9.2	
Distillation loss	1.7			

Bureau of Mines Item 477
Sample Bartlesville
52089 Laboratory

IDENTIFICATION

Portilla field Texas
7,400', Frio, Oligocene San Patricio County
7,400-7,415 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.827 Gravity, ° API, 39.6 Pour point, ° F, 20
Sulfur, percent, 0.14 Color, green
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.1	1.1	0.666	81.0	-	1.38346	126.6		
2	167	1.8	2.9	.716	66.1	19	1.39918	125.8		
3	212	5.0	7.9	.747	57.9	25	1.41544	135.8		
4	257	8.1	16.0	.769	52.5	28	1.42722	141.6		
5	302	6.9	22.9	.787	48.3	30	1.43720	142.3		
6	347	7.7	30.6	.799	45.6	29	1.44440	143.6		
7	392	7.2	37.8	.814	42.3	31	1.45177	143.6		
8	437	7.1	44.9	.833	38.4	34	1.46168	149.2		
9	482	11.0	55.9	.853	34.4	39	1.47284	153.8		
10	527	13.3	69.2							

Stage 2—Distillation continued at 40 mm Hg

11	392	7.9	77.1	0.869	31.3	43			41	15
12	437	6.0	83.1	.874	30.4	41			48	40
13	482	4.3	87.4	.886	28.2	44			67	60
14	527	3.2	90.6	.916	23.0	55			120	75
15	572	3.4	94.0	.930	20.7	58			over 400	90
Residuum		5.3	99.3	.995	10.7					

Carbon residue, Conradson Residuum 4.6 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.9	0.698	71.2	
Total gasoline and naphtha	37.8	0.759	54.9	
Kerosene distillate	7.1	.814	42.3	
Gas oil	35.9	.853	34.4	
Nonviscous lubricating distillate	6.8	.876-.904	30.0-25.0	50-100
Medium lubricating distillate	2.3	.904-.920	25.0-22.3	100-200
Viscous lubricating distillate	4.1	.920-.937	22.3-19.5	Above 200
Residuum	5.3	.995	10.7	
Distillation loss	.7			

Bureau of Mines Item 478
Sample Bartlesville
62012 Laboratory

IDENTIFICATION

Prado field Texas
Loma Novia Middle 1 & 11, Jackson, Eocene Jim Hogg County
3,776-3,795 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.828 Gravity, ° API, 39.4 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen, percent, less than 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 739 mm Hg
First drop 81° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122			0.704	69.5	-	1.39616	99.3		
2	167	2.0	2.0	.727	63.1	25	1.40330	113.6		
3	212	5.8	7.8	.758	55.2	30	1.41989	132.6		
4	257	13.3	21.1	.784	49.0	35	1.43417	144.1		
5	302	9.6	30.7	.804	44.5	38	1.44665	152.6		
6	347	9.9	40.6	.820	41.1	39	1.45498	153.3		
7	392	8.4	49.0	.840	37.0	43	1.46449	156.7		
8	437	6.2	55.2	.857	33.6	46	1.47488	163.7		
9	482	8.8	64.0	.870	31.1	47	1.48476	173.7		
10	527	11.5	75.5							

Stage 2—Distillation continued at 40 mm Hg

11	392	5.7	81.2	0.872	30.8	44	1.48693	172.9	41	20
12	437	5.4	86.6	.876	30.0	42	1.48436	167.7	46	60
13	482	2.8	89.4	.877	29.9	39	1.48657	169.2	54	65
14	527									
15	572									
Residuum		9.3	98.7	.936	19.7					

Carbon residue, Conradson Residuum 0.4 percent crude <0.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.8	0.721	64.8	
Total gasoline and naphtha	49.0	0.777	50.6	
Kerosene distillate	-	-	-	
Gas oil	37.5	.863	32.5	
Nonviscous lubricating distillate	2.9	.877-.878	29.9-29.7	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	9.3	.936	19.7	
Distillation loss	1.3			

1/ Distillation discontinued at 455° F.

Item 479
Bureau of Mines Bartlesville Laboratory
Sample 63240

IDENTIFICATION

Prado field Texas
Loma Novia Middle II, Jackson, Locene Jim Hogg County
3,753 - 3,740 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.834 Gravity, ° API, 38.2 Pour point, ° F, below 5
Sulfur percent, 0.04 Color, green
Viscosity, Saybolt Universal at 100° F., 31 sec. Nitrogen, percent, 0.002

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.0	0.0	0.848	86.7	14	1.3832	124.8		
2	167	1.6	2.4	.803	75.7	31	1.40246	126.9		
3	212	3.6	6.0	.741	59.5	33	1.42178	131.6		
4	257	13.2	19.2	.764	53.7	35	1.43488	143.0		
5	302	12.2	31.4	.705	48.0	40	1.44880	152.0		
6	347	11.3	42.7	.608	43.6	43	1.45930	155.6		
7	392	6.0	51.3	.620	39.4	47	1.46845	171.0		
8	437	7.6	58.9	.640	35.4	51	1.48167	180.4		
9	482	9.3	68.2	.669	31.3	53	1.49077	177.1		
10	527	2.1	77.3	.883	28.7					

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	7.7	84.9	0.892	27.3	54	1.49507	179.6	42	Below 5
12	437	4.0	88.9	.896	26.4	52	1.49595	177.2	51	30
13	482	3.6	92.5	.902	25.4	51	1.50142	181.0	70	60
14	527									
15	572									
Residuum		7.0	99.5	.955	16.7					

Carbon residue, Conradson Residuum 1.1 percent, crude 0.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.0	0.713	67.0	
Total gasoline and naphtha	42.7	0.774	51.3	
Kerosene distillate	-	-	-	
Gas oil	34.6	.850	33.4	
Nonviscous lubricating distillate	9.0	.869-.902	27.7-25.6	50-100
Medium lubricating distillate	6.2	.902-.905	25.6-24.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	7.0	.955	16.7	
Distillation loss	.5			

1/ Distillation discontinued at 516° F.

2/ Distillation discontinued at 482° F.

Item 480
Bureau of Mines Bartlesville Laboratory
Sample 62010

IDENTIFICATION

Prado field Texas
Loma Novia Middle III, Jackson, Eocene Jim Hogg County
3,710-3,713 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.830 Gravity, ° API, 39.0 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 33 sec. Nitrogen, percent, less than 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	1.5	1.5	0.718	65.6	-	1.39953	127.9		
3	212	5.1	6.6	.731	62.1	27	1.40419	127.0		
4	257	11.4	18.0	.763	54.0	33	1.42117	133.5		
5	302	11.3	29.3	.784	49.0	35	1.43298	140.9		
6	347	10.1	39.4	.805	44.3	38	1.44582	150.8		
7	392	8.0	47.4	.823	40.4	41	1.45563	154.0		
8	437	7.3	54.7	.840	37.0	43	1.46475	156.9		
9	482	9.1	63.8	.861	32.8	48	1.47700	166.5		
10	527	11.7	75.5	.871	31.0	48	1.48456	172.3		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	6.8	82.3	0.874	30.4	45	1.48683	172.2	41	20
12	437	5.3	87.6	.881	29.1	45	1.48441	167.3	46	45
13	482									
14	527									
15	572									
Residuum		11.5	99.1	.927	21.1					

Carbon residue, Conradson Residuum 1.0 percent, crude 0.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	6.6	0.728	62.9	
Total gasoline and naphtha	47.4	0.782	49.5	
Kerosene distillate	-	-	-	
Gas oil	40.2	.865	32.1	
Nonviscous lubricating distillate	-	-	-	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	11.5	.927	21.1	
Distillation loss	.9			

1/ Distillation discontinued at 437° F.

Item 481
Bureau of Mines Bartlesville Laboratory
Sample 54150

IDENTIFICATION

Prentice field
6,700', Clear Fork, Permian
6,460-6,760 feet

Texas
Yoakum County

GENERAL CHARACTERISTICS

Gravity, specific, 0.829 Gravity, ° API, 25.9 Pour point, ° F, 30
Sulfur, percent, 2.60 Color, brownish black
Viscosity, Saybolt Universal at 77°F., 71 sec.; at 100°F., 54 sec. Nitrogen, percent, 0.109

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 738 mm. Hg

First drop, 111 ° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n_D at 20° C	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1	122	0.6	0.6	0.656	84.2					
2	167	2.0	2.6	.695	72.1	19	1.38680	133.9		
3	212	5.2	7.8	.739	60.0	30	1.41367	146.4		
4	257	6.2	14.0	.769	52.5	36	1.42956	155.9		
5	302	6.4	20.4	.788	48.1	37	1.44081	152.3		
6	347	4.6	25.0	.797	46.0	34	1.44610	158.1		
7	392	4.4	29.4	.806	44.1	32	1.45000	153.1		
8	437	4.7	34.1	.820	41.1	33	1.45791	152.2		
9	482	4.8	38.9	.839	37.2	37	1.46780	157.4		
10	527	6.5	45.4	.864	32.3	44	1.48172	170.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.2	47.6	0.874	30.4	45	1.49443	187.0	39	15
12	437	6.4	54.0	.899	25.9	53	1.49985	181.8	45	40
13	482	5.1	59.1	.918	22.6	59	1.51055	192.1	57	60
14	527	5.4	64.5	.930	20.7	61			86	80
15	572	5.1	69.6	.945	18.2	65			160	95
Residuum		30.3	99.9	1.031	5.8					

Carbon residue, Conradson: Residuum, 9.4 percent; crude, 3.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.8	0.721	64.8	
Total gasoline and naphtha	29.4	0.770	52.3	
Kerosine distillate	4.7	.820	41.1	
Gas oil	19.1	.867	31.7	
Nonviscous lubricating distillate	9.8	.906-.932	24.7-20.3	50-100
Medium lubricating distillate	6.6	.932-.948	20.3-17.8	100-200
Viscous lubricating distillate				Above 200
Residuum	30.3	1.031	5.8	
Distillation loss	.1			

Item 482
Bureau of Mines Bartlesville Laboratory
Sample 54151

IDENTIFICATION

Prentice field
Glorieta, Permian
5,945-5,972 feet

Texas
Yoakum County

GENERAL CHARACTERISTICS

Gravity, specific, 0.884 Gravity, ° API, 28.6 Pour point, ° F, 30
Sulfur, percent, 2.68 Color, brownish black
Viscosity, Saybolt Universal at 100°F., 47 sec. Nitrogen, percent, 0.126

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 746 mm Hg

First drop, 82 ° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n_D at 20° C	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1	122	1.5	1.5	0.644	88.2					
2	167	3.5	5.0	.687	74.5	16	1.39039	140.4		
3	212	6.0	11.0	.737	60.5	29	1.41265	147.3		
4	257	5.8	16.8	.770	52.3	36	1.43085	157.7		
5	302	6.4	23.2	.791	47.4	38	1.44229	164.7		
6	347	4.5	27.7	.799	45.6	35	1.44709	157.2		
7	392	4.2	31.9	.807	43.8	33	1.45094	157.5		
8	437	4.5	36.4	.820	41.1	33	1.45778	160.5		
9	482	4.9	41.3	.840	37.0	38	1.46792	162.9		
10	527	5.8	47.1	.864	32.3	44	1.48170	173.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.9	51.0	0.887	28.0	51	1.49524	182.1	40	15
12	437	5.6	56.6	.900	25.7	54	1.50221	191.6	45	30
13	482	4.7	61.3	.918	22.6	59	1.51207	202.2	59	50
14	527	4.7	66.0	.928	21.0	60			88	75
15	572	5.6	71.6	.939	19.2	63			170	90
Residuum		27.2	98.8	1.030	5.9					

Carbon residue, Conradson: Residuum, 5.8 percent; crude, 1.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	11.0	0.708	68.4	
Total gasoline and naphtha	31.9	0.762	54.2	
Kerosine distillate	4.5	.820	41.1	
Gas oil	19.4	.871	31.0	
Nonviscous lubricating distillate	8.7	.905-.930	24.9-20.7	50-100
Medium lubricating distillate	6.3	.930-.943	20.7-18.6	100-200
Viscous lubricating distillate	.8	.943-.945	18.6-18.2	Above 200
Residuum	27.2	1.030	5.9	
Distillation loss	1.2			

Bureau of Mines
Sample

Item 483
Bartlesville
58056

Laboratory

IDENTIFICATION

Quinduno field
Lower Albany and Wolfcamp, Permian
4,077-4,098 feet

Texas
Roberts County

GENERAL CHARACTERISTICS

Gravity specific 0.800 Gravity ° API 45.4 Pour point ° F, below 5
Sulfur percent 0.17 Color, green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen percent 0.009

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.649	86.5					
2	167	3.6	4.7	.675	78.1	9.8	1.37644	124.2		
3	212	5.6	10.3	.718	65.6	20	1.39986	124.9		
4	257	12.8	23.1	.741	59.5	22	1.41129	126.5		
5	302	9.4	32.5	.759	54.9	23	1.42259	134.2		
6	347	7.9	40.4	.775	51.1	24	1.43178	137.2		
7	392	6.6	47.0	.789	47.8	24	1.43792	136.2		
8	437	7.1	54.1	.801	45.2	24	1.44504	135.8		
9	482	5.4	59.5	.814	42.3	25	1.45203	140.4		
10	527	6.3	65.8	.826	39.8	26	1.45835	140.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	69.4	0.833	38.4	26	1.46500	145.1	40	14
12	437	4.6	74.0	.841	36.8	26	1.46555	143.8	44	36
13	482	4.0	78.0	.848	35.4	26	1.47048	144.1	54	54
14	527	4.3	82.3	.857	33.6	27	1.47576	-	71	70
15	572	3.5	85.8	.868	31.5	29			110	94
Residue m		12.7	98.5	.907	24.5					

Carbon residue, Conradson Residue 2.6 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.3	0.696	71.8	
Total gasoline and naphtha	47.0	0.747	57.9	
Kerosine distillate	12.5	.807	43.8	
Gas oil	14.9	.833	38.4	
Non viscous lubricating distillate	8.7	.847-.863	35.6-32.5	50-100
Medium lubricating distillate	2.7	.863-.873	32.5-30.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue m	12.7	.907	24.5	
Distillation loss	1.5			

Bureau of Mines
Sample

Item 484
Bartlesville
54109

Laboratory

IDENTIFICATION

Quitman field
Trinity, Lower Cretaceous
6,134-6,150 feet

Texas
Wood County

GENERAL CHARACTERISTICS

Gravity specific 0.807 Gravity ° API, 43.8 Pour point, ° F, 10
Sulfur, percent 0.92 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.036

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 756 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.8	3.8	0.637	90.6					
2	167	6.2	10.0	.660	82.9	2.7	1.37971	126.3		
3	212	7.6	17.6	.692	73.0	8.0	1.38960	125.8		
4	257	7.7	25.3	.717	65.9	11	1.40177	125.1		
5	302	6.7	32.0	.739	60.0	14	1.41347	130.9		
6	347	6.6	38.6	.761	54.4	17	1.42549	140.8		
7	392	5.2	43.8	.778	50.4	19	1.43465	138.0		
8	437	5.7	49.5	.790	47.6	19	1.44098	138.2		
9	482	5.0	54.5	.804	44.5	21	1.44845	141.4		
10	527	6.2	60.7	.822	40.6	24	1.45798	148.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	63.8	0.840	37.0	29	1.46814	152.5	39	20
12	437	4.7	68.5	.851	34.8	30	1.47258	168.2	44	35
13	482	4.3	72.8	.866	31.9	34	1.48180	160.8	53	45
14	527	3.6	76.4	.887	28.0	41	1.48913	164.4	70	65
15	572	4.9	81.3	.889	27.7	42			110	80
Residue m		18.4	99.7	.963	15.4					

Carbon residue, Conradson Residue 8.5 percent crude 1.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	17.6	0.669	80.0	
Total gasoline and naphtha	43.8	0.715	66.4	
Kerosine distillate	16.9	.806	44.1	
Gas oil	8.6	.848	35.4	
Non viscous lubricating distillate	8.5	.861-.886	32.8-28.2	50-100
Medium lubricating distillate	3.5	.886-.895	28.2-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue m	18.4	.963	15.4	
Distillation loss	.3			

Item 485
Bureau of Mines Bartlesville Laboratory
Sample 56089

IDENTIFICATION

Raccoon Bend field
Hockley, Eocene
3,344-3,400 feet

Texas
Austin County

GENERAL CHARACTERISTICS

Gravity, specific, 0.894 - - Gravity, ° API, 26.8 Pour point, ° F, 40
Sulfur, percent 0.13 - - Color, greenish black
Viscosity, Saybolt Universal at 77°F, 1.72 sec. at 100°F, 57 sec. Nitrogen, percent, 0.048

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm Hg
First drop 171 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.4	1.4	0.730	62.3	-				
4	257	2.7	4.1	.759	54.9	31	1.41441	129.0		
5	302	2.4	6.5	.786	48.5	36	1.43426	134.5		
6	347	2.0	8.5	.808	43.6	40	1.44698	142.9		
7	392	3.7	12.2	.827	39.6	42	1.45859	152.6		
8	437	5.0	17.2	.848	35.4	47	1.47108	160.1		
9	482	7.1	24.3	.868	31.5	51	1.48359	171.5		
10	527	11.5	35.8	.884	28.6	54	1.49387	184.7		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.8	43.6	0.892	27.1	54	1.49922	185.0	41	Below 5
12	437	8.8	52.4	.897	26.3	52	1.49922	181.0	48	15
13	482	7.6	60.0	.906	24.7	53	1.50310	184.8	70	40
14	527	7.3	67.3	.912	23.7	53	1.50631	-	105	65
15	572	7.8	75.1	.917	22.8	52			210	90
Residium		22.6	97.7	.964	15.3					

Carbon residue, Conradson Residium 5.3 percent, crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.4	0.730	62.3	
Total gasoline and naphtha	8.5	0.773	51.6	
Kerosene distillate	-	-	-	
Gas oil	40.3	.875	30.2	
Nonviscous lubricating distillate	13.9	.898-.911	26.1-23.8	50-100
Medium lubricating distillate	7.9	.911-.916	23.8-23.0	100-200
Viscous lubricating distillate	4.5	.916-.920	23.0-22.3	Above 200
Residium	22.6	.964	15.3	
Distillation loss	2.3			

Item 486
Bureau of Mines Bartlesville Laboratory
Sample 62071

IDENTIFICATION

Red Fish Reef, South (F-15) field
Frio 15 B, Oligocene
11,340-11,346 feet

Texas
Galveston County

GENERAL CHARACTERISTICS

Gravity, specific 0.829 Gravity, ° API, 39.2 - - Pour point, ° F, 25
Sulfur, percent less than 0.10 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 44 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.7	1.7	0.678	77.2	-				
3	212	3.0	4.7	.692	73.0	8.0	1.38823	129.5		
4	257	3.5	8.2	.723	64.2	14	1.40529	129.9		
5	302	3.4	11.6	.741	59.5	15	1.41464	131.6		
6	347	3.7	15.3	.759	54.9	16	1.42429	136.6		
7	392	4.1	19.4	.776	50.9	18	1.43218	136.5		
8	437	5.7	25.1	.792	47.2	20	1.44031	137.6		
9	482	6.9	32.0	.808	43.6	22	1.44924	139.8		
10	527	10.7	42.7	.823	40.4	25	1.45788	142.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.5	46.2	0.841	36.8	29	1.46643	146.7	40	20
12	437	10.0	56.2	.844	36.2	27	1.46661	144.9	43	40
13	482	8.7	64.9	.849	35.2	26	1.47019	144.7	52	60
14	527	7.8	72.7	.864	32.3	30			69	85
15	572	6.8	79.5	.878	29.7	34			115	90
Residium		17.6	97.1	.932	20.3					

Carbon residue, Conradson Residium 4.7 percent, crude 0.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.7	0.687	74.5	
Total gasoline and naphtha	19.4	0.736	60.8	
Kerosene distillate	23.3	.811	43.0	
Gas oil	15.0	.844	36.2	
Nonviscous lubricating distillate	15.5	.847-.871	35.6-31.0	50-100
Medium lubricating distillate	6.3	.871-.885	31.0-28.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residium	17.6	.932	20.3	
Distillation loss	2.9			

Item 487
Bureau of Mines Bartlesville
Sample 63201 Laboratory

IDENTIFICATION

Reeves field
San Andres and Guadalupe, Permian
4,968-4,998 feet

Texas
Yoakum County

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API, 33.8 Pour point, ° F, below 5
Sulfur, percent 1.77 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen, percent, 0.092

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 738 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visco. 100° F	Cloud test ° F
1	122	2.3	2.3	0.641	89.2					
2	167	3.4	5.7	.683	75.7	14	1.38475	136.0		
3	212	5.3	11.0	.732	61.8	27	1.41005	145.1		
4	257	6.6	17.6	.758	55.2	30	1.42423	150.0		
5	302	5.7	23.3	.771	52.0	29	1.43405	154.9		
6	347	4.9	28.2	.788	48.1	30	1.44008	150.0		
7	392	4.7	32.9	.800	45.4	30	1.44593	147.9		
8	437	4.3	37.2	.814	42.3	31	1.45329	150.9		
9	482	5.0	42.2	.831	38.8	33	1.46257	156.1		
10	527	5.9	48.1	.848	35.4	37	1.47322	165.6		

Stage 2—Distillation continued at 40 mm. Hg

11	392	2.7	50.8	0.872	30.8	44	1.48162	167.7	40	20
12	437	5.1	55.9	.881	29.1	45	1.48668	172.5	48	35
13	482	5.2	61.1	.890	27.5	45	1.49492	178.9	62	60
14	527	4.6	65.7	.906	24.7	50	1.50211	-	92	90
15	572	4.9	70.6	.913	23.5	50			160	110
Residuum		26.5	97.1	.992	11.1					

Carbon residue, Conradson Residuum 6.5 percent crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.0	0.698	71.3	
Total gasoline and naphtha	32.9	0.751	57.0	
Kerosene distillate	4.3	.814	42.3	
Gas oil	16.9	.853	34.4	
Nonviscous lubricating distillate	9.9	.882-.907	28.9-24.5	50-100
Medium lubricating distillate	6.6	.907-.917	24.5-22.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.5	.992	11.1	
Distillation loss	2.9			

Item 488
Bureau of Mines Bartlesville
Sample 62041 Laboratory

IDENTIFICATION

Refugio-Fox field
5,800', Frio, Oligocene
5,843-5,859 feet

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific, 0.853 Gravity, ° API, 34.4 Pour point, ° F, below 5
Sulfur, percent, 0.12 Color, green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	8 U visco. 100° F	Cloud test ° F
1	122									
2	167	3.2	3.2	0.692	73.0	-	1.38759	124.5		
3	212	5.6	8.8	.721	64.8	22	1.40079	133.2		
4	257	7.0	15.8	.746	58.2	25	1.41376	133.2		
5	302	5.9	21.7	.765	53.5	26	1.42472	137.2		
6	347	6.0	27.7	.784	49.0	28	1.43454	139.4		
7	392	5.7	33.4	.801	45.2	30	1.44330	139.1		
8	437	6.6	40.0	.821	40.9	34	1.45272	140.4		
9	482	9.6	49.6	.845	36.0	40	1.46470	144.0		
10	527	11.7	61.3	.868	31.5	46	1.47679	148.4		

Stage 2—Distillation continued at 40 mm. Hg

11	392	6.9	68.2	0.889	27.7	52	1.48868	157.4	48	Below 5
12	437	9.6	77.8	.905	24.9	56	1.49784	164.9	61	25
13	482	3.3	81.1	.924	21.6	62	1.50935	170.1	125	45
14	527	3.3	84.4	.945	18.2	68	1.51716	-	305	55
15	572	4.2	88.6	.966	15.0	75	1.52380	-	over 400	65
Residuum		10.4	99.0	.998	10.3					

Carbon residue, Conradson Residuum 5.6 percent crude 0.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.8	0.710	67.8	
Total gasoline and naphtha	33.4	0.756	55.7	
Kerosene distillate	6.6	.821	40.9	
Gas oil	26.3	.863	32.5	
Nonviscous lubricating distillate	10.7	.892-.917	27.1-22.8	50-100
Medium lubricating distillate	11.6	.917-.972	22.8-14.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.4	.998	10.3	
Distillation loss	1.0			

Item 489
Bureau of Mines Bartlesville Laboratory
Sample 62195

IDENTIFICATION

Refugio, Old field
5,700', Frio, Oligocene

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific 0.831 Gravity ° API 38.8 Pour point, ° F, below 5
Sulfur percent, 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 36 sec. Nitrogen percent, 0.023

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.1	1.1	0.658	83.5					
2	167	2.8	3.9	.679	76.9	12	1.38070	128.8		
3	212	6.9	10.8	.727	63.1	25	1.40402	129.6		
4	257	8.4	19.2	.751	56.9	27	1.41704	135.5		
5	302	7.6	26.8	.771	52.0	29	1.42854	141.5		
6	347	7.4	34.2	.790	47.6	31	1.43852	143.3		
7	392	6.6	40.8	.804	44.5	31	1.44607	143.6		
8	437	7.9	48.7	.821	40.9	34	1.45410	144.6		
9	482	9.8	58.5	.839	37.2	37	1.46358	148.4		
1/10	527	10.4	68.9	.856	33.8	40	1.47368	155.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.2	75.1	0.877	29.8	46	1.48354	159.1	43	5
12	437	7.2	82.3	.891	27.3	49	1.48933	163.1	55	35
13	482	4.1	86.4	.904	25.0	52	1.49965	-	81	65
14	527	4.4	90.8	.933	20.2	63			260	75
2/15	572	4.1	94.9	.967	14.8	76			over 400	85
Residuum		4.5	99.4	1.015	7.9					

Carbon residue, Conradson Residuum 7.9 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.8	0.708	68.5	
Total gasoline and naphtha	40.8	0.759	55.0	
Kerosine distillate	7.9	.821	40.9	
Gas oil	27.2	.856	33.9	
Nonviscous lubricating distillate	8.9	.885-.907	28.4-24.5	50 100
Medium lubricating distillate	2.4	.907-.923	24.5-21.8	100 200
Viscous lubricating distillate	7.7	.923-.983	21.8-12.4	Above 200
Residuum	4.5	1.015	7.9	
Distillation loss	6			

1/ Distillation discontinued at 522° F.

2/ Distillation discontinued at 554° F.

Item 490
Bureau of Mines Bartlesville Laboratory
Sample 51065

IDENTIFICATION

Reinecke field
Canyon, Pennsylvanian
6,886-6,920 feet

Texas
Borden County

GENERAL CHARACTERISTICS

Gravity, specific 0.804 Gravity, ° API, 44.5 Pour point ° F below 5
Sulfur percent 0.15 Color, green
Viscosity, Saybolt Universal at 100° F., 36 sec. Nitrogen percent -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.8	4.8	0.642	88.9					
2	167	5.1	9.9	.676	77.8	10	1.37793	124.0		
3	212	8.5	18.4	.722	64.5	22	1.40047	127.4		
4	257	9.4	27.8	.748	57.7	26	1.41392	130.9		
5	302	5.8	33.6	.768	52.7	27	1.42564	137.4		
6	347	5.5	39.1	.785	48.8	29	1.43506	139.8		
7	392	4.8	43.9	.798	45.8	29	1.44211	140.3		
8	437	5.1	49.0	.812	42.8	30	1.44974	140.6		
9	482	4.7	53.7	.826	39.8	31	1.45763	146.0		
10	527	5.7	59.4	.837	37.6	32	1.46485	154.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	61.9	0.846	35.8	32			41	10
12	437	5.1	67.0	.850	35.0	30			46	30
13	482	4.6	71.6	.865	32.1	34			55	45
14	527	4.6	76.2	.871	30.8	33			76	60
15	572	4.3	80.5	.879	29.3	34			125	80
Residuum		16.6	97.1	.923	21.8					

Carbon residue, Conradson Residuum 2.9 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	18.4	0.688	74.2	
Total gasoline and naphtha	43.9	0.736	60.8	
Kerosine distillate	5.1	.812	42.8	
Gas oil	17.8	.840	37.0	
Nonviscous lubricating distillate	9.3	.857-.875	33.6-30.2	50 100
Medium lubricating distillate	4.4	.875-.883	30.2-28.8	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.6	.923	21.8	
Distillation loss	2.9			

Item 491
Bureau of Mines Bartlesville Laboratory
Sample 48042

IDENTIFICATION

Rincon field
Frio Main G, Oligocene
4,124-4,142 feet

Texas
Starr County

GENERAL CHARACTERISTICS

Gravity, specific 0.811 Gravity, ° API 43.0 Pour point, ° F 30
Sulfur, percent 0.05 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 33 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.640	89.6					
2	147	3.2	5.0	.678	77.2	11	1.38039	126.4		
3	212	8.3	13.3	.728	62.9	25	1.40420	129.4		
4	257	11.3	24.6	.758	55.2	30	1.41998	136.9		
5	302	7.7	32.3	.779	50.1	33	1.43223	145.0		
6	347	7.3	39.6	.795	46.5	33	1.44183	147.5		
7	392	5.3	44.9	.806	44.1	32	1.44727	146.3		
8	437	7.3	52.2	.816	41.9	32	1.45269	144.8		
9	482	10.0	62.2	.827	39.6	31	1.45921	148.7		
10	527	12.1	74.3	.840	37.0	33	1.46657	154.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.9	80.2	0.850	35.0	34			41	25
12	437	5.7	85.9	.853	34.4	31			46	45
13	482	3.8	89.7	.868	31.5	35			56	65
14	527	3.1	92.8	.886	28.2	40			79	80
15	572	3.2	96.0	.911	23.8	49			230	95
Residuum		3.4	99.4	.991	11.3					

Carbon residue, Conradson Residuum 8.3 percent crude 0.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.3	0.704	69.5	
Total gasoline and naphtha	44.9	0.757	55.4	
Kerosine distillate	7.3	.816	41.9	
Gas oil	32.8	.840	37.0	
Nonviscous lubricating distillate	6.7	.859-.889	33.2-27.7	50-100
Medium lubricating distillate	2.1	.889-.906	27.7-24.7	100-200
Viscous lubricating distillate	2.2	.906-.924	24.7-21.6	Above 200
Residuum	3.4	.991	11.3	
Distillation loss	.6			

Item 492
Bureau of Mines Bartlesville Laboratory
Sample 56052

IDENTIFICATION

Robertson field
San Angelo and Clear Fork, Permian

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific 0.877 Gravity, ° API 29.9 Pour point, ° F 25
Sulfur, percent 1.95 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 49 sec. Nitrogen, percent, 0.121

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.9	0.9	0.656	84.2					
2	167	2.4	3.3	.685	75.1	15	1.38398	135.3		
3	212	4.4	7.7	.734	61.3	28	1.40917	139.9		
4	257	6.2	13.9	.762	54.2	32	1.42561	149.5		
5	302	6.0	19.9	.781	49.7	34	1.43542	151.2		
6	347	5.2	25.1	.793	46.9	32	1.44218	147.7		
7	392	4.0	29.1	.805	44.3	32	1.44784	148.8		
8	437	4.0	33.1	.817	41.7	32	1.45443	148.0		
9	482	5.1	38.2	.834	38.2	35	1.46355	154.1		
10	527	6.3	44.5	.854	34.2	40	1.47514	166.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.3	46.8	0.875	30.2	46	1.48547	168.7	40	15
12	437	5.4	52.2	.882	28.9	45	1.48998	164.4	45	35
13	482	5.6	57.8	.896	26.4	48	1.49819	179.9	58	55
14	527	5.0	62.8	.911	23.8	52	1.50515	186.4	83	70
15	572	5.2	68.0	.918	22.6	53			145	85
Residuum		31.4	99.4	.980	12.9					

Carbon residue, Conradson Residuum 6.1 percent crude 2.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.7	0.710	67.8	
Total gasoline and naphtha	29.1	0.764	53.7	
Kerosine distillate	4.0	.817	41.7	
Gas oil	18.6	.859	33.8	
Nonviscous lubricating distillate	10.0	.887-.913	28.0-23.5	50-100
Medium lubricating distillate	6.3	.913-.921	23.5-22.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	31.4	.980	12.9	
Distillation loss	.6			

Bureau of Mines Item 493
Sample Bartlesville
59061 Laboratory

IDENTIFICATION

Robertson, North field
7,100 , Clear Fork, Permian
7,114 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific 0.851 Gravity, ° API, 34.8 Pour point, ° F, below 5
Sulfur, percent, 0.79 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 743 mm Hg
First drop 106 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	2.7	2.7	0.676	77.8	-	1.38070	139.0		
3	212	6.2	8.9	.721	64.8	22	1.40282	135.6		
4	257	6.6	15.5	.751	56.9	27	1.41741	141.8		
5	302	5.9	21.4	.768	52.7	27	1.42699	146.3		
6	347	5.3	26.7	.781	49.7	27	1.43474	142.6		
7	392	4.8	31.5	.795	46.5	27	1.44257	144.1		
8	437	5.3	36.8	.810	43.2	29	1.44919	145.0		
9	482	5.0	41.8	.822	40.6	29	1.45681	148.4		
10	527	6.2	48.0	.839	37.2	32	1.46528	155.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.5	52.5	0.852	34.6	35	1.47529	161.7	39	10
12	437	4.7	57.2	.861	32.8	35	1.47976	163.0	46	20
13	482	5.6	62.8	.876	30.0	39	1.48676	165.8	59	50
14	527	5.3	68.1	.891	27.3	43	1.49355	161.3	90	65
15	572	6.3	74.4	.900	25.7	44			180	90
Residuum		25.0	99.4	.960	15.2					

Carbon residue, Conradson Residuum 8.4 percent, crude 2.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.9	0.707	68.6	
Total gasoline and naphtha	31.5	0.754	56.2	
Kerosene distillate	10.3	.816	41.9	
Gas oil	14.8	.849	35.2	
Nonviscous lubricating distillate	9.6	.866-.892	31.9-27.1	50-100
Medium lubricating distillate	6.4	.892-.901	27.1-25.6	100-200
Viscous lubricating distillate	1.8	.901-.904	25.6-25.0	Above 200
Residuum	25.0	.960	15.9	
Distillation loss	.6			

Bureau of Mines Item 494
Sample Bartlesville
54110 Laboratory

IDENTIFICATION

Rodessa field
Gloyd, Trinity, Lower Cretaceous
5,954-5,996 feet

Texas
Marion County

GENERAL CHARACTERISTICS

Gravity, specific, 0.835 Gravity, ° API, 38.0 Pour point, ° F, 45
Sulfur, percent, 0.46 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, 0.032

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 135 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.9	1.9	0.720	65.0	-				
4	257	2.3	4.2	.733	61.5	18	1.40967	139.7		
5	302	3.0	7.2	.749	57.4	18	1.41771	133.3		
6	347	3.9	11.1	.759	54.9	16	1.42420	131.9		
7	392	5.0	16.1	.771	52.0	16	1.43054	134.4		
8	437	5.2	21.3	.784	49.0	16	1.43666	134.4		
9	482	7.1	28.4	.798	45.8	18	1.44435	133.0		
10	527	10.1	40.2	.810	43.2	19	1.45141	136.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.9	47.1	0.827	39.6	23	1.45838	138.5	40	25
12	437	7.7	54.8	.835	38.0	23	1.46249	140.2	44	40
13	482	7.6	62.4	.844	36.2	24	1.46822	144.4	54	55
14	527	7.2	69.6	.858	33.4	27	1.47592	-	70	75
15	572	6.5	76.1	.870	31.1	30			110	85
Residuum		23.3	99.4	.923	21.8					

Carbon residue, Conradson Residuum 5.7 percent, crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.9	0.720	65.0	
Total gasoline and naphtha	16.1	0.753	56.4	
Kerosene distillate	24.1	.799	45.6	
Gas oil	15.4	.832	38.6	
Nonviscous lubricating distillate	15.6	.840-.867	37.0-31.7	50-100
Medium lubricating distillate	4.9	.867-.875	31.7-30.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.3	.923	21.8	
Distillation loss	6			

Bureau of Mines
Sample

Item 495
Bartlesville
59080

Laboratory

IDENTIFICATION

Round Top field
Palo Pinto Reef, Pennsylvanian
4,808-4,820 feet

Texas
Fisher County

GENERAL CHARACTERISTICS

Gravity, specific 0.819 Gravity, ° API, 41.3 Pour point, ° F, 50
Sulfur percent, 0.26 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, 0.060

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 740 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	3.7	3.7	0.643	88.6					
2	167	3.9	7.6	.667	80.6	6.1	1.37845	123.6		
3	212	6.9	14.5	.713	67.0	18	1.39839	124.3		
4	257	8.1	22.6	.742	59.2	23	1.41185	126.8		
5	302	6.4	29.0	.762	54.2	25	1.42331	134.7		
6	347	5.7	34.7	.780	49.9	26	1.43352	136.6		
7	392	5.0	39.7	.798	45.8	29	1.44229	140.1		
8	437	5.4	45.1	.810	43.2	29	1.44955	142.3		
9	482	5.4	50.5	.823	40.4	30	1.45733	147.3		
10	527	5.6	56.1	.837	37.6	32	1.46544	149.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	59.1	0.846	35.8	32	1.47241	156.1	39	10
12	437	5.6	64.7	.850	35.0	30	1.47524	157.7	44	30
13	482	5.1	69.8	.861	32.8	32	1.48090	162.5	55	50
14	527	4.9	74.7	.874	30.4	35	1.48686	-	76	66
15	572	5.7	80.4	.893	27.0	41			135	74
Residuum		18.3	98.7	.936	19.7					

Carbon residue, Conradson Residuum 4.7 percent crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	14.5	0.683	75.7	
Total gasoline and naphtha	39.7	0.732	61.8	
Kerosene distillate	10.8	.817	41.7	
Gas oil	14.5	.845	36.0	
Nonviscous lubricating distillate	9.4	.855-.881	34.0-29.1	50-100
Medium lubricating distillate	6.0	.881-.903	29.1-25.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	18.3	.936	19.7	
Distillation loss	1.3			

Bureau of Mines
Sample

Item 496
Bartlesville
59036

Laboratory

IDENTIFICATION

Running W field
Waddell, Ordovician
5,790 feet

Texas
Crane County

GENERAL CHARACTERISTICS

Gravity, specific, 0.841 Gravity, ° API, 36.8 Pour point, ° F, 15
Sulfur, percent, 0.55 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen, percent, 0.139

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 752 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	8 U visc. 100° F	Cloud test ° F
1	122	1.4	1.4	0.653	85.2					
2	167	2.1	3.5	.663	81.9	4.2	1.37684	124.2		
3	212	4.0	7.5	.704	69.5	14	1.39425	126.6		
4	257	5.4	12.9	.726	63.4	15	1.41182	134.6		
5	302	5.4	18.3	.746	58.2	17	1.42417	139.4		
6	347	5.4	23.7	.761	54.4	17	1.43460	145.0		
7	392	5.2	28.9	.778	50.3	19	1.44315	145.2		
8	437	5.6	34.5	.792	47.2	20	1.45094	145.7		
9	482	5.5	40.0	.806	44.1	22	1.45900	149.5		
10	527	6.5	46.5	.820	41.1	23	1.45657	143.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.4	49.9	0.833	38.4	26	1.46459	147.4	39	20
12	437	6.8	56.7	.842	36.6	26	1.46924	149.6	44	36
13	482	4.7	61.4	.858	33.4	30	1.47662	157.9	53	46
14	527	4.9	66.3	.874	30.4	35	1.48496	157.9	71	64
15	572	5.4	71.7	.888	27.9	38			115	80
Residuum		27.8	99.5	.950	17.5					

Carbon residue, Conradson Residuum 6.5 percent, crude 2.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.5	0.683	75.7	
Total gasoline and naphtha	28.9	0.734	61.3	
Kerosene distillate	17.6	.807	43.8	
Gas oil	10.7	.842	36.6	
Nonviscous lubricating distillate	10.1	.853-.885	34.4-28.4	50-100
Medium lubricating distillate	4.4	.885-.895	28.4-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.8	.950	17.5	
Distillation loss	.5			

Item 497
Bureau of Mines Bartlesville Laboratory
Sample 63023

IDENTIFICATION

Rusmag field
Caddo, Pennsylvanian
4,466-4,547 feet

Texas
Jack County

GENERAL CHARACTERISTICS

Gravity, specific, 0.827 Gravity, ° API, 39.6 Pour point, ° F, below 5
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, 0.057

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 745 mm. Hg
First drop, 77° F

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr., 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc., 100° F	Cloud test, ° F
1	122	1.5	1.5	0.653	85.2					
2	167	2.8	4.3	.676	77.8	10	1.37935	127.1		
3	212	6.5	10.8	.722	64.5	22	1.40132	130.1		
4	257	6.9	17.7	.745	58.4	24	1.41335	132.7		
5	302	6.2	23.9	.763	54.0	25	1.42376	136.6		
6	347	5.6	29.5	.780	49.9	26	1.43281	137.9		
7	392	5.0	34.5	.792	47.2	26	1.44008	138.3		
8	437	5.8	40.3	.807	43.8	27	1.44709	138.9		
9	482	5.5	45.8	.819	41.3	28	1.45471	143.4		
10	527	6.4	52.2	.830	39.0	28	1.46155	148.1		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	3.4	55.6	0.847	35.6	32	1.46856	151.4	41	15
12	437	5.9	61.5	.855	34.0	32	1.47119	149.9	48	45
13	482	5.5	67.0	.863	32.5	33	1.47726	152.6	62	55
14	527	5.0	72.0	.875	30.2	35	1.48344	-	91	75
15	572	6.0	78.0	.884	28.6	36	-	-	170	100
Residuum		21.4	99.4	.930	20.7					

Carbon residue, Conradson: Residuum, 2.5 percent; crude, 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.8	0.700	70.6	
Total gasoline and naphtha	34.5	0.747	58.0	
Kerosine distillate	11.3	.813	42.8	
Gas oil	13.6	.841	38.8	
Nonviscous lubricating distillate	10.7	.856-.876	33.8-30.0	50-100
Medium lubricating distillate	7.0	.876-.887	30.0-28.0	100-200
Viscous lubricating distillate	9	.887-.889	28.0-27.7	Above 200
Residuum	21.4	.930	20.7	
Distillation loss	.6			

Item 498
Bureau of Mines Bartlesville Laboratory
Sample 54040

IDENTIFICATION

Russell field
Clear Fork, Permian
7,350-7,700 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific, 0.852 Gravity, ° API, 34.6 Pour point, ° F, below 5
Sulfur, percent, 1.23 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.081

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 748 mm. Hg
First drop, 91° F

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr., 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc., 100° F	Cloud test, ° F
1	122	2.9	2.9	0.652	85.5					
2	167	3.9	6.8	.685	75.1	15	1.38636	134.4		
3	212	7.3	14.1	.738	60.2	30	1.41242	145.4		
4	257	8.1	22.2	.770	52.3	36	1.42958	153.3		
5	302	6.2	28.4	.788	48.1	37	1.44032	157.3		
6	347	5.4	33.8	.798	45.8	35	1.44573	156.5		
7	392	4.4	38.2	.805	44.3	32	1.44993	153.4		
8	437	4.6	42.8	.818	41.5	33	1.45682	154.7		
9	482	5.1	47.9	.837	37.6	36	1.46710	161.6		
10	527	6.4	54.3	.859	33.2	42	1.47976	174.3		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.7	57.0	0.879	29.5	47	1.49060	182.2	40	10
12	437	4.7	61.7	.888	27.9	48	1.49551	187.1	44	30
13	482	4.8	66.5	.899	25.9	50	1.50288	190.2	55	45
14	527	4.7	71.2	.909	24.2	51	-	-	80	65
15	572	5.4	76.6	.919	22.5	53	-	-	145	80
Residuum		21.7	98.3	.990	11.4					

Carbon residue, Conradson: Residuum, 10.6 percent; crude, 2.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	14.1	0.707	68.6	
Total gasoline and naphtha	38.2	0.757	55.4	
Kerosine distillate	4.6	.818	41.5	
Gas oil	19.5	.864	32.3	
Nonviscous lubricating distillate	8.1	.895-.912	26.6-23.7	50-100
Medium lubricating distillate	6.2	.912-.924	23.7-21.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.7	.990	11.4	
Distillation loss	1.7			

Item 499
Bureau of Mines Bartlesville Laboratory
Sample 54038

IDENTIFICATION

Russell, North field
Devonian
11,090-11,440 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific, 0.824 Gravity, ° API, 40.2 Pour point, ° F., below 5
Sulfur, percent, 0.31 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, 0.076

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 748 mm Hg
First drop, 82° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F.	C. I	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F.
1	122	3.1	3.1	0.637	90.6					
2	167	3.3	6.4	.669	80.0	7.0	1.37591	124.1		
3	212	6.2	12.6	.708	68.4	16	1.39615	122.9		
4	257	6.8	19.4	.736	60.8	20	1.40971	126.4		
5	302	6.1	25.5	.758	55.2	23	1.42155	132.1		
6	347	5.3	30.8	.777	50.6	25	1.43215	137.8		
7	392	5.1	35.9	.794	46.7	27	1.44124	140.4		
8	437	5.1	41.0	.808	43.6	28	1.44941	141.9		
9	482	5.2	46.2	.822	40.6	29	1.45760	148.0		
10	527	6.2	52.4	.838	37.4	32	1.46667	156.5		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F.	C. I	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F.
11	392	3.0	55.4	0.852	34.6	35	1.47452	159.8	40	10
12	437	5.7	61.1	.860	33.0	35	1.47863	163.6	44	35
13	482	4.5	65.6	.873	30.6	37	1.48580	166.9	55	50
14	527	4.5	70.1	.886	28.2	40			77	70
15	572	4.8	74.9	.897	26.3	43			135	80
Residuum		22.1	97.0	.957	16.4					

Carbon residue, Conradson. Residuum, 7.8 percent; crude, 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.6	0.680	76.6	
Total gasoline and naphtha	35.9	0.734	61.3	
Kerosene distillate	10.3	.815	42.1	
Gas oil	14.9	.850	35.0	
Nonviscous lubricating distillate	8.6	.867-.890	31.7-27.5	50-100
Medium lubricating distillate	5.2	.890-.903	27.5-25.2	100-200
Viscous lubricating distillate				Above 200
Residuum	22.1	.957	16.4	
Distillation loss	3.0			

Item 500
Bureau of Mines Bartlesville Laboratory
Sample 54026

IDENTIFICATION

Sadler field
Sadler, Pennsylvanian
6,896-6,950 feet

Texas
Grayson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.858 Gravity, ° API, 32.4 Pour point, ° F., below 5
Sulfur, percent, 0.58 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 59 sec.; at 77° F., 95 sec. Nitrogen, percent, 0.214

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 737 mm Hg
First drop, 82° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F.	C. I	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F.
1	122	1.5	1.5							
2	167	2.1	3.6	0.660	82.9		1.37349	126.4		
3	212	4.2	7.8	.713	67.0	18	1.39825	126.1		
4	257	4.9	12.7	.737	60.5	20	1.40968	128.6		
5	302	4.8	17.5	.756	55.7	22	1.42004	131.0		
6	347	4.4	21.9	.772	51.8	23	1.42919	132.7		
7	392	4.6	26.5	.789	47.8	24	1.43754	134.6		
8	437	4.5	31.0	.805	44.3	26	1.44584	135.1		
9	482	4.8	35.8	.819	41.3	28	1.45414	140.1		
10	527	5.7	41.5	.834	38.2	30	1.46299	148.1		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp. gr. 60/60° F	° API, 60° F.	C. I	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F.
11	392	3.0	44.5	0.850	35.0	34			40	15
12	437	4.6	49.1	.859	33.2	34			45	30
13	482	5.3	54.4	.872	30.8	37			56	45
14	527	4.8	59.2	.884	28.6	40			83	60
15	572	5.7	64.9	.898	26.1	43			160	75
Residuum		33.9	98.8	.963	15.4					

Carbon residue, Conradson. Residuum, 9.8 percent; crude, 3.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.8	0.689	73.9	
Total gasoline and naphtha	26.5	0.741	59.5	
Kerosene distillate	9.3	.812	42.8	
Gas oil	13.4	.847	35.6	
Nonviscous lubricating distillate	8.8	.865-.887	32.1-28.0	50-100
Medium lubricating distillate	6.9	.887-.905	28.0-24.9	100-200
Viscous lubricating distillate				Above 200
Residuum	33.9	.963	15.4	
Distillation loss	1.2			

Item 501
Bureau of Mines Bartlesville
Sample 56072

Laboratory

IDENTIFICATION

Sadler, West field
Huff, Pennsylvanian
6,413-6,432 feet

Texas
Grayson County

GENERAL CHARACTERISTICS

Gravity, specific 0.876... Gravity, ° API, 30.0 - Pour point, ° F, below 5
Sulfur, percent 0.82 Color, brownish black
Viscosity, Saybolt Universal at 77° F, 115 sec. Nitrogen, percent, 0.244 -
at 100° F, 76 sec.

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.8	1.8	0.641	89.3					
2	167	1.9	3.7	665	81.3	5 1				
3	212	3.9	7.6	.711	67.5	17	1.38328	125.2		
4	257	4.5	12.1	.735	61.0	19	1.40946	130.0		
5	302	4.5	16.6	.757	55.4	22	1.41986	131.6		
6	347	4.2	20.8	.775	51.1	24	1.42°56	132.7		
7	392	4.4	25.2	.793	46.9	26	1.43913	135.0		
8	437	4.0	29.2	.809	43.4	28	1.44812	132.0		
9	482	4.7	33.9	.825	40.0	31	1.45673	134.7		
10	527	5.6	39.5	.840	37.0	33	1.46568	148.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.9	41.4	0.861	32.8	39	1.47532	144.2	40	Below 5
12	437	5.4	46.8	.870	31.1	39	1.47988	156.3	46	20
13	482	4.5	51.3	.886	28.2	44	1.48748	146.1	60	35
14	527	4.2	55.5	.904	25.0	49	1.49482	157.2	92	60
15	572	5.7	61.2	.908	24.3	48	1.50178	-	180	75
Residuum		38.0	99.2	.977	13.3					

Carbon residue, Conradson Residuum 3.9 percent crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.6	0.683	75.7	
Total gasoline and naphtha	25.2	0.740	59.7	
Kerosene distillate	8.7	.818	41.5	
Gas oil	11.7	.854	34.2	
Nonviscous lubricating distillate	8.3	.875- .905	30.2-24.9	50-100
Medium lubricating distillate	5.7	.905- .909	24.9-24.2	100-200
Viscous lubricating distillate	1.6	.909- .911	24.2-23.8	Above 200
Residuum	38.0	.977	13.3	
Distillation loss	8			

Item 502
Bureau of Mines Bartlesville
Sample 63120

Laboratory

IDENTIFICATION

Salt Creek field
Canyon Reef, Pennsylvanian
6,200 feet

Texas
Kent County

GENERAL CHARACTERISTICS

Gravity, specific 0.848 Gravity, ° API, 35.4 Pour point, ° F, below 5
Sulfur, percent 0.57 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent 0.094 -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.2	1.2	0.648	86.9					
2	167	2.9	4.1	.668	80.3	6 5	1.37545	126.6		
3	212	6.1	10.2	.715	66.4	19	1.39899	129.1		
4	257	6.5	16.7	.741	59.5	22	1.41200	132.3		
5	302	6.0	22.7	.762	54.2	25	1.42376	139.5		
6	347	5.6	28.3	.782	49.4	27	1.43494	142.8		
7	392	4.8	33.1	.797	46.0	28	1.44304	145.7		
8	437	5.3	38.4	.811	43.0	29	1.45138	148.2		
9	482	5.4	43.8	.826	39.8	31	1.45924	152.3		
1/10	527	5.8	49.6	.839	37.2	32	1.46735	157.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.9	54.5	0.858	33.4	37	1.47472	160.8	41	15
12	437	5.7	60.2	.866	31.9	37	1.48001	163.8	48	40
13	482	5.8	66.0	.877	29.8	39	1.48753	-	64	60
2/14	527	4.4	70.4	.889	27.7	42			91	75
15	572									
Residuum		29.6	100.0	.953	17.0					

Carbon residue, Conradson Residuum 7.9 percent crude 2.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.2	0.694	72.5	
Total gasoline and naphtha	33.1	0.745	58.4	
Kerosene distillate	5.3	.811	43.0	
Gas oil	19.7	.845	36.0	
Nonviscous lubricating distillate	11.8	.867- .893	31.6-27.0	50-100
Medium lubricating distillate	5	.893- .894	27.0-26.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.6	.953	17.0	
Distillation loss	0			

1/ Distillation discontinued at 523°F

2/ Distillation discontinued at 509°F

Bureau of Mines
Sample
Item 503
Bartlesville
62046
Laboratory

IDENTIFICATION

Salt Flat field
Austin, Upper Cretaceous and
Buda, Lower Cretaceous
2,330-2,674 feet
Texas
Caldwell County

GENERAL CHARACTERISTICS

Gravity, specific 0.836 Gravity, ° API 37.6 Pour point, ° F, below 5
Sulfur percent 0.58 Color, brownish green
Viscosity, Saybolt Universal at 100°F 45 sec Nitrogen percent, 0.07

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.8	2.8	0.682	76.0	-				
3	212	4.3	7.1	703	69.8	13	1.40064	134.6		
4	257	6.0	13.1	733	61.5	18	1.40973	132.0		
5	302	6.0	19.1	755	55.9	21	1.42035	137.5		
6	347	5.6	24.7	772	51.8	23	1.42985	138.5		
7	392	5.9	30.6	788	48.1	24	1.43800	140.7		
8	437	6.0	36.6	801	45.2	24	1.44502	140.0		
9	482	5.7	42.3	815	42.1	26	1.45252	149.5		
10	527	7.9	50.2	830	39.0	28	1.46080	148.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	6.4	56.6	0.847	35.6	32	1.47019	151.1	41	30
12	437	5.6	62.2	.858	33.4	34	1.47493	155.9	49	45
13	482	6.0	68.2	869	31.3	36	1.48159	154.6	64	70
14	527	3.9	72.1	.880	29.3	38			90	80
15	572	6.5	78.6	891	27.3	40			160	95
Residuum		19.7	98.3	953	17.0					

Carbon residue, Conradson Residuum 6.9 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.1	0.695	72.1	
Total gasoline and naphtha	30.6	0.746	58.2	
Kerosene distillate	11.7	.808	43.6	
Gas oil	17.5	.841	36.8	
Nonviscous lubricating distillate	11.1	.859-.881	33.2-29.1	50-100
Medium lubricating distillate	7.7	.881-.898	29.1-26.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	19.7	.953	17.0	
Distillation loss	1.7			

Bureau of Mines
Sample
Item 504
Bartlesville
56059
Laboratory

IDENTIFICATION

Sand Hills (McKnight) field
San Andres, Permian
3,390 feet
Texas
Crane County

GENERAL CHARACTERISTICS

Gravity specific 0.867 Gravity, ° API, 31.7 Pour point, ° F, below 5
Sulfur percent 3.33 Color, brownish black
Viscosity, Saybolt Universal at 100°F 45 sec Nitrogen percent, 0.085

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.3	2.3	0.646	87.5					
2	167	3.8	6.1	.680	76.6	12	1.38199	124.1		
3	212	4.1	10.2	.723	64.2	23	1.40402	130.7		
4	257	7.2	17.4	.749	57.4	26	1.41738	139.3		
5	302	8.4	25.8	.775	51.1	31	1.43136	147.0		
6	347	6.0	31.8	.794	46.7	33	1.44140	145.4		
7	392	2.5	34.3	.805	44.3	32	1.44764	144.9		
8	437	4.4	38.7	.815	42.1	31	1.45239	146.7		
9	482	5.6	44.3	.829	39.2	32	1.46077	149.1		
10	527	6.4	50.7	.851	34.8	38	1.47273	157.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	53.8	0.873	30.6	45	1.48342	157.0	41	10
12	437	4.4	58.2	.883	28.8	46	1.48898	167.2	47	30
13	482	5.5	63.7	.899	25.9	50	1.49766	175.0	61	50
14	527	4.4	68.1	.911	23.8	52	1.50584	-	92	70
15	572	6.5	74.6	.916	23.0				170	80
Residuum		23.9	98.5	1.039	4.7					

Carbon residue, Conradson Residuum 9.9 percent crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.2	0.690	73.6	
Total gasoline and naphtha	34.3	0.750	57.2	
Kerosene distillate	4.4	.815	42.1	
Gas oil	18.4	.854	34.2	
Nonviscous lubricating distillate	9.4	.886-.911	28.2-23.8	50-100
Medium lubricating distillate	7.0	.911-.918	23.8-22.6	100-200
Viscous lubricating distillate	1.1	.918-.919	22.6-22.5	Above 200
Residuum	23.9	1.039	4.7	
Distillation loss	1.5			

1/ Distillation discontinued at 563°F

Item 505
Bureau of Mines Bartlesville Laboratory
Sample 63073

IDENTIFICATION

Sand Hills (Tubb) field Texas
Clear Fork, Permian Crane County
3,700 - 4,500 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 Gravity, ° API, 36.4 Pour point, ° F., below 5
Sulfur, percent, 0.79 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, 0.085

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 745 mm. Hg
First drop, 86° F.

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr 60/60° F.	° API 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test, ° F
1.....	122	2.1	2.1	0.642	88.9					
2.....	167	2.6	4.7	.670	79.7	7.5	1.37793	129.0		
3.....	212	4.6	9.3	.717	65.9	20	1.40046	133.7		
4.....	257	7.4	16.7	.743	58.9	23	1.41347	137.9		
5.....	302	6.1	22.8	.762	54.2	25	1.42535	141.3		
6.....	347	5.7	28.5	.779	50.1	26	1.43423	143.2		
7.....	392	5.0	33.5	.793	46.9	26	1.44118	142.3		
8.....	437	5.0	38.5	.806	44.1	27	1.44825	142.8		
9.....	482	5.1	43.6	.820	41.1	28	1.45552	145.0		
10.....	527	6.1	49.7	.836	37.8	31	1.46444	151.6		

STAGE 2—Distillation continued at 40 mm. Hg

11.....	392	4.3	54.0	0.854	34.2	36	1.47337	157.1	41	15
12.....	437	5.3	59.3	.867	31.7	38	1.47870	159.0	48	35
1/13.....	482	4.9	64.2	.876	30.0	39	1.48602	-	61	55
14.....	527									
15.....	572									
Residuum		34.4	98.6	.943	18.6					

Carbon residue, Conradson Residuum, 5.8 percent; crude, 2.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	9.3	0.687	74.5	
Total gasoline and naphtha	33.5	0.744	58.6	
Kerosine distillate	10.1	.813	42.5	
Gas oil	13.9	.849	35.2	
Nonviscous lubricating distillate	6.7	.868-.879	31.5-29.5	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	34.4	.943	18.6	
Distillation loss	1.4			

1/ Distillation discontinued at 469° F.

Item 506
Bureau of Mines Bartlesville Laboratory
Sample 59028

IDENTIFICATION

Scarborough field Texas
Yates, Permian Winkler County
3,000 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.855 Gravity, ° API, 34.0 Pour point, ° F., below 5
Sulfur, percent, 1.00 Color, dark green
Viscosity, Saybolt Universal at 100° F., 47 sec. Nitrogen, percent, 0.153

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 746 mm. Hg
First drop, 88° F.

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr 60/60° F.	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test, ° F
1.....	122	1.0	1.0	0.637	90.6					
2.....	167	1.7	2.7	.674	78.4	9.4	1.37564	121.7		
3.....	212	4.3	7.0	.710	67.8	17	1.39658	124.7		
4.....	257	6.1	13.1	.738	60.2	21	1.41209	130.0		
5.....	302	6.1	19.2	.762	54.2	25	1.42417	135.2		
6.....	347	5.9	25.1	.779	50.1	26	1.43460	141.7		
7.....	392	5.1	30.2	.797	46.0	28	1.44313	141.4		
8.....	437	6.0	36.2	.813	42.6	30	1.45086	141.2		
9.....	482	5.4	41.6	.823	40.4	32	1.45916	145.3		
10.....	527	6.1	47.7	.842	36.6	34	1.46817	154.1		

STAGE 2—Distillation continued at 40 mm. Hg

11.....	392	3.9	51.6	0.859	33.2	38	1.47811	159.8	40	Below 5
12.....	437	6.3	57.9	.871	31.0	40	1.48354	165.9	46	14
13.....	482	5.7	63.6	.885	28.4	43	1.49231	170.7	61	30
14.....	527	4.8	68.4	.900	25.7	47	1.49936	177.9	95	44
1/15.....	572	7.5	75.9	.911	23.8	-	1.50441	-	190	70
Residuum		23.7	99.6	.965	15.1					

Carbon residue, Conradson Residuum, 8.2 percent; crude, 2.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	7.0	0.691	73.3	
Total gasoline and naphtha	30.2	0.750	57.2	
Kerosine distillate	6.0	.813	42.6	
Gas oil	20.2	.848	35.4	
Nonviscous lubricating distillate	10.0	.875-.901	30.2-25.6	50-100
Medium lubricating distillate	6.6	.901-.912	25.6-23.7	100-200
Viscous lubricating distillate	2.9	.912-.917	23.7-22.8	Above 200
Residuum	23.7	.965	15.1	
Distillation loss	.4			

1/ Distillation discontinued at 568° F.

Item 507
Bureau of Mines Bartlesville Laboratory
Sample 55038

IDENTIFICATION

Seeligson field Texas
Frio 19B, Oligocene Kleberg County
6,057 - 6,074 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.819 Gravity, ° API, 41.3 Pour point, ° F., 20
Sulfur, percent, less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, 0.015

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 742 mm. Hg
First drop, 88° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F
1	122	1.0	1.0							
2	167	1.5	2.5	0.665	81.3	-	1.37839	124.7		
3	212	4.5	7.0	.722	64.5	22	1.40266	131.3		
4	257	7.5	14.5	.750	57.2	27	1.41673	136.3		
5	302	7.9	22.4	.767	53.0	27	1.42733	143.9		
6	347	8.3	30.7	.781	49.7	27	1.43574	141.1		
7	392	8.3	39.0	.793	46.9	26	1.44113	140.2		
8	437	7.8	46.8	.807	43.8	27	1.44801	140.0		
9	482	11.0	57.8	.825	40.0	31	1.45779	147.4		
10	527	12.3	70.1	.844	36.2	35	1.46865	151.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F
11	392	5.7	75.8	0.860	33.0	38	1.47546	150.8	41	20
12	437	6.1	81.9	.863	32.5	36	1.47706	153.2	46	40
13	482	4.5	86.4	.875	30.2	38	1.48309	151.8	59	60
14	527	3.1	89.5	.891	27.3	43			89	75
15	572	3.7	93.2	.919	22.5	53			250	85
Residuum		5.4	98.6	.990	11.4					

Carbon residue, Conradson Residuum, 6.9 percent; crude, 0.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.702	70.1	
Total gasoline and naphtha	39.0	0.761	54.4	
Kerosine distillate	18.8	.818	41.5	
Gas oil	22.7	.852	34.6	
Nonviscous lubricating distillate	7.7	.866-.892	31.9-27.1	50-100
Medium lubricating distillate	2.2	.892-.910	27.1-24.0	100-200
Viscous lubricating distillate	2.8	.910-.934	24.0-20.0	Above 200
Residuum	5.4	.990	11.4	
Distillation loss	1.4			

Item 508
Bureau of Mines Bartlesville Laboratory
Sample 55039

IDENTIFICATION

Seeligson field Texas
Frio 19C, Oligocene Kleberg County
6,123 - 6,129 feet

GENERAL CHARACTERISTICS

Gravity, specific, 0.816 Gravity, ° API, 41.9 Pour point, ° F., below 5
Sulfur, percent, less than 0.10 Color, NPA 8
Viscosity, Saybolt Universal at 100° F., 34 sec. Nitrogen, percent, 0.014

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 746 mm Hg
First drop, 81° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F
1	122	1.3	1.3							
2	167	1.9	3.2	0.662	82.2	-	1.38045	129.2		
3	212	4.3	7.5	.723	64.2	23	1.40245	128.5		
4	257	7.5	15.0	.749	57.4	26	1.41682	134.8		
5	302	7.2	22.2	.767	53.0	27	1.42676	142.6		
6	347	8.1	30.3	.780	49.9	26	1.43461	142.1		
7	392	8.5	38.8	.793	46.9	26	1.44049	144.0		
8	437	9.5	48.3	.805	44.3	26	1.44746	142.3		
9	482	11.3	59.6	.826	39.8	31	1.45700	145.0		
10	527	13.0	72.6	.845	36.0	31	1.46773	149.7		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F	Cloud test, ° F
11	392	5.6	78.2	0.860	33.0	38	1.47549	154.4	40	15
12	437	5.7	83.9	.864	32.3	37	1.47731	152.2	46	35
13	482	4.2	88.1	.875	30.2	38	1.48388	149.1	58	55
14	527	3.3	91.4	.894	26.8	44			88	70
15	572	3.6	95.0	.919	22.5	53			230	85
Residuum		4.0	99.0	.982	12.6					

Carbon residue, Conradson Residuum, 4.4 percent; crude, 0.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.5	0.697	71.5	
Total gasoline and naphtha	38.8	0.758	55.2	
Kerosine distillate	9.5	.805	44.3	
Gas oil	34.5	.844	36.2	
Nonviscous lubricating distillate	7.4	.868-.897	31.5-26.3	50-100
Medium lubricating distillate	2.3	.897-.913	26.3-23.5	100-200
Viscous lubricating distillate	2.5	.913-.931	23.5-20.5	Above 200
Residuum	4.0	.982	12.6	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 509
Bartlesville
54153
Laboratory

IDENTIFICATION

Seminole field
San Andres, Permian
5,240 - 5,270 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific, 0.857 Gravity, ° API, 33.6 Pour point, ° F, below 5
Sulfur, percent, 1.86 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen percent, 0.104

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 753 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.634	91.7					
2	167	2.9	4.6	.662	82.2	3.7	1.37139	126.9		
3	212	5.3	9.9	.712	67.2	18	1.40234	136.3		
4	257	6.7	16.6	.752	56.7	27	1.41911	140.5		
5	302	6.1	22.7	.774	51.3	30	1.43096	145.4		
6	347	5.3	28.0	.787	48.3	30	1.43852	141.6		
7	392	4.7	32.7	.799	45.6	29	1.44466	142.4		
8	437	5.0	37.7	.813	42.6	30	1.45141	144.7		
9	482	4.8	42.5	.826	39.8	31	1.46048	149.3		
10	527	6.4	48.9	.848	35.4	37	1.47066	157.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.0	51.9	0.867	31.7	42	1.48103	158.0	40	15
12	437	5.1	57.0	.877	29.9	43	1.48294	169.1	45	35
13	482	5.9	62.9	.887	28.0	44	1.49251	-	56	50
14	527	4.8	67.7	.904	25.0	49	1.50091	-	84	70
15	572	5.4	73.1	.914	23.3	51			150	85
Residuum		26.0	99.1	.983	12.5					

Carbon residue, Conradson Residuum 9.7 percent, crude 2.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.9	0.684	75.4	
Total gasoline and naphtha	32.7	0.748	57.7	
Kerosene distillate	5.0	.813	42.6	
Gas oil	19.4	.853	34.4	
Nonviscous lubricating distillate	9.4	.881-.907	29.1-24.5	50-100
Medium lubricating distillate	6.6	.907-.919	24.5-22.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	26.0	.983	12.5	
Distillation loss	.9			

Bureau of Mines
Sample
Item 510
Bartlesville
63121
Laboratory

IDENTIFICATION

Seminole, West field
San Andres, Permian
5,009 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific, 0.866 Gravity, ° API, 31.9 Pour point, ° F, below 5
Sulfur, percent, 2.11 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, 0.108

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.632	92.4					
2	167	3.2	4.9	.673	78.8	8.9	1.37855	133.2		
3	212	5.5	10.4	.723	64.2	23	1.40520	139.1		
4	257	7.4	17.8	.754	56.2	28	1.42038	146.0		
5	302	6.2	24.0	.777	50.6	32	1.43275	151.1		
6	347	5.4	29.4	.789	47.8	31	1.43986	151.1		
7	392	4.6	34.0	.800	45.4	30	1.44499	147.6		
8	437	4.9	38.9	.815	42.1	31	1.45192	149.5		
9	482	4.7	43.6	.829	39.2	32	1.46074	154.1		
10	527	5.1	48.7	.847	35.6	36	1.47058	163.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.4	53.1	0.873	30.6	45	1.48167	168.7	40	20
12	437	5.5	58.6	.885	28.4	46	1.48888	175.7	48	45
13	482	5.2	63.8	.895	26.6	48	1.49789	-	63	60
14	527	4.1	67.9	.908	24.3	51			94	75
15	572	6.1	74.0	.920	22.3	54			200	90
Residuum		25.4	99.4	1.007	9.0					

Carbon residue, Conradson Residuum 8.7 percent, crude 2.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.4	0.693	72.8	
Total gasoline and naphtha	34.0	0.751	56.9	
Kerosene distillate	4.9	.815	42.1	
Gas oil	17.7	.856	33.9	
Nonviscous lubricating distillate	9.6	.886-.909	28.1-24.2	50-100
Medium lubricating distillate	4.8	.909-.920	24.2-22.3	100-200
Viscous lubricating distillate	3.0	.920-.927	22.3-21.1	Above 200
Residuum	25.4	1.007	9.0	
Distillation loss	.6			

Item 511
Bureau of Mines Bartlesville
Sample 56034 Laboratory

IDENTIFICATION

Shafter Lake field
San Andres, Permian
4,482 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.838 Gravity, ° API 37.4 Pour point, ° F, below 5
Sulfur, percent 0.25 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 46 sec. Nitrogen, percent, 0.041

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122									
2	167	1.2	1.2	0.674	78.4	-				
3	212	2.2	3.4	.708	68.4	16	1.40437	125.2		
4	257	4.6	8.0	.735	61.0	19	1.41035	119.8		
5	302	6.1	14.1	.753	56.4	20	1.41931	120.7		
6	347	5.9	20.0	.771	52.0	22	1.42788	128.8		
7	392	6.5	26.5	.784	49.0	22	1.43500	129.1		
8	437	6.7	33.2	.797	46.0	23	1.44203	128.0		
9	482	6.7	39.9	.809	43.4	23	1.44858	132.9		
10	527	7.1	47.0	.820	41.1	23	1.45508	136.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	50.3	0.835	38.0	27	1.46219	140.2	39	20
12	437	6.5	56.8	.841	36.8	26	1.46510	136.3	44	35
13	482	6.1	62.9	.850	35.0	27	1.47024	146.8	53	50
14	527	5.3	68.2	.865	32.1	31	1.47595	145.2	70	60
15	572	6.3	74.5	.879	29.5	34			115	75
Residuum		25.2	99.7	.936	19.7					

Carbon residue, Conradson Residuum 6.0 percent, crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.4	0.696	71.8	
Total gasoline and naphtha	26.5	0.754	56.2	
Kerosene distillate	20.5	.804	43.4	
Gas oil	10.9	.840	37.0	
Nonviscous lubricating distillate	11.6	.847-.874	35.6-30.4	50-100
Medium lubricating distillate	5.0	.874-.886	30.4-28.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.2	.936	19.7	
Distillation loss	.3			

Item 512
Bureau of Mines Bartlesville
Sample 56053 Laboratory

IDENTIFICATION

Sharon Ridge field
San Andres, Permian
1,759 feet

Texas
Scurry County

GENERAL CHARACTERISTICS

Gravity, specific 0.892 Gravity, ° API 27.1 Pour point, ° F, below 5
Sulfur, percent, 2.04 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 68 sec., 100° F., 58 sec. Nitrogen, percent, 0.128

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.8	0.8	0.661	82.6					
2	167	4.3	5.1	.693	72.7	18	1.38750	135.1		
3	212	2.8	7.9	.741	59.5	31	1.41244	160.6		
4	257	5.4	13.3	.761	54.4	32	1.42409	147.0		
5	302	5.2	18.5	.780	49.9	33	1.43502	151.3		
6	347	4.9	23.4	.792	47.2	32	1.44206	151.1		
7	392	3.5	26.9	.803	44.7	31	1.44781	149.6		
8	437	4.3	31.2	.817	41.7	32	1.45508	150.6		
9	482	4.7	35.9	.835	38.0	35	1.46539	157.6		
10	527	5.7	41.6	.858	33.4	41	1.47782	168.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	44.6	0.877	29.9	46	1.48798	170.7	40	15
12	437	5.3	49.9	.888	27.9	48	1.49492	162.9	45	30
13	482	5.5	55.4	.907	24.5	54	1.50411	181.8	59	50
14	527	4.4	59.8	.918	22.6	56	1.51171	-	84	65
15	572	6.0	65.8	.924	21.6	55			155	80
Residuum		33.0	98.8	1.018	7.5					

Carbon residue, Conradson Residuum 6.6 percent, crude 2.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.9	0.707	68.6	
Total gasoline and naphtha	26.9	0.760	54.7	
Kerosene distillate	4.3	.817	41.7	
Gas oil	18.1	.863	32.5	
Nonviscous lubricating distillate	7.8	.895-.916	26.6-23.0	50-100
Medium lubricating distillate	8.7	.916-.928	23.0-21.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	33.0	1.018	7.5	
Distillation loss	1.2			

Bureau of Mines
Sample Item 513
Bartlesville 56071
Laboratory

IDENTIFICATION

Sherman field
7,500', Baker, Pennsylvanian
7,247 - 7,326 feet
Texas
Grayson County

GENERAL CHARACTERISTICS

Gravity, specific 0.843 Gravity, ° API, 36.4 Pour point, ° F, below 5
Sulfur, percent, 0.35 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, 0.111

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.643	88.6					
2	167	2.4	4.2	.664	81.6	4.6	1.37120	122.2		
3	212	4.4	8.6	.710	67.8	17	1.39788	126.1		
4	257	5.9	14.5	.737	60.5	20	1.41041	126.9		
5	302	5.3	19.8	.756	55.7	22	1.42009	125.0		
6	347	5.3	25.1	.773	51.6	23	1.42979	127.4		
7	392	4.8	29.9	.788	48.1	24	1.43761	133.3		
8	437	5.0	34.9	.803	44.7	25	1.44529	131.7		
9	482	5.8	40.7	.817	41.7	27	1.45307	135.9		
10	527	6.1	46.8	.832	38.6	29	1.46128	142.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	50.5	0.850	35.0	34	1.46940	143.1	40	Below 5
12	437	6.0	56.5	.859	33.2	34	1.47460	144.2	46	25
13	482	4.1	60.6	.871	31.0	37	1.48170	142.7	58	40
14	527	4.7	65.3	.886	28.2	40	1.48848	-	84	55
15	572	5.3	70.6	.895	26.6	42			155	75
Residuum		28.1	98.7	.947	17.9					

Carbon residue, Conradson Residuum 5.8 percent, crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.6	0.683	75.7	
Total gasoline and naphtha	29.9	0.739	60.0	
Kerosine distillate	10.8	.811	43.0	
Gas oil	14.6	.845	36.0	
Nonviscous lubricating distillate	8.8	.863-.889	32.5-27.7	50 100
Medium lubricating distillate	6.5	.889-.899	27.7-25.9	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	28.1	.947	17.9	
Distillation loss	1.3			

Bureau of Mines
Sample Item 514
Bartlesville 56069
Laboratory

IDENTIFICATION

Sherman field
8,900', Cordell, Pennsylvanian
9,238 - 9,375 feet
Texas
Grayson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.847 Gravity, ° API, 35.6 Pour point, ° F, below 5
Sulfur, percent, 0.35 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, 0.131

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	3.0	3.0	0.661	82.6	-	1.37493	127.9		
3	212	4.4	7.4	.711	67.5	17	1.39959	127.4		
4	257	5.4	12.8	.737	60.5	20	1.41079	133.2		
5	302	4.4	17.2	.758	55.2	23	1.42154	131.4		
6	347	5.3	22.5	.772	51.8	23	1.43002	132.6		
7	392	5.0	27.5	.787	48.3	23	1.43729	147.1		
8	437	4.8	32.3	.803	44.7	25	1.44607	133.1		
9	482	5.4	37.7	.818	41.5	27	1.45405	139.2		
10	527	6.4	44.1	.832	38.6	29	1.46228	144.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	47.7	0.845	36.0	31	1.47019	150.2	39	10
12	437	5.2	52.9	.856	33.8	33	1.47477	151.9	45	25
13	482	4.5	57.4	.873	30.6	37	1.48236	153.6	57	45
14	527	5.0	62.4	.889	27.7	42	1.49001	155.3	81	70
15	572	6.3	68.7	.899	25.9	44			155	80
Residuum		29.0	97.7	.952	17.1					

Carbon residue, Conradson Residuum 5.6 percent, crude 1.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.4	0.691	73.3	
Total gasoline and naphtha	27.5	0.744	58.7	
Kerosine distillate	10.2	.811	43.0	
Gas oil	14.7	.843	36.4	
Nonviscous lubricating distillate	9.0	.863-.890	32.5-27.5	50 100
Medium lubricating distillate	7.3	.890-.904	27.5-25.0	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	29.0	.952	17.1	
Distillation loss	2.3			

Item 515
Bureau of Mines Bartlesville
Sample 59022 Laboratory

IDENTIFICATION

Shipley field
Queen, Permian
3,100 feet

Texas
Ward County

GENERAL CHARACTERISTICS

Gravity, specific 0.845 Gravity, ° API, 36.0 Pour point, ° F, 25
Sulfur, percent 1.34 Color, dark green
Viscosity, Saybolt Universal at 100° F., 41 sec. Nitrogen, percent, 0.129

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 86° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
1	122	2.8	2.8	0.642	88.9					
2	167	3.0	5.8	.667	80.6	6.1	1.37812	123.9		
3	212	5.3	11.1	.712	67.2	18	1.39673	127.5		
4	257	7.4	18.5	.744	58.7	24	1.41406	132.2		
5	302	6.4	24.9	.767	53.0	27	1.42736	140.9		
6	347	5.4	30.3	.784	49.0	28	1.43725	143.7		
7	392	4.4	34.7	.796	46.3	28	1.44413	143.2		
8	437	5.3	40.0	.811	43.0	29	1.44995	143.0		
9	482	4.4	44.4	.824	40.2	30	1.45735	146.8		
10	527	6.8	51.2	.842	36.6	34	1.46759	152.9		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
11	392	2.8	54.0	0.857	33.6	37	1.47752	163.7	39	10
12	437	6.3	60.3	.869	31.3	39	1.48299	164.3	46	30
13	482	4.2	64.5	.885	28.4	43	1.49186	173.6	59	50
14	527	4.9	69.4	.899	25.9	47	1.49907	172.5	84	60
15	572	5.6	75.0	.906	24.7	47			155	74
Residuum		23.9	98.9	.971	14.2					

Carbon residue, Conradson Residuum 8.9 percent crude 2.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.682	76.0	
Total gasoline and naphtha	34.7	0.741	59.5	
Kerosene distillate	9.7	.817	41.7	
Gas oil	14.4	.853	34.4	
Nonviscous lubricating distillate	9.4	.873-.900	30.6-25.7	50-100
Medium lubricating distillate	6.8	.900-.910	25.7-24.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.9	.971	14.2	
Distillation loss	1.1			

Item 516
Bureau of Mines Bartlesville
Sample 53019 Laboratory

IDENTIFICATION

Slaughter field
Permian

Texas
Hockley County

GENERAL CHARACTERISTICS

Gravity, specific 0.869 Gravity, ° API, 31.3 Pour point, ° F, 20
Sulfur, percent 2.09 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 90° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
1	122									
2	167	5.8	5.8	0.677	77.5	-	1.38606	137.2		
3	212	5.5	11.3	.737	60.5	29	1.41281	148.4		
4	257	6.2	17.5	.762	54.2	32	1.42510	149.3		
5	302	5.4	22.9	.777	50.6	32	1.43368	152.8		
6	347	4.7	27.6	.789	47.8	31	1.43996	148.5		
7	392	4.7	32.3	.801	45.2	30	1.44570	147.4		
8	437	4.8	37.1	.815	42.1	31	1.45375	149.1		
9	482	4.3	41.4	.831	38.8	33	1.46296	154.5		
10	527	6.0	47.4	.851	34.8	38	1.47328	160.2		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise, 100° F	Cloud test ° F
11	392	2.3	49.7	0.864	32.3	40			39	20
12	437	5.7	55.4	.876	30.0	42			45	30
13	482	5.7	61.9	.888	27.9	45			56	50
14	527	4.5	65.6	.903	25.2	49			81	70
15	572	6.3	71.9	.915	23.1	51			160	85
Residuum		28.0	99.9	.995	10.7					

Carbon residue, Conradson Residuum 12.4 percent crude 4.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.3	0.706	68.9	
Total gasoline and naphtha	32.3	0.755	55.9	
Kerosene distillate	4.8	.815	42.1	
Gas oil	18.1	.855	34.0	
Nonviscous lubricating distillate	9.5	.881-.905	29.1-24.9	50-100
Medium lubricating distillate	6.8	.905-.921	24.9-22.1	100-200
Viscous lubricating distillate	.4	.921-.922	22.1-22.0	Above 200
Residuum	28.0	.995	10.7	
Distillation loss	.1			

Bureau of Mines Item 517
Bartlesville Laboratory
Sample 58052

IDENTIFICATION

Slocum, Northwest field
Woodbine C, Upper Cretaceous
5,564 - 5,567 feet

Texas
Anderson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.799 Gravity, ° API, 45.6 Pour point, ° F, 35
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, 0.010

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122	2.7	2.7	0.639	89.9					
2	167	3.7	6.4	.674	78.4	9.4	1.37935	126.6		
3	212	6.1	12.5	.719	65.3	21	1.40177	128.7		
4	257	9.1	21.6	.748	57.7	26	1.41634	136.7		
5	302	7.5	29.1	.769	52.5	28	1.42945	142.1		
6	347	7.0	36.1	.783	49.2	28	1.43702	140.9		
7	392	6.0	42.1	.793	46.9	26	1.44206	142.7		
8	437	5.7	47.8	.803	44.7	25	1.44761	142.9		
9	482	6.8	54.6	.815	42.1	26	1.45495	143.9		
10	527	7.4	62.0	.828	39.4	27	1.46112	149.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.3	66.3	0.835	38.0	27	1.46568	147.1	39	20
12	437	5.9	72.2	.842	36.6	26	1.46748	148.4	43	34
13	482	6.7	78.9	.854	34.2	28	1.47228	145.2	54	64
14	527	4.6	83.5	.863	32.5	30			76	84
15	572	4.7	88.2	.890	27.5	32			185	94
Residuum		8.7	96.9	.925	21.5					

Carbon residue, Conradson Residuum 3.3 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.5	0.688	74.2	
Total gasoline and naphtha	42.1	0.746	58.2	
Kerosene distillate	12.5	.810	43.2	
Gas oil	18.7	.836	37.8	
Nonviscous lubricating distillate	9.0	.850-.869	35.0-31.3	50-100
Medium lubricating distillate	4.2	.869-.893	31.3-27.0	100-200
Viscous lubricating distillate	1.7	.893-.903	27.0-25.2	Above 200
Residuum	8.7	.925	21.5	
Distillation loss	3.1			

Bureau of Mines Item 518
Bartlesville Laboratory
Sample 61138

IDENTIFICATION

Snyder field
San Angelo, Permian
2,598 - 2,727 feet

Texas
Howard County

GENERAL CHARACTERISTICS

Gravity, specific, 0.871 Gravity, ° API, 31.0 Pour point, ° F, 36
Sulfur, percent, 1.46 Color, greenish black
Viscosity, Saybolt Universal at 77°F., 111 sec., 100°F., 80 sec. Nitrogen, percent, 0.10

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 755 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc, 100° F	Cloud test ° F
1	122	2.2	2.2	0.673	78.8					
2	167	2.9	5.1	.681	76.3	13	1.38377	129.7		
3	212	5.1	10.2	.729	62.6	26	1.40656	146.6		
4	257	6.2	16.4	.758	55.2	30	1.42331	148.1		
5	302	5.2	21.6	.776	50.9	31	1.43434	155.4		
6	347	4.1	25.7	.789	47.8	31	1.44070	154.9		
7	392	4.1	29.8	.801	45.2	30	1.44659	152.6		
8	437	4.6	34.4	.814	42.3	31	1.45394	154.6		
9	482	5.4	39.8	.832	38.6	34	1.46406	160.8		
10	527	5.6	45.4	.853	30.0	39	1.47553	168.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.6	47.0	0.876	30.0	46	1.48542	176.1	40	20
12	437	5.9	52.9	.883	28.8	46	1.49087	181.2	44	35
13	482	5.1	58.0	.895	26.6	48	1.49936	188.3	56	60
14	527	4.9	62.9	.913	23.5	53	1.50579	-	81	75
15	572	5.9	68.8	.923	21.8	55			150	95
Residuum		28.9	97.7	1.000	10.0					

Carbon residue, Conradson Residuum 12.6 percent crude 4.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.2	0.703	69.8	
Total gasoline and naphtha	29.8	0.753	56.4	
Kerosene distillate	4.6	.814	42.3	
Gas oil	18.4	.859	33.9	
Nonviscous lubricating distillate	9.2	.889-.916	27.7-23.0	50-100
Medium lubricating distillate	6.8	.916-.929	23.0-20.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	28.9	1.000	10.0	
Distillation loss	2.3			

Item 519
Bureau of Mines Bartlesville
Sample 49028 Laboratory

IDENTIFICATION

Sour Lake field
Eocene

Texas
Hardin County

GENERAL CHARACTERISTICS

Gravity, specific 0.822 Gravity, ° API, 40.6 Pour point, ° F, 25
Sulfur, percent, 0.14 Color, dark green
Viscosity, Saybolt Universal at 100° F, 39 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.644	88.2					
2	167	2.0	3.9	.680	76.6	12	1.38337	128.3		
3	212	5.1	9.0	.727	63.1	25	1.40453	133.9		
4	257	8.4	17.4	.756	55.7	29	1.42036	141.2		
5	302	8.2	25.6	.777	50.6	32	1.43263	149.7		
6	347	5.3	30.9	.789	47.8	31	1.43999	151.1		
7	392	5.5	36.4	.798	45.8	29	1.44489	148.6		
8	437	5.5	41.9	.812	42.8	30	1.45147	149.4		
9	482	6.3	48.2	.826	39.8	31	1.46031	154.4		
10	527	8.0	56.2	.840	37.0	33	1.46925	159.7		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.2	60.4	0.852	34.6	35			40	20
12	437	5.9	66.3	.854	34.2	32			45	45
13	482	4.9	71.2	.862	32.7	32			54	60
14	527	5.2	76.4	.872	30.8	34			76	80
15	572	5.8	82.2	.885	28.4	37			135	95
Residuum		16.7	98.9	.919	22.5					

Carbon residue, Conradson Residuum 2.7 percent crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.0	0.699	70.9	
Total gasoline and naphtha	36.4	0.758	55.2	
Kerosene distillate	5.5	.812	42.8	
Gas oil	24.6	.843	36.4	
Nonviscous lubricating distillate	9.6	.858-.877	33.4-29.9	50-100
Medium lubricating distillate	6.1	.877-.891	29.9-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	16.7	.919	22.5	
Distillation loss	1.1			

Item 520
Bureau of Mines Bartlesville
Sample 59144 Laboratory

IDENTIFICATION

Spindletop field
Miocene
3,500 - 4,500 feet

Texas
Jefferson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.884 Gravity, ° API, 28.6 Pour point, ° F, below 5
Sulfur, percent, 0.15 Color, brownish green
Viscosity, Saybolt Universal at 77° F, 69 sec. 100° F, 51 sec. Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 754 mm Hg
First drop 149 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.8	1.8	0.725	63.7	-	1.40258	125.9		
4	257	2.3	4.1	.760	54.7	31	1.41771	128.6		
5	302	2.3	6.4	.782	49.5	34	1.42891	129.4		
6	347	3.3	9.7	.804	44.5	38	1.44146	133.3		
7	392	4.5	14.2	.826	39.8	42	1.45307	137.2		
8	437	6.5	20.7	.847	35.6	46	1.46417	143.8		
9	482	9.9	30.6	.866	31.9	50	1.47498	152.2		
10	527	13.3	43.9	.882	28.9	53	1.48552	161.3		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	7.6	51.5	0.894	26.8	55	1.49330	167.5	44	Below 5
12	437	8.3	59.8	.900	25.7	54	1.49512	158.5	55	do.
13	482	7.7	67.5	.906	24.7	53	1.49722	158.5	82	do.
14	527	6.8	74.3	.915	23.1	54	1.50274	-	165	20
15	572	7.3	81.6	.924	21.6	55		over 400		30
Residuum		17.6	99.2	.942	18.7					

Carbon residue, Conradson Residuum 2.9 percent, crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.8	0.725	63.7	
Total gasoline and naphtha	9.7	0.774	51.3	
Kerosene distillate	-	-	-	
Gas oil	42.5	.869	31.3	
Nonviscous lubricating distillate	13.1	.897-.908	26.3-24.3	50-100
Medium lubricating distillate	8.3	.908-.916	24.3-23.0	100-200
Viscous lubricating distillate	8.0	.916-.926	23.0-21.3	Above 200
Residuum	17.6	.942	18.7	
Distillation loss	.8			

Item 521
Bureau of Mines Bartlesville Laboratory
Sample 52022

IDENTIFICATION

Spraberry Deep field
Spraberry, Pennsylvanian
6,770 - 6,811 feet

Texas
Dawson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.839 Gravity, ° API, 37.2 Pour point, ° F, below 5
Sulfur, percent, 0.17 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.3	2.3	0.656	84.2					
2	167	3.0	5.3	.669	80.0	7.0	1.38097	126.1		
3	212	6.6	11.9	.719	65.3	21	1.39957	125.5		
4	257	8.8	20.7	.746	58.2	25	1.41163	124.8		
5	302	5.6	26.3	.764	53.7	26	1.42204	127.4		
6	347	5.2	31.5	.784	49.0	28	1.43263	129.7		
7	392	4.6	36.1	.802	44.9	31	1.44281	133.0		
8	437	4.8	40.9	.819	41.3	33	1.45190	137.3		
9	482	4.9	45.8	.831	38.8	33	1.45926	141.7		
10	527	5.5	51.3	.841	36.8	33	1.46617	148.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.7	54.0	0.852	34.6	35			41	10
12	437	5.5	59.5	.859	33.2	34			46	30
13	482	4.6	64.1	.869	31.3	36			59	45
14	527	4.7	68.8	.886	28.2	40			93	65
15	572	4.7	73.5	.900	25.7	44			185	80
Residuum		25.5	99.0	.959	16.0					

Carbon residue, Conradson Residuum 6.6 percent, crude 1.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.9	0.694	72.4	
Total gasoline and naphtha	36.1	0.744	58.7	
Kerosene distillate	4.8	.819	41.3	
Gas oil	17.4	.844	36.2	
Nonviscous lubricating distillate	8.6	.862-.887	32.7-28.0	50 100
Medium lubricating distillate	5.0	.887-.902	28.0-25.4	100 200
Viscous lubricating distillate	1.6	.902-.907	25.4-24.5	Above 200
Residuum	25.5	.959	16.0	
Distillation loss	1.0			

Item 522
Bureau of Mines Bartlesville Laboratory
Sample 63123

IDENTIFICATION

Spraberry Trend field
Clear Fork, Permian

Texas
Midland County

GENERAL CHARACTERISTICS

Gravity, specific, 0.855 Gravity, ° API, 34.0 Pour point, ° F, below 5
Sulfur, percent, 0.19 Color, brownish green
Viscosity, Saybolt Universal at 77° F, 61 sec., 100° F, 52 sec. Nitrogen, percent, 0.163

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 735 mm Hg
First drop 122 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.9	1.9	0.701	70.4	-				
3	212	6.3	8.2	.721	64.8	22	1.40114	131.1		
4	257	5.1	13.3	.745	58.4	24	1.41259	130.9		
5	302	5.6	18.9	.761	54.4	24	1.42157	136.3		
6	347	4.3	23.2	.778	50.4	25	1.43070	137.1		
7	392	4.1	27.3	.793	46.9	26	1.43891	139.3		
8	437	4.2	31.5	.808	43.6	28	1.44775	139.6		
9	482	5.4	36.9	.823	40.4	30	1.45606	145.9		
10	527	5.7	42.6	.834	38.2	30	1.46289	150.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	45.6	0.856	33.8	36	1.47228	154.5	41	20
12	437	4.8	50.4	.861	32.8	35	1.47540	-	48	35
13	482	4.6	55.0	.870	31.1	36	1.48289	-	62	50
14	527	4.9	59.9	.885	28.4	40	1.48908	-	96	70
15	572	5.2	65.1	.895	26.6	42			180	80
Residuum		33.3	98.4	.947	17.9					

Carbon residue, Conradson Residuum 3.8 percent, crude 1.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.2	0.716	66.0	
Total gasoline and naphtha	27.3	0.752	56.6	
Kerosene distillate	9.6	.816	41.8	
Gas oil	11.8	.846	35.7	
Nonviscous lubricating distillate	9.0	.862-.885	32.6-28.3	50 100
Medium lubricating distillate	6.0	.885-.897	28.3-26.2	100 200
Viscous lubricating distillate	1.4	.897-.900	26.2-25.7	Above 200
Residuum	33.3	.947	17.9	
Distillation loss	1.6			

Item 523
Bureau of Mines Bartlesville Laboratory
Sample 58005

IDENTIFICATION

Spraberry Trend field
Spraberry, Permian
7,128 - 7,228 feet

Texas
Reagan County

GENERAL CHARACTERISTICS

Gravity, specific, 0.850 Gravity, ° API, 35.0 Pour point, ° F, 10
Sulfur, percent, 0.18 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 48 sec. Nitrogen, percent, 0.183

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 750 mm Hg
First drop, 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. vis., 100° F	Cloud test, ° F
1	122	1.4	1.4	0.658	83.6					
2	167	1.1	2.5	.697	71.5	20				
3	212	6.3	8.8	.724	63.9	23	1.39423	120.8		
4	257	7.9	16.7	.750	57.2	27	1.41347	120.5		
5	302	5.7	22.4	.769	52.5	28	1.42411	127.6		
6	347	4.8	27.2	.787	48.3	30	1.43462	127.6		
7	392	4.1	31.3	.805	44.3	32	1.44415	129.3		
8	437	4.5	35.8	.819	41.3	33	1.45258	138.2		
9	482	4.5	40.3	.831	38.8	33	1.45994	140.3		
10	527	5.4	45.7	.841	36.8	33	1.46621	148.3		

Stage 2—Distillation continued at 40 mm. Hg

11	392	3.7	49.4	0.849	35.2	33	1.47319	-	41	10
12	437	5.0	54.4	.861	32.8	35	1.47610	-	46	30
13	482	4.3	58.7	.871	31.0	37	1.48256	-	60	56
14	527	4.8	63.5	.885	28.4	40	1.48986	-	90	70
15	572	4.8	68.3	.903	25.2	46		-	185	80
Residuum		28.4	96.7	.953	17.0					

Carbon residue, Conradson Residuum, 7.1 percent; crude, 2.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.8	0.710	67.8	
Total gasoline and naphtha	31.3	0.755	55.9	
Kerosine distillate	4.5	.819	41.3	
Gas oil	17.5	.844	36.2	
Nonviscous lubricating distillate	8.3	.864-.876	32.3-30.0	50-100
Medium lubricating distillate	5.1	.876-.906	30.0-24.7	100-200
Viscous lubricating distillate	1.6	.906-.912	24.7-23.7	Above 200
Residuum	28.4	.953	17.0	
Distillation loss	3.3			

Item 524
Bureau of Mines Bartlesville Laboratory
Sample 46129

IDENTIFICATION

Stowell field
Frio, Oligocene
7,838 feet

Texas
Jefferson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.858 Gravity, ° API, 33.4 Pour point, ° F, -
Sulfur, percent, 0.17 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 49 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 742 mm. Hg
First drop, 133° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. vis., 100° F	Cloud test, ° F
1	122									
2	167	0.5	0.5							
3	212	1.4	1.9	0.714	66.7	-	1.40041	135.8		
4	257	2.4	4.3	.754	56.2	28	1.41957	144.3		
5	302	3.6	7.9	.775	51.1	31	1.43186	149.0		
6	347	3.6	11.5	.789	47.8	31	1.43903	145.1		
7	392	4.9	16.4	.801	45.2	30	1.44395	143.9		
8	437	7.1	23.5	.814	42.3	31	1.45024	140.2		
9	482	9.3	32.8	.828	39.4	32	1.45817	144.4		
10	527	11.2	44.0	.844	36.2	35	1.46614	144.6		

Stage 2—Distillation continued at 40 mm. Hg

11	392	8.1	52.1	0.856	33.8	37			41	10
12	437	6.9	59.0	.862	32.7	36			48	25
13	482	8.9	67.9	.872	30.8	37			61	45
14	527	5.7	73.6	.881	29.1	38			91	60
15	572	6.3	79.9	.895	26.6	42			170	80
Residuum		19.6	99.5	.940	19.0					

Carbon residue, Conradson: Residuum, 5.0 percent; crude, 1.1 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.9	0.714	66.7	
Total gasoline and naphtha	16.4	0.776	50.9	
Kerosine distillate	7.1	.814	42.3	
Gas oil	33.3	.845	36.0	
Nonviscous lubricating distillate	14.7	.864-.883	32.3-28.8	50-100
Medium lubricating distillate	7.5	.883-.900	28.8-25.7	100-200
Viscous lubricating distillate	.9	.900-.902	25.7-25.4	Above 200
Residuum	19.6	.940	19.0	
Distillation loss	.5			

Item 525
Bureau of Mines Bartlesville
Sample 55043 Laboratory

IDENTIFICATION

Stratton field
Bertram, Wardner, Sellers 2 and P-4,
Frio, Oligocene
6,591 - 6,635

Texas
Kieberg County

GENERAL CHARACTERISTICS

Gravity, specific, 0.811 Gravity, ° API, 43.0 Pour point, ° F, 25
Sulfur, percent, less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 34 sec. Nitrogen, percent, 0.013

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 82.00 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9							
2	167	1.9	3.8	0.664	81.6	-	1.37511	120.0		
3	212	5.8	9.6	.722	64.5	22	1.40373	129.5		
4	257	8.0	17.6	.748	57.7	26	1.41584	134.7		
5	302	6.7	24.3	.764	53.7	26	1.42570	140.2		
6	347	8.4	32.7	.777	50.6	25	1.43335	140.7		
7	392	8.2	40.9	.789	47.8	24	1.43891	139.2		
8	437	8.8	49.7	.802	44.9	25	1.44563	138.8		
9	482	11.0	60.7	.820	41.1	28	1.45484	144.1		
10	527	12.6	73.3	.838	37.4	32	1.46484	149.7		

Stage 2—Distillation continued at 40 mm. Hg

11	392	4.6	77.9	0.854	34.2	36	1.47236	151.2	40	20
12	437	6.0	83.9	.856	33.8	33	1.47399	152.9	45	40
13	482	4.5	88.4	.868	31.5	35	1.48042	153.8	56	60
14	527	2.7	91.1	.888	27.9	41			82	75
15	572	3.0	94.1	.915	23.1	51			190	85
Residuum		4.7	98.8	1.002	9.7					

Carbon residue, Conradson Residuum 9.9 percent, crude 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.6	0.699	70.9	
Total gasoline and naphtha	40.9	0.753	56.4	
Kerosene distillate	19.8	.812	42.8	
Gas oil	22.7	.846	35.8	
Nonviscous lubricating distillate	6.8	.861-.891	32.8-27.3	50-100
Medium lubricating distillate	2.7	.891-.916	27.3-23.0	100-200
Viscous lubricating distillate	1.2	.916-.928	23.0-21.0	Above 200
Residuum	4.7	1.002	9.7	
Distillation loss	1.2			

Item 526
Bureau of Mines Bartlesville
Sample 59107 Laboratory

IDENTIFICATION

Sun, North Field
Frio C-25, Oligocene
4,318 - 4,326 feet

Texas
Starr County

GENERAL CHARACTERISTICS

Gravity, specific, 0.783 Gravity, ° API, 49.2 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, NPA 4
Viscosity, Saybolt Universal at 100° F, 47 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 737 mm. Hg
First drop 90.00 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.661	82.6					
2	167	4.3	6.2	.679	76.9	12	1.37855	124.5		
3	212	10.5	16.7	.722	64.5	22	1.39875	128.7		
4	257	13.7	30.4	.749	57.4	26	1.41306	135.0		
5	302	11.6	42.0	.765	53.5	26	1.42371	135.3		
6	347	10.3	52.3	.779	50.1	26	1.43258	140.3		
7	392	8.8	61.1	.793	46.9	26	1.43924	138.0		
8	437	8.1	69.2	.807	43.4	27	1.44577	140.1		
9	482	8.0	77.2	.824	40.2	30	1.45476	147.1		
10	527	7.2	84.4	.841	36.8	33	1.46484	148.5		

Stage 2—Distillation continued at 40 mm. Hg

11	392	4.4	88.8	0.850	35.0	34	1.47254	156.9	40	15
12	437	2.6	91.4	.853	34.4	31	1.47399	154.3	45	35
13	482	2.3	93.7	.864	32.3	33	1.47988	155.6	55	60
14	527	1.5	95.2	.885	28.4	40			87	75
15	572	1.7	96.9	.911	23.8	-			185	90
Residuum		1.7	98.6	.984	12.3					

Carbon residue, Conradson Residuum 3.9 percent, crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	16.7	0.704	69.5	
Total gasoline and naphtha	61.1	0.752	56.7	
Kerosene distillate	16.1	.815	42.1	
Gas oil	14.2	.847	35.6	
Nonviscous lubricating distillate	3.3	.858-.886	33.4-28.2	50-100
Medium lubricating distillate	1.8	.886-.916	28.2-23.0	100-200
Viscous lubricating distillate	4	.916-.924	23.0-21.6	Above 200
Residuum	1.7	.984	12.3	
Distillation loss	1.4			

1/ Distillation discontinued, 563° F

Item 527
Bureau of Mines Bartlesville
Sample 62052 Laboratory

IDENTIFICATION

Taft Deep field Texas
Frio D-2, Oligocene San Patricio County
6,209-6,214 feet

GENERAL CHARACTERISTICS

Gravity specific 0.842 Gravity ° API, 36.6 Pour point, ° F, 5
Sulfur percent, 0.10 Color, green
Viscosity, Saybolt Universal at 77° F, 38 sec., 100° F., 37 sec. Nitrogen, percent, 0.01

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 169 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	3.0	3.0	0.724	63.9	-	1.40615	129.9		
4	257	5.3	8.3	.746	58.2	25	1.41511	134.1		
5	302	5.4	13.7	.763	54.0	25	1.42461	141.4		
6	347	6.3	20.0	.778	50.4	25	1.43358	144.7		
7	392	6.9	26.9	.791	47.4	25	1.44025	143.6		
8	437	8.9	35.8	.806	44.1	27	1.44781	143.4		
9	482	12.1	47.9	.824	40.2	30	1.45787	145.6		
10	527	15.5	63.4	.848	35.4	37	1.47082	155.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	8.5	71.9	0.871	31.0	44	1.48129	161.0	40	15
12	437	8.9	80.8	.880	29.3	44	1.48575	165.1	46	35
13	482	5.4	86.2	.898	26.1	49	1.49647	171.7	63	60
14	527	3.6	89.8	.921	22.1	57	1.51081	173.9	110	70
15	572	3.6	93.4	.953	17.0	69			390	80
Residuum		5.8	99.2	1.002	9.7					

Carbon residue, Conradson Residuum 4.3 percent crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.0	0.724	63.9	
Total gasoline and naphtha	26.9	0.766	53.2	
Kerosene distillate	8.9	.806	44.1	
Gas oil	42.3	.851	34.8	
Nonviscous lubricating distillate	9.0	.884-.916	28.6-23.0	50-100
Medium lubricating distillate	2.4	.916-.934	23.0-20.0	100-200
Viscous lubricating distillate	3.9	.934-.969	20.0-14.5	Above 200
Residuum	5.8	1.002	9.7	
Distillation loss	8			

Item 528
Bureau of Mines Bartlesville
Sample 54106 Laboratory

IDENTIFICATION

Talco field Texas
Trinity, Lower Cretaceous Titus County
4,258 - 4,276 feet

GENERAL CHARACTERISTICS

Gravity, specific 0.931 Gravity, ° API, 20.5 Pour point, ° F, 15
Sulfur percent 3.00 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 520 sec., 130° F, 270 sec. Nitrogen, percent, 0.134

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 124 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	4.4	4.4	0.698	71.2	-	1.39399	127.0		
5	302	2.0	6.4	.749	57.4	18	1.41666	128.5		
6	347	2.0	8.4	.777	50.6	25	-	-		
7	392	2.3	10.7	.792	47.2	26	1.43744	140.8		
8	437	3.2	13.9	.807	43.8	27	1.45061	146.7		
9	482	3.8	17.7	.820	41.1	28	1.45774	148.5		
10	527	5.7	23.4	.835	38.0	31	1.46671	158.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.4	24.8	0.859	33.2	38	1.47584	162.3	39	Below 5
12	437	5.5	30.3	.869	31.3	39	1.48154	167.7	44	20
13	482	5.7	36.0	.884	28.6	43	1.49001	173.3	53	40
14	527	5.4	41.4	.901	25.6	48			73	55
15	572	7.9	49.3	.911	23.8	49			125	75
Residuum		50.7	100.0	1.012	8.3					

Carbon residue, Conradson Residuum 17.6 percent crude 9.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	10.7	0.743	58.9	
Kerosene distillate	7.0	.814	42.3	
Gas oil	13.7	.854	34.2	
Nonviscous lubricating distillate	10.8	.856-.879	33.8-29.5	50-100
Medium lubricating distillate	7.1	.879-.906	29.5-24.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	50.7	1.012	9.7	
Distillation loss	.0			

Bureau of Mines
Sample
Item 529
Bartlesville
62084
Laboratory

IDENTIFICATION

Tatum field
Lower Pettit, Lower Cretaceous
6,782 - 6,786 feet

Texas
Rusk County

GENERAL CHARACTERISTICS

Gravity, specific, 0.811 Gravity, ° API, 43.0 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, green
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 95 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	2.4	2.4	0.882	76.0	-	1.38472	-		
3	212	3.8	6.2	.707	68.6	15	1.39692	139.3		
4	257	5.2	11.4	.726	63.4	15	1.40591	134.1		
5	302	4.8	16.2	.739	60.0	14	1.41268	132.7		
6	347	6.2	22.4	.754	56.2	14	1.42105	135.6		
7	392	6.1	28.5	.771	52.0	16	1.42993	133.1		
8	437	6.3	34.8	.785	48.8	17	1.43688	134.7		
9	482	6.7	41.5	.799	45.6	18	1.44432	136.4		
10	527	8.0	49.5	.812	42.8	20	1.45163	139.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.9	52.4	0.834	38.2	26	1.46035	142.4	39	15
12	437	7.3	59.7	.841	36.8	26	1.46368	141.6	43	35
13	482	5.8	65.5	.848	35.4	26	1.46917	146.6	50	55
14	527	5.9	71.4	.864	32.3	30	1.47553	147.1	66	70
15	572	6.5	77.9	.872	30.8	31			105	90
Residuum		17.2	95.1	.915	23.1					

Carbon residue, Conradson Residuum 2.6 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.2	0.697	71.4	
Total gasoline and naphtha	28.5	0.738	60.3	
Kerosene distillate	21.0	.800	45.4	
Gas oil	13.1	.841	36.9	
Nonviscous lubricating distillate	11.3	.848-.871	35.4-31.0	50-100
Medium lubricating distillate	4.0	.871-.876	31.0-30.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.2	.915	23.1	
Distillation loss	4.9			

Bureau of Mines
Sample
Item 530
Bartlesville
52084
Laboratory

IDENTIFICATION

Thompson field
3,600', No. 2, Miocene
3,478 - 3,510

Texas
Fort Bend County

GENERAL CHARACTERISTICS

Gravity, specific 0.911 Gravity, ° API, 23.8 Pour point, ° F, below 5
Sulfur, percent, 0.25 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 140 sec. 130° F, 83 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 753 mm Hg
First drop 360 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302									
6	347									
7	392	1.4	1.4	0.843	36.4	-				
8	437	3.2	4.6	.853	34.4	49	1.46176	133.9		
9	482	6.7	11.3	.870	31.1	52	1.47468	142.4		
10	527	11.7	23.0	.882	28.9	53	1.48241	150.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	9.1	32.1	0.889	27.7	52			44	Below 5
12	437	9.4	41.5	.892	27.1	50			56	do
13	482	8.4	49.9	.897	26.3	49			83	do.
14	527	6.9	56.8	.907	24.5	50			155	do.
15	572	9.0	65.8	.916	23.0	52			370	do
Residuum		33.5	99.3	.945	18.2					

Carbon residue, Conradson Residuum 4.2 percent, crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha				
Kerosene distillate				
Gas oil	32.4	0.877	29.9	
Nonviscous lubricating distillate	15.2	.891-.899	27.3-25.9	50-100
Medium lubricating distillate	7.5	.899-.909	25.9-24.2	100-200
Viscous lubricating distillate	10.7	.909-.921	24.2-22.1	Above 200
Residuum	33.5	.945	18.2	
Distillation loss	7			

Item 531
Bureau of Mines Bartlesville Laboratory
Sample 48056

IDENTIFICATION

Tijerina-Canales-Blucher field
Frio, Oligocene
7,115 - 7,121 feet

Texas
Jim Wells County

GENERAL CHARACTERISTICS

Gravity, specific, 0.823 Gravity, ° API, 40.5 Pour point, ° F., 35
Sulfur, percent, less than 0.10 Color, brownish green.
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 747 mm Hg
First drop, 115 ° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1.....	122	0.2	0.2							
2.....	167	1.3	1.5	0.661	82.6	-	1.37349	134.9		
3.....	212	4.3	5.8	.717	65.9	20	1.39990	127.5		
4.....	257	8.6	14.4	.745	58.4	24	1.41418	134.7		
5.....	302	7.7	22.1	.763	54.0	25	1.42513	139.4		
6.....	347	7.7	29.8	.778	50.4	25	1.43342	142.5		
7.....	392	7.9	37.7	.791	47.4	25	1.43990	140.3		
8.....	437	7.4	45.1	.805	44.3	26	1.44685	140.8		
9.....	482	10.1	55.2	.815	42.1	26	1.45560	143.4		
10.....	527	12.2	67.4	.840	37.0	33	1.46582	148.4		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
11.....	392	6.3	73.7	0.852	34.6	35			41	15
12.....	437	6.7	80.4	.854	34.2	32			46	40
13.....	482	5.8	86.2	.866	31.9	34			59	65
14.....	527	3.4	89.6	.883	28.8	39			94	85
15.....	572	3.9	93.5	.918	22.6	53			230	95
Residuum		6.4	99.9	.985	12.2					

Carbon residue, Conradson Residuum, 7.7 percent; crude, 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.8	0.703	69.8	
Total gasoline and naphtha	37.7	0.759	54.9	
Kerosene distillate	17.5	.811	43.0	
Gas oil	23.8	.847	35.6	
Nonviscous lubricating distillate	9.0	.858-.884	33.4-28.6	50-100
Medium lubricating distillate	2.7	.884-.910	28.6-24.0	100-200
Viscous lubricating distillate	2.8	.910-.936	24.0-19.7	Above 200
Residuum	6.4	.985	12.2	
Distillation loss	.1			

Item 532
Bureau of Mines Bartlesville Laboratory
Sample 63013

IDENTIFICATION

Todd Deep field
Ellenburger, Cambro-Ordovician
6,232 - 6,320 feet

Texas
Crockett County

GENERAL CHARACTERISTICS

Gravity, specific, 0.819 Gravity, ° API, 41.3 Pour point, ° F., below 5
Sulfur, percent, 0.26 Color, green
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen, percent, 0.027

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 747 mm Hg
First drop, 77 ° F.

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1.....	122	3.3	3.3	0.636	91.0					
2.....	167	3.1	6.4	.673	78.8	8.9	1.37876	124.0		
3.....	212	6.4	12.8	.719	65.3	21	1.40004	128.1		
4.....	257	7.3	20.1	.745	58.4	24	1.41385	133.6		
5.....	302	5.3	25.4	.766	53.2	26	1.42561	138.3		
6.....	347	5.2	30.6	.782	49.4	27	1.43477	141.7		
7.....	392	4.6	35.2	.795	46.5	27	1.44173	141.1		
8.....	437	5.1	40.3	.809	43.4	28	1.44908	142.4		
9.....	482	5.2	45.5	.823	40.4	30	1.45724	145.4		
10.....	527	5.8	51.3	.836	37.8	31	1.46433	151.0		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum, percent	Sp gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
11.....	392	4.3	55.6	0.853	34.4	35	1.47114	154.3	41	15
12.....	437	5.0	60.6	.860	33.0	35	1.47483	152.6	47	35
13.....	482	5.1	65.7	.866	31.9	34	1.48022	159.2	60	55
14.....	527	4.9	70.6	.878	29.7	37			88	80
15.....	572	5.9	76.5	.883	28.7	36			155	95
Residuum		20.4	96.9	.921	22.1					

Carbon residue, Conradson Residuum, 2.7 percent; crude, 0.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	12.8	0.686	74.6	
Total gasoline and naphtha	35.2	0.739	60.0	
Kerosene distillate	10.3	.816	41.9	
Gas oil	13.8	.847	35.5	
Nonviscous lubricating distillate	9.8	.861-.879	32.8-29.5	50-100
Medium lubricating distillate	7.4	.879-.886	29.5-28.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.4	.921	22.1	
Distillation loss	3.1			

Item 533
Bureau of Mines Bartlesville Laboratory
Sample 62044

IDENTIFICATION

Tom O'Connor field
5,500', Frio, Oligocene
5,536 - 5,550 feet

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific, 0.870 Gravity, ° API, 31.1 Pour point, ° F, below 5
Sulfur, percent, 0.16 Color, green
Viscosity, Saybolt Universal at 100° F, 39 sec Nitrogen, percent, 0.03

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 140° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	5.8	5.8	0.730	62.3	-	1.40508	-		
4	257	7.3	13.1	.755	55.9	29	1.41669	128.5		
5	302	5.5	18.6	.776	50.9	31	1.42896	135.1		
6	347	5.7	24.3	.798	45.8	35	1.44098	140.7		
7	392	5.2	29.5	.818	41.5	38	1.45099	143.1		
8	437	6.5	36.0	.838	37.4	42	1.46073	142.4		
9	482	9.9	45.9	.859	33.2	47	1.47171	146.0		
10	527	12.9	58.8	.879	29.5	51	1.48282	155.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	5.4	64.2	0.903	25.2	59	1.49328	162.2	44	Below 5
12	437	8.0	72.2	.913	23.5	60	1.49912	169.3	54	do.
13	482	7.7	79.9	.930	20.7	64	1.51069	179.7	84	do
14	527	4.9	84.8	.960	15.9	76	1.52765	-	over 400	30
15	572	3.7	88.5	.976	13.5	80			over 400	35
Residuum		10.0	98.5	1.008	8.9					

Carbon residue, Conradson Residuum 6.1 percent, crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.8	0.730	62.3	
Total gasoline and naphtha	29.5	0.773	51.6	
Kerosine distillate	-	-	-	
Gas oil	36.1	.871	31.0	
Nonviscous lubricating distillate	12.8	.909-.941	24.2-18.9	50-100
Medium lubricating distillate	10.1	.941-.983	18.9-12.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	10.0	1.008	8.9	
Distillation loss	1.5			

Item 534
Bureau of Mines Bartlesville Laboratory
Sample 62193

IDENTIFICATION

Tom O'Connor field
5,900', Frio, Oligocene

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific, 0.852 Gravity, ° API, 34.6 Pour point, ° F, below 5
Sulfur, percent, 0.18 Color, green
Viscosity, Saybolt Universal at 100° F, 37 sec Nitrogen, percent, 0.036

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm Hg
First drop 77° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	0.7	0.7	0.683	75.7					
2	167	2.4	3.1	.692	73.0	18	1.38665	129.1		
3	212	5.4	8.5	.736	60.8	29	1.40787	131.4		
4	257	5.8	14.3	.759	54.9	31	1.42032	136.2		
5	302	5.9	20.2	.779	50.1	33	1.43196	143.0		
6	347	5.1	25.3	.790	47.6	31	1.44215	145.7		
7	392	5.6	30.9	.814	42.3	36	1.44979	143.8		
8	437	8.2	39.1	.832	38.6	39	1.45854	144.7		
9	482	8.5	47.6	.851	34.8	43	1.46808	148.1		
10	527	9.9	57.5	.868	31.5	46	1.47787	154.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	9.3	66.8	0.887	28.0	51	1.48743	160.5	43	Below 5
12	437	7.8	74.6	.897	26.3	52	1.49389	170.0	55	25
13	482	4.5	79.1	.910	24.0	55	1.50379	-	81	45
14	527	4.4	83.5	.928	21.0	60	1.51255	-	170	65
15	572									
Residuum		14.0	97.5	.989	11.6					

Carbon residue, Conradson Residuum 2.7 percent, crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.5	0.719	65.2	
Total gasoline and naphtha	30.9	0.767	53.0	
Kerosine distillate	-	-	-	
Gas oil	36.2	.861	32.8	
Nonviscous lubricating distillate	10.7	.893-.914	27.0-23.3	50-100
Medium lubricating distillate	5.0	.914-.934	23.3-20.0	100-200
Viscous lubricating distillate	.7	.934-.937	20.0-19.5	Above 200
Residuum	14.0	.989	11.6	
Distillation loss	2.5			

1/ Distillation discontinued at 518° F.

Bureau of Mines
Sample

Item 535
Bartlesville
59154

Laboratory

IDENTIFICATION

Tom O'Connor field
Frio, Oligocene

Texas
Refugio County

GENERAL CHARACTERISTICS

Gravity, specific 0.851 Gravity, ° API, 34.8 Pour point, ° F, below 5
Sulfur, percent, 0.17 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 39 sec. Nitrogen, percent, 0.048

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 747 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.2	1.2	0.661	82.6					
2	167	2.0	3.2	.669	80.0	7.0	1.37548	124.1		
3	212	4.8	8.0	.722	64.5	22	1.40079	123.1		
4	257	6.7	14.7	.753	56.4	28	1.41648	131.2		
5	302	5.1	19.8	.773	51.6	30	1.42805	138.8		
6	347	5.4	25.2	.790	47.6	31	1.43852	138.8		
7	392	5.4	30.6	.806	44.1	32	1.44702	140.6		
8	437	6.8	37.4	.826	39.8	36	1.45549	140.1		
9	482	9.3	46.7	.846	35.8	41	1.46603	148.2		
10	527	13.0	59.7	.868	31.5	46	1.47787	150.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.2	65.9	0.883	28.8	49	1.48816	158.2	42	14
12	437	7.9	73.8	.891	27.3	49	1.49369	162.9	51	40
13	482	5.3	79.1	.909	24.2	55	1.50157	168.1	73	70
14	527	5.5	84.6	.929	20.8	61	1.51133	-	155	74
15	572	4.1	88.7	.957	16.4	71	1.52060	-	Over 400	84
Residuum		9.5	98.2	1.001	9.9					

Carbon residue, Conradson Residuum 4.4 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.0	0.700	70.6	
Total gasoline and naphtha	30.6	0.758	55.2	
Kerosene distillate	-	-	-	
Gas oil	38.5	.859	33.2	
Nonviscous lubricating distillate	9.2	.890-.915	27.5-23.1	50-100
Medium lubricating distillate	4.4	.915-.933	23.1-20.2	100-200
Viscous lubricating distillate	6.0	.933-.969	20.2-14.5	Above 200
Residuum	9.5	1.001	9.9	
Distillation loss	1.8			

Bureau of Mines
Sample

Item 536
Bartlesville
55072

Laboratory

IDENTIFICATION

Tomball field
Schultz, Cockfield, Eocene
5,537 - 5,544 feet

Texas
Harris County

GENERAL CHARACTERISTICS

Gravity, specific 0.820 Gravity, ° API, 41.1 Pour point, ° F, 25
Sulfur, percent, less than 0.10 Color, NPA 6
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen, percent, 0.015

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	1.0	1.0							
2	167	1.4	2.4	0.678	77.2	-				
3	212	4.0	6.4	.729	62.6	26	1.39935	130.8		
4	257	6.6	13.0	.759	54.9	31	1.42256	142.0		
5	302	6.1	19.1	.776	50.9	31	1.43256	147.8		
6	347	6.6	25.7	.787	48.3	30	1.44020	148.6		
7	392	7.0	32.7	.798	45.8	29	1.44477	151.7		
8	437	8.2	40.9	.810	43.2	29	1.45028	147.1		
9	482	11.6	52.5	.825	40.0	31	1.45803	147.5		
10	527	15.1	67.6	.840	37.0	33	1.46606	151.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	7.4	75.0	0.852	34.6	35	1.47205	152.0	40	20
12	437	8.1	83.1	.853	34.4	31	1.47254	151.7	45	40
13	482	5.2	88.3	.863	32.5	33	1.47590	152.5	51	55
14	527	3.6	91.9	.875	30.2	35			79	75
15	572	3.5	95.4	.894	26.8	41			140	90
Residuum		4.1	99.5	.950	17.5					

Carbon residue, Conradson Residuum 2.5 percent, crude 0.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.4	0.716	66.1	
Total gasoline and naphtha	32.7	0.768	52.7	
Kerosene distillate	19.8	.819	41.3	
Gas oil	32.2	.848	35.4	
Nonviscous lubricating distillate	6.2	.861-.879	32.8-29.5	50-100
Medium lubricating distillate	4.5	.879-.903	29.5-25.2	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	4.1	.950	17.5	
Distillation loss	.5			

Bureau of Mines Item 537
Bartlesville Laboratory
Sample 59123

Trinity Bay field
Frio 12, Oligocene
8,106 - 8,108 feet

IDENTIFICATION

Texas
Chambers County

GENERAL CHARACTERISTICS

Gravity, specific, 0.844 Gravity, ° API, 36.2 Pour point, ° F, 15
Sulfur, percent, 0.11 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent, 0.027

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 740 mm Hg
First drop, 108 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test, ° F
1	122	2.0	2.0	0.682	76.0		1.39254	130.1		
2	167	2.1	4.1	.725	63.7	24	1.40303	131.9		
3	212	4.6	8.7	.752	56.7	27	1.41733	134.6		
4	257	4.9	13.6	.771	52.0	29	1.42893	144.3		
5	302	5.1	18.7	.784	49.0	28	1.43722	146.0		
6	347	5.2	23.9	.796	46.3	28	1.44313	144.3		
7	392	8.9	32.8	.814	42.3	31	1.45244	146.7		
8	437	8.0	40.8	.835	38.0	35	1.46342	154.3		
9	482	12.4	53.2	.851	34.8	38	1.47275	159.3		
10	527									

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test, ° F
11	392	7.0	60.2	0.861	32.8	39	1.48009	164.1	41	16
12	437	8.0	68.2	.868	31.5	38	1.48098	160.0	46	36
13	482	6.9	75.1	.876	30.0	39	1.48605	160.7	61	50
14	527	5.0	80.1	.890	27.5	42			94	70
15	572	4.4	84.5	.903	25.2	46			190	80
Residuum		13.6	98.1	.937	19.5					

Carbon residue, Conradson. Residuum, 2.3 percent; crude, 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.1	0.704	69.5	
Total gasoline and naphtha	23.9	0.764	53.7	
Kerosine distillate	8.9	.814	42.3	
Gas oil	33.5	.852	34.6	
Nonviscous lubricating distillate	10.6	.870-.881	31.1-29.1	50-100
Medium lubricating distillate	5.9	.881-.907	29.1-24.5	100-200
Viscous lubricating distillate	1.7	.907-.911	24.5-23.8	Above 200
Residuum	13.6	.937	19.5	
Distillation loss	1.9			

Bureau of Mines Item 538
Bartlesville Laboratory
Sample 61170

Triple N field
Pennsylvanian
8,897 - 8,961

IDENTIFICATION

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.815 Gravity, ° API, 42.1 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 40 sec. Nitrogen, percent, 0.05

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 745 mm Hg
First drop, 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test, ° F
1	122	1.8	1.8	0.660	82.9					
2	167	3.3	5.1	.668	80.3	13	1.37619	117.8		
3	212	5.4	10.5	.704	69.5	18	1.39278	129.0		
4	257	7.9	18.4	.730	62.3	22	1.40609	129.6		
5	302	6.5	24.9	.750	57.2	24	1.41727	131.8		
6	347	4.0	28.9	.764	53.7	24	1.42498	136.3		
7	392	6.0	34.9	.778	50.1	24	1.43270	136.6		
8	437	5.8	40.7	.792	47.2	25	1.43986	136.8		
9	482	5.8	46.5	.807	43.8	26	1.44775	141.1		
10	527	6.8	53.3	.820	41.1	27	1.45514	142.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API, 60° F	C. I.	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test, ° F
11	392	3.7	57.0	0.839	37.2	27	1.46363	146.5	40	25
12	437	6.6	63.6	.852	34.6	28	1.46803	146.6	45	45
13	482	5.1	68.7	.859	33.2	29	1.47545	152.9	57	55
14	527	4.3	73.0	.874	30.4	33			82	75
15	572	5.1	78.1	.885	28.4	35			135	85
Residuum		19.4	97.5	.930	20.7					

Carbon residue, Conradson. Residuum, 4.6 percent; crude, 1.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.5	0.685	75.1	
Total gasoline and naphtha	34.9	0.732	61.8	
Kerosine distillate	18.4	.807	43.8	
Gas oil	9.6	.845	36.0	
Nonviscous lubricating distillate	9.6	.855-.878	34.0-29.7	50-100
Medium lubricating distillate	5.6	.878-.891	29.7-27.3	100-200
Viscous lubricating distillate				Above 200
Residuum	19.4	.930	20.7	
Distillation loss	2.5			

Bureau of Mines
Sample

Item 539
Bartlesville
63059

Laboratory

IDENTIFICATION

TXL field
Devonian
7,818 - 7,900 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific 0.830 Gravity, ° API 39.0 Pour point, ° F, below 5
Sulfur, percent, 0.30 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen percent, 0.076

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.643	88.6					
2	147	2.9	4.8	.670	79.7	7.5	1.37756	126.0		
3	212	6.3	11.1	.714	66.7	18	1.39854	128.7		
4	257	6.8	17.9	.739	60.0	21	1.41138	130.5		
5	302	6.3	24.2	.759	54.9	23	1.42250	136.2		
6	347	5.6	29.8	.777	50.6	25	1.43224	139.7		
7	392	4.7	34.5	.792	47.2	26	1.44036	140.6		
8	437	5.6	40.1	.806	44.1	27	1.44809	140.5		
9	482	5.2	45.3	.821	40.9	29	1.45584	146.3		
10	527	5.9	51.2	.833	38.4	30	1.46368	152.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.0	55.2	0.852	34.6	35	1.47103	153.0	40	15
12	437	5.2	60.4	.860	33.0	35	1.47545	152.5	48	35
13	482	5.8	66.2	.870	31.1	36	1.48258	157.0	62	50
14	527	4.5	70.7	.883	28.7	39			94	70
15	572	5.2	75.9	.891	27.3	40			170	90
Residuum		72.7	98.6	.941	18.9					

Carbon residue, Conradson Residuum 5.2 percent crude 1.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.690	73.5	
Total gasoline and naphtha	34.5	0.740	59.6	
Kerosine distillate	10.8	.813	42.5	
Gas oil	13.3	.845	35.9	
Nonviscous lubricating distillate	10.2	.861-.884	32.8-28.6	50-100
Medium lubricating distillate	6.4	.884-.894	28.6-26.8	100-200
Viscous lubricating distillate	.7	.894-.895	26.8-26.6	Above 200
Residuum	22.7	.941	18.9	
Distillate on loss	1.4			

Bureau of Mines
Sample

Item 540
Bartlesville
63046

Laboratory

IDENTIFICATION

TXL field
Ellenburger, Cambro-Ordovician
9,359 - 9,411

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity specific 0.809 Gravity, ° API 43.4 Pour point, ° F, below 5
Sulfur, percent, 0.23 Color, green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.036

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 749 mm Hg
First drop 73 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.638	90.3					
2	167	3.1	5.8	.665	81.3	5.1	1.37514	129.5		
3	212	5.3	11.1	.701	70.4	12	1.39363	129.9		
4	257	5.9	17.0	.725	63.7	15	1.40621	131.4		
5	302	5.3	22.3	.743	58.9	16	1.41610	136.1		
6	347	5.5	27.8	.758	55.2	16	1.42400	136.3		
7	392	5.4	33.2	.773	51.6	17	1.43116	136.5		
8	437	5.9	39.1	.785	48.8	17	1.43913	138.5		
9	482	6.0	45.1	.800	45.4	19	1.44681	142.8		
10	527	6.1	51.2	.814	42.3	21	1.45362	145.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.1	55.3	0.830	39.0	24	1.46038	146.4	39	25
12	437	6.3	61.6	.840	37.0	25	1.46581	150.7	44	40
13	482	4.8	66.4	.852	34.6	27	1.47503	156.6	53	45
14	527	4.2	70.6	.870	31.1	33	1.48319	-	70	60
15	572	4.9	75.5	.879	29.5	34			110	85
Residuum		21.0	96.5	.929	20.8					

Carbon residue, Conradson Residuum 4.2 percent, crude 1.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.1	0.676	77.9	
Total gasoline and naphtha	33.2	0.725	63.8	
Kerosine distillate	18.0	.800	45.4	
Gas oil	10.9	.837	37.6	
Nonviscous lubricating distillate	9.8	.848-.877	35.4-29.9	50-100
Medium lubricating distillate	3.6	.877-.884	29.9-28.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.0	.929	20.8	
Distillate on loss	3.5			

Item 541
Bureau of Mines Bartlesville Laboratory
Sample 59047

IDENTIFICATION

TXL field
Tubb, Permian
6,158 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity, specific, 0.843 Gravity, ° API, - 36.4 Pour point, ° F, below 5
Sulfur, percent, 0.54 Color, green
Viscosity, Saybolt Universal at 100° F, 47 sec. Nitrogen, percent, 0.02

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.650	86.2					
2	167	2.5	4.2	.670	79.7	7.5	1.37508	127.7		
3	212	4.6	8.8	.710	67.8	17	1.39598	130.5		
4	257	6.1	14.9	.740	59.7	22	1.41064	133.0		
5	302	5.4	20.3	.759	54.9	23	1.42128	135.9		
6	347	5.1	25.4	.775	51.1	24	1.43033	138.3		
7	392	4.9	30.3	.791	47.4	25	1.43885	140.0		
8	437	4.7	35.0	.806	44.1	27	1.44687	137.5		
9	482	5.1	40.1	.821	40.9	29	1.45470	140.5		
10	527	5.9	46.0	.833	38.4	30	1.46315	146.4		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.4	49.4	0.848	35.4	33	1.47243	150.1	40	10
12	437	4.9	54.3	.856	33.8	33	1.47633	150.0	45	25
13	482	4.9	59.2	.868	31.5	35	1.48294	157.2	56	35
14	527	5.3	64.5	.883	28.8	39	1.48918	158.8	80	60
15	572	5.5	70.0	.893	27.0	41			140	70
Residuum		28.5	98.5	.947	17.9					

Carbon residua, Conradson Residuum 5.2 percent, crude 1.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	8.8	0.687	74.5	
Total gasoline and naphtha	30.3	0.742	59.2	
Kerosene distillate	9.8	.814	42.3	
Gas oil	14.1	.845	36.0	
Nonviscous lubricating distillate	9.5	.861-.886	32.8-28.2	50-100
Medium lubricating distillate	6.3	.886-.898	28.2-26.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	28.5	.947	17.9	
Distillation loss	1.5			

Item 542
Bureau of Mines Bartlesville Laboratory
Sample 56058

IDENTIFICATION

University Block 9 field
Devonian
10,450 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific, 0.803 Gravity, ° API, 44.7 Pour point, ° F, below 5
Sulfur, percent, less than 0.10 Color, green
Viscosity, Saybolt Universal at 100° F, 36 sec. Nitrogen, percent, 0.050

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 749 mm. Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.2	4.2	0.641	89.3					
2	167	3.6	7.8	.669	80.0	7 0	1.37632	123.5		
3	212	6.3	14.1	.709	68.1	16	1.39598	127.3		
4	257	7.6	21.7	.734	61.3	19	1.40935	129.6		
5	302	5.8	27.5	.754	56.2	21	1.42070	134.3		
6	347	7.3	34.8	.773	51.6	23	1.43047	136.0		
7	392	4.3	39.1	.786	48.5	23	1.43730	136.8		
8	437	5.3	44.4	.797	46.0	23	1.44327	135.6		
9	482	5.9	50.3	.810	43.2	23	1.45072	138.8		
10	527	5.9	56.2	.823	40.4	25	1.45803	142.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.7	59.9	0.841	36.8	29	1.46457	144.6	39	25
12	437	6.0	65.9	.849	35.2	29	1.46872	145.3	45	35
13	482	4.8	70.7	.863	32.5	33	1.47529	148.5	57	45
14	527	3.8	74.5	.871	31.0	33	1.48037	149.7	79	60
15	572	4.8	79.3	.877	29.9	33	1.48708	-	130	75
Residuum		17.4	96.7	.917	22.8					

Carbon residua, Conradson Residuum 2.7 percent, crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	14.1	0.679	76.9	
Total gasoline and naphtha	39.1	0.730	62.3	
Kerosene distillate	17.1	.810	43.2	
Gas oil	9.1	.847	35.6	
Nonviscous lubricating distillate	9.1	.855-.873	34.0-30.6	50-100
Medium lubricating distillate	4.9	.873-.880	30.6-29.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.4	.917	22.8	
Distillation loss	3.3			

Bureau of Mines
Sample

Item 543
Bartlesville
56054

Laboratory

IDENTIFICATION

University Block 9 field
Wolfcamp, Permian
8,430 feet

Texas
Andrews County

GENERAL CHARACTERISTICS

Gravity, specific 0.840 Gravity, ° API, 37.0 Pour point, ° F, below 5
Sulfur, percent 0.57 Color, dark green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.109

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.646	87.5					
2	167	2.9	4.8	.681	76.3	13	1.37647	129.0		
3	212	7.3	12.1	.729	62.6	26	1.40588	133.5		
4	257	8.1	20.2	.756	55.7	29	1.42035	139.8		
5	302	6.5	26.7	.775	51.1	31	1.43176	145.8		
6	347	5.2	31.9	.789	47.8	31	1.43944	146.4		
7	392	4.5	36.4	.801	45.2	30	1.44557	144.0		
8	437	5.2	41.6	.815	42.1	31	1.45329	146.0		
9	482	5.5	47.1	.830	39.0	33	1.46155	159.3		
10	527	5.8	52.9	.845	36.0	35	1.47160	160.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.0	56.9	0.862	32.7	39	1.47957	165.0	40	20
12	437	5.9	62.8	.873	30.6	41	1.48378	165.4	47	30
13	482	4.2	67.0	.883	28.8	42	1.49056	167.8	60	50
14	527	4.6	71.6	.894	26.8	44	1.49764	-	84	70
15	572	5.4	77.0	.898	26.1	43		165		80
Residuum		21.0	98.0	.959	16.0					

Carbon residue, Conradson Residuum 6.2 percent crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.1	0.704	69.5	
Total gasoline and naphtha	36.4	0.753	56.4	
Kerosene distillate	5.2	.815	42.1	
Gas oil	19.5	.850	35.0	
Nonviscous lubricating distillate	9.2	.875-.895	30.2-26.6	50-100
Medium lubricating distillate	6.7	.895-.900	26.6-25.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.0	.959	16.0	
Distillation loss	2.0			

Bureau of Mines
Sample

Item 544
Bartlesville
51060

Laboratory

IDENTIFICATION

University Waddell field
Devonian
8,510 - 9,225 feet

Texas
Crane County

GENERAL CHARACTERISTICS

Gravity, specific, 0.817 Gravity, ° API, 41.7 Pour point, ° F, below 5
Sulfur, percent, 0.14 Color, green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 746 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.649	86.5					
2	167	2.7	3.7	.664	81.6	4.6	1.37325	126.9		
3	212	6.3	10.0	.713	67.0	18	1.39726	127.6		
4	257	8.2	18.2	.739	60.0	21	1.41062	131.0		
5	302	7.0	25.2	.760	54.7	24	1.42244	136.4		
6	347	7.1	32.3	.777	50.6	25	1.43263	138.9		
7	392	5.4	37.7	.791	47.4	25	1.44018	138.9		
8	437	5.5	43.2	.803	44.7	25	1.44639	139.8		
9	482	6.4	49.6	.816	41.9	26	1.45408	143.1		
10	527	6.9	56.5	.831	38.8	29	1.46221	149.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	59.0	0.841	36.8	29			41	15
12	437	6.0	65.0	.847	35.6	28			44	30
13	482	5.4	70.4	.856	33.8	29			54	45
14	527	5.5	75.9	.867	31.7	31			79	60
15	572	5.1	81.0	.878	29.7	34			130	85
Residuum		17.6	98.6	.916	23.0					

Carbon residue, Conradson Residuum 19.8 percent crude 3.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.0	0.693	72.7	
Total gasoline and naphtha	37.7	0.745	58.4	
Kerosene distillate	11.9	.810	43.2	
Gas oil	16.0	.839	37.2	
Nonviscous lubricating distillate	9.7	.853-.871	34.4-31.0	50-100
Medium lubricating distillate	5.7	.871-.883	31.0-28.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.6	.916	23.0	
Distillation loss	1.4			

Bureau of Mines
Sample

Item 545
Bartlesville
62168

Laboratory

IDENTIFICATION

Van field
Woodbine, Upper Cretaceous
2,682 - 2,811 feet

Texas
Van Zandt County

GENERAL CHARACTERISTICS

Gravity, specific 0.851 Gravity, ° API, 34.8 Pour point, ° F, below 5
Sulfur, percent 0.80 Color, greenish black
Viscosity, Saybolt Universal at 77° F., 60 sec., 100° F., 56 sec. Nitrogen, percent, 0.039

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 77° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.5	1.5	0.639	89.9					
2	167	2.6	4.1	.664	81.6	4.6	1.37520	125.5		
3	212	3.9	8.0	.699	70.9	11	1.39266	127.8		
4	257	5.1	13.1	.722	64.5	13	1.40508	132.6		
5	302	4.7	17.8	.741	59.5	15	1.41590	136.4		
6	347	4.7	22.5	.760	54.7	17	1.42558	138.0		
7	392	4.5	27.0	.776	50.8	18	1.43394	140.4		
8	437	4.9	31.9	.793	46.9	21	1.44243	140.9		
9	482	5.1	37.0	.810	43.2	23	1.45146	144.7		
10	527	6.3	43.3	.830	39.0	28	1.46155	151.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.1	46.4	0.852	34.6	35	1.47153	150.5	41	10
12	437	6.1	52.5	.866	31.9	37	1.47682	158.1	49	25
13	482	5.5	58.0	.875	30.2	38	1.48572	167.6	64	50
14	527	6.2	64.2	.892	27.1	43	1.49451	173.5	93	65
15	572									
Residuum		35.3	99.5	.951	17.3					

Carbon residue, Conradson Residuum 7.6 percent, crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.0	0.676	77.7	
Total gasoline and naphtha	27.0	0.727	63.0	
Kerosene distillate	10.0	.802	45.0	
Gas oil	12.8	.844	36.2	
Nonviscous lubricating distillate	12.7	.867-.896	31.8-26.4	50 100
Medium lubricating distillate	1.7	.896-.901	26.4-25.5	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	35.3	.951	17.3	
Distillation loss	.5			

1/ Distillation discontinued at 518° F.

Bureau of Mines
Sample

Item 546
Bartlesville
63071

Laboratory

IDENTIFICATION

Vealmoor field
Pennsylvanian
7,853 - 7,870 feet

Texas
Howard County

GENERAL CHARACTERISTICS

Gravity, specific 0.815 Gravity, ° API 42.1 Pour point, ° F, below 5
Sulfur percent 0.09 Color, green
Viscosity, Saybolt Universal at 100° F, 38 sec. Nitrogen percent, 0.042

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 745 mm Hg
First drop 77° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.1	2.1	0.649	86.5					
2	167	3.6	5.7	.677	77.5	11	1.38039	127.2		
3	212	7.4	13.1	.722	64.5	22	1.40156	130.2		
4	257	9.0	22.1	.745	58.4	24	1.41411	132.9		
5	302	6.8	28.9	.764	53.7	26	1.42527	138.2		
6	347	6.3	35.2	.778	50.4	25	1.43474	141.2		
7	392	4.9	40.1	.795	46.5	27	1.44159	141.1		
8	437	5.9	46.0	.809	43.4	28	1.44941	141.7		
9	482	4.7	50.7	.822	40.6	29	1.45692	147.1		
10	527	6.4	57.1	.834	38.2	30	1.46395	150.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	60.9	0.847	35.6	32	1.46935	150.3	41	20
12	437	5.4	66.3	.856	33.8	33	1.47306	151.3	49	45
13	482	4.9	71.2	.863	32.5	33	1.47860	157.9	63	55
14	527	4.2	75.4	.875	30.2	35			91	70
15	572	5.2	80.6	.884	28.6	36			160	90
Residuum		17.9	98.5	.917	22.8					

Carbon residue, Conradson Residuum 2.5 percent, crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.1	0.698	71.2	
Total gasoline and naphtha	40.1	0.744	58.7	
Kerosene distillate	10.6	.815	42.2	
Gas oil	13.3	.842	36.5	
Nonviscous lubricating distillate	9.9	.857-.876	33.7-30.0	50 100
Medium lubricating distillate	6.7	.876-.889	30.0-27.7	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.9	.917	22.8	
Distillation loss	1.5			

Bureau of Mines Item 547
Sample Bartlesville
63052 Laboratory

IDENTIFICATION

Vealmoor, East field
Canyon Reef, Pennsylvanian
7,485 - 7,535 feet

Texas
Howard County

GENERAL CHARACTERISTICS

Gravity, specific 0.814 Gravity, ° API, 42.3 Pour point, ° F, below 5
Sulfur percent 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen, percent, 0.045

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.1	3.1	0.639	89.9					
2	167	3.8	6.9	.679	76.9	12	1.38817	130.3		
3	212	8.9	15.8	.722	64.5	22	1.40126	130.1		
4	257	9.4	25.2	.745	58.4	24	1.41476	134.6		
5	302	6.3	31.5	.766	53.2	26	1.42544	138.7		
6	347	6.4	37.9	.783	49.2	28	1.43525	140.8		
7	392	5.1	43.0	.798	45.8	29	1.44271	140.7		
8	437	5.1	48.1	.809	43.4	28	1.44936	144.5		
9	482	5.5	53.6	.823	40.4	30	1.45735	147.0		
10	527	5.7	59.3	.834	38.2	30	1.46428	151.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.4	62.7	0.854	34.2	36	1.47034	152.6	40	10
12	437	5.0	67.7	.858	33.4	34	1.47327	152.5	48	40
13	482	5.3	73.0	.864	32.3	33	1.47931	156.8	63	60
14	527	4.1	77.1	.874	30.4	35	1.48405	-	91	80
15	572	4.7	81.8	.884	28.6	36		155		105
Residuum		17.8	99.6	.919	22.5					

Carbon residue, Conradson Residuum 2.9 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.8	0.695	72.0	
Total gasoline and naphtha	43.0	0.742	59.3	
Kerosine distillate	10.6	.816	41.9	
Gas oil	12.3	.846	35.8	
Nonviscous lubricating distillate	9.8	.859-.875	33.3-30.1	50-100
Medium lubricating distillate	6.1	.875-.889	30.1-27.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.8	.919	22.5	
Distillation loss	.4			

Bureau of Mines Item 548
Sample Bartlesville
50044 Laboratory

IDENTIFICATION

Village Mills, East field
Yegua and Cockfield, Eocene
7,118 - 7,126 feet

Texas
Hardin County

GENERAL CHARACTERISTICS

Gravity, specific 0.827 Gravity, ° API, 39.6 Pour point, ° F, 60
Sulfur, percent, less than 0.10 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 757 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3							
2	167	1.7	3.0	0.650	86.2	-				
3	212	3.5	6.5	.715	66.4	19	1.39825	127.6		
4	257	5.3	11.8	.744	58.7	24	1.41357	132.7		
5	302	5.0	16.8	.763	54.0	25	1.42501	139.8		
6	347	4.9	21.7	.778	50.4	25	1.43388	142.5		
7	392	4.8	26.5	.789	47.8	24	1.43973	140.3		
8	437	5.7	32.2	.802	44.9	25	1.44584	141.0		
9	482	7.5	39.7	.815	42.1	26	1.45433	144.6		
10	527	10.1	49.8	.833	38.4	30	1.46363	150.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	7.3	57.1	0.846	35.8	32			40	30
12	437	8.9	66.0	.850	35.0	30			44	50
13	482	6.8	72.8	.860	33.0	31			56	65
14	527	7.2	80.0	.870	31.1	33			73	85
15	572	7.0	87.0	.883	28.8	36			-	105
Residuum		11.4	98.4	.929	20.8					

Carbon residue, Conradson Residuum 3.2 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.5	0.685	75.1	
Total gasoline and naphtha	26.5	0.748	57.7	
Kerosine distillate	13.2	.809	43.4	
Gas oil	25.9	.843	36.4	
Nonviscous lubricating distillate	-	-	-	50-100
Medium lubricating distillate	21.4	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	11.4	.929	20.8	
Distillation loss	1.6			

Bureau of Mines Item 549
Bartlesville -- Laboratory
 Sample 56048 ---

IDENTIFICATION

Virey field
 Ellenburger, Cambro-Ordovician
 13,276 feet

Texas
 Midland County

GENERAL CHARACTERISTICS

Gravity, specific, 0.771 Gravity, ° API, 52.0 Pour point, ° F, below 5
 Sulfur, percent, less than 0.10 Color, --- NPA 6
 Viscosity, Saybolt Universal at 100° F, 34 sec. --- Nitrogen, percent, 0.021

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
 First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.6	4.6	0.633	92.0					
2	167	5.0	9.6	.656	84.2	0.8	1.37055	126.1		
3	212	5.5	15.1	.690	73.6	7.1	1.39408	125.4		
4	257	8.3	23.4	.718	65.6	11	1.40258	122.1		
5	302	5.7	29.1	.736	60.8	12	1.41303	131.7		
6	347	6.6	35.7	.750	57.2	12	1.41969	123.2		
7	392	7.0	42.7	.762	54.2	12	1.42599	125.2		
8	437	7.3	50.0	.775	51.1	12	1.43213	129.3		
9	482	6.7	56.7	.789	47.8	13	1.43880	129.7		
10	527	7.1	63.8	.801	45.2	14	1.44504	125.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.8	68.6	0.820	41.1	19	1.45225	133.6	38	20
12	437	7.0	75.6	.830	39.0	20	1.45692	131.6	42	30
13	482	4.8	80.4	.842	36.6	23	1.46388	134.1	50	45
14	527	3.6	84.0	.854	34.2	25	1.47037	140.1	64	60
15	572	3.6	87.6	.863	32.5	27	1.47724	127.7	97	80
Residuum		8.7	96.3	.898	26.1					

Carbon residue, Conradson Residuum 1.8 percent, crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.1	0.661	82.6	
Total gasoline and naphtha	42.7	0.713	67.0	
Kerosene distillate	21.1	.788	48.1	
Gas oil	14.2	.829	39.2	
Nonviscous lubricating distillate	8.2	.842-.865	36.6-32.1	50-100
Medium lubricating distillate	1.4	.865-.867	32.1-31.7	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	8.7	.898	26.1	
Distillation loss	3.7			

Bureau of Mines Item 550
Bartlesville -- Laboratory
 Sample 54155 ---

IDENTIFICATION

Waddell field
 Grayburg, Permian
 3,500 feet

Texas
 Crane County

GENERAL CHARACTERISTICS

Gravity, specific 0.857 Gravity, ° API, 33.6 Pour point, ° F, 10
 Sulfur percent 1.69 Color, greenish black
 Viscosity, Saybolt Universal at 100° F, 46 sec. --- Nitrogen, percent, 0.098

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
 First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.9	1.9	0.641	89.3					
2	167	2.7	4.6	.675	78.1	9.8	1.38917	127.4		
3	212	5.0	9.6	.714	66.7	18	1.39845	123.2		
4	257	5.8	15.4	.739	60.0	21	1.40952	125.2		
5	302	7.3	22.7	.768	52.7	27	1.42547	135.2		
6	347	3.5	26.2	.789	47.8	31	1.43772	140.5		
7	392	4.7	30.9	.802	44.2	31	1.44457	141.4		
8	437	4.7	35.6	.816	41.9	32	1.45184	141.6		
9	482	5.1	40.7	.830	39.0	33	1.46046	149.4		
10	527	6.8	47.5	.844	36.2	35	1.46919	151.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.3	50.8	0.861	32.8	39	1.47872	156.6	40	5
12	437	5.6	56.4	.870	31.1	39	1.48267	155.4	46	20
13	482	5.2	61.6	.883	28.8	42	1.49071	155.3	60	40
14	527	5.7	67.3	.899	25.9	47	1.49711	—	88	65
15	572	4.9	72.2	.906	24.7	47			150	75
Residuum		26.8	99.0	.980	12.9					

Carbon residue, Conradson Residuum 9.8 percent, crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.6	0.689	73.9	
Total gasoline and naphtha	30.9	0.745	58.4	
Kerosene distillate	4.7	.816	41.9	
Gas oil	19.7	.849	35.2	
Nonviscous lubricating distillate	10.3	.874-.900	30.4-25.7	50-100
Medium lubricating distillate	6.6	.900-.909	25.7-24.3	100-200
Viscous lubricating distillate	—	—	—	Above 200
Residuum	26.8	.980	12.9	
Distillation loss	1.0			

Item 551
Bureau of Mines Bartlesville Laboratory
Sample 54125

IDENTIFICATION

Walnut Bend field
Upper Strawn, Pennsylvanian
3,692 - 3,706 feet

Texas
Cooke County

GENERAL CHARACTERISTICS

Gravity, specific, 0.806 Gravity, ° API, -44.1 Four point, ° F, below 5
Sulfur, percent, 0.17 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 38 sec. Nitrogen, percent, 0.050

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 754 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso, 100° F	Cloud test ° F
1	122	4.2	4.2	0.839	89.9					
2	167	4.0	8.2	.662	82.2	3.7	1.37312	121.2		
3	212	5.4	13.6	.702	70.1	13	1.39184	121.8		
4	257	9.2	22.8	.732	61.8	18	1.40775	125.5		
5	302	4.3	27.1	.753	56.4	20	1.41858	130.4		
6	347	5.6	32.7	.766	53.2	20	1.42647	133.2		
7	392	4.8	37.5	.780	49.9	20	1.43318	132.3		
8	437	5.3	42.8	.791	47.4	20	1.43969	132.3		
9	482	5.1	47.9	.806	44.1	22	1.44764	133.2		
10	527	6.1	54.0	.819	41.3	23	1.45471	134.6		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr	° API	C I	Refractive index	Specific dispersion	S U viso	Cloud test
11	392	4.3	58.3	0.836	37.8	27	1.46271	139.6	40	10
12	437	5.2	63.5	.842	36.6	26	1.46650	144.0	45	30
13	482	4.8	68.3	.852	34.6	28	1.47249	144.9	56	45
14	527	4.4	72.7	.864	32.3	30	1.47780	146.5	80	65
15	572	5.1	77.8	.875	30.2	32			135	80
Residuum		20.6	98.4	.914	23.3					

Carbon residue, Conradson Residuum 3.5 percent crude 0.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.6	0.671	79.4	
Total gasoline and naphtha	37.5	0.723	64.2	
Kerosene distillate	16.5	.806	44.1	
Gas oil	9.3	.840	37.0	
Nonviscous lubricating distillate	9.0	.846-.868	35.8-31.5	50-100
Medium lubricating distillate	5.5	.868-.881	31.5-29.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	20.6	.914	23.3	
Distillation loss	1.6			

Item 552
Bureau of Mines Bartlesville Laboratory
Sample 54127

IDENTIFICATION

Walnut Bend field
Winger, Strawn, Pennsylvanian
5,405 - 5,435 feet

Texas
Cooke County

GENERAL CHARACTERISTICS

Gravity, specific, 0.871 Gravity, ° API, 31.0 Four point, ° F, 20
Sulfur, percent, 0.86 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 220 sec., 100° F., 77 sec. Nitrogen, percent, 0.202

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr, 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U viso, 100° F	Cloud test ° F
1	122	1.5	1.5	0.654	84.9					
2	167	2.0	3.5	.670	79.7	7.5	1.38313	128.0		
3	212	3.8	7.3	.712	67.2	18	1.39698	124.4		
4	257	4.0	11.3	.738	60.2	21	1.40940	127.4		
5	302	4.5	15.8	.756	55.7	22	1.41992	128.6		
6	347	4.4	20.2	.774	51.3	23	1.42968	133.6		
7	392	4.3	24.5	.790	47.6	25	1.43735	145.4		
8	437	4.1	28.6	.807	43.8	27	1.44709	135.2		
9	482	4.6	33.2	.822	40.6	29	1.45564	141.7		
10	527	5.6	38.8	.837	37.6	32	1.46444	146.1		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr	° API	C I	Refractive index	Specific dispersion	S U viso	Cloud test
11	392	2.9	41.7	0.851	34.8	34	1.47335	149.6	40	15
12	437	5.9	47.6	.867	31.7	38	1.47832	150.6	47	30
13	482	4.6	52.2	.880	29.3	41	1.48575	150.2	62	50
14	527	5.4	57.6	.890	27.5	42	1.49345	-	96	70
15	572	6.4	64.0	.911	23.8	49			200	90
Residuum		35.7	99.7	.971	14.2					

Carbon residue, Conradson Residuum 8.3 percent, crude 3.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.3	0.689	73.9	
Total gasoline and naphtha	24.5	0.742	59.2	
Kerosene distillate	8.7	.815	42.1	
Gas oil	12.6	.849	35.2	
Nonviscous lubricating distillate	9.3	.870-.894	31.1-26.8	50-100
Medium lubricating distillate	5.7	.894-.911	26.8-23.8	100-200
Viscous lubricating distillate	3.2	.911-.922	23.8-22.0	Above 200
Residuum	35.7	.971	14.2	
Distillation loss	.3			

Item 553
Bureau of Mines Bartlesville Laboratory
Sample 54157

IDENTIFICATION

Ward, South field
Yates, Permian
2,400 feet

Texas
Ward County

GENERAL CHARACTERISTICS

Gravity specific 0.846 Gravity ° API 35.8 Pour point, ° F, below 5
Sulfur percent 1.12 Color, dark green
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen percent, 0.080

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 741 mm Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	1.3	1.3	0.639	89.9					
2	167	3.0	4.3	.669	80.0	7.0	1.38423	125.5		
3	212	5.6	9.9	.712	67.2	18	1.39701	125.7		
4	257	7.1	17.0	.742	59.2	23	1.41194	130.1		
5	302	6.2	23.2	.765	53.5	26	1.42437	134.4		
6	347	5.5	28.7	.782	49.5	27	1.43474	138.7		
7	392	5.1	33.8	.799	45.6	29	1.44330	143.1		
8	437	5.3	39.1	.813	42.6	30	1.45042	142.0		
9	482	5.6	44.7	.829	39.2	32	1.45890	146.9		
10	527	6.1	50.8	.845	36.0	35	1.46875	154.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.9	54.7	0.861	32.8	39	1.47852	160.4	41	Below 5
12	437	5.4	60.1	.871	31.0	40	1.48370	161.7	47	15
13	482	5.9	66.0	.887	28.0	44	1.49266	174.7	62	35
14	527	4.9	70.9	.907	24.5	50	1.50009	175.1	100	55
15	572	4.9	75.8	.913	23.5	50			185	70
Residuum		23.8	99.6	.961	15.7					

Carbon residue, Conradson Residuum 8.0 percent crude 2.2 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	9.9	0.689	73.9	
Total gasoline and naphtha	33.8	0.746	58.2	
Kerosene distillate	5.3	.813	42.6	
Gas oil	19.5	.849	35.2	
Nonviscous lubricating distillate	9.9	.874-.907	30.4-24.5	50 100
Medium lubricating distillate	5.8	.907-.914	24.5-23.3	100 200
Viscous lubricating distillate	1.5	.914-.916	23.3-23.0	Above 200
Residuum	23.8	.961	15.7	
Distillation loss	.4			

Item 554
Bureau of Mines Bartlesville Laboratory
Sample 59176

IDENTIFICATION

Ward-Estes, North field
Yates, Permian
2,696 - 2,756 feet

Texas
Ward County

GENERAL CHARACTERISTICS

Gravity, specific 0.855 Gravity, ° API 34.0 Pour point, ° F, below 5
Sulfur percent 1.17 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen percent, 0.107

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 737 mm Hg
First drop 82° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	2.8	2.8	0.649	86.5					
2	167	2.7	5.5	.667	80.6	6.1	1.37526	123.6		
3	212	4.9	10.4	.710	67.8	17	1.39550	121.1		
4	257	5.9	16.3	.739	60.0	21	1.40988	124.8		
5	302	5.3	21.6	.761	54.4	24	1.42163	131.3		
6	347	5.5	27.1	.781	49.7	27	1.43391	135.1		
7	392	4.5	31.6	.800	45.4	30	1.44410	140.7		
8	437	5.4	37.0	.818	41.5	33	1.45250	141.8		
9	482	6.0	43.0	.836	37.8	36	1.46214	146.3		
10	527	5.4	48.4	.853	34.4	39	1.47342	154.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.2	51.6	0.872	30.8	44	1.48454	165.6	41	10
12	437	5.2	56.8	.879	29.5	44	1.48923	171.8	48	20
13	482	4.7	61.5	.896	26.4	48	1.49708	176.8	65	30
14	527	4.9	66.4	.912	23.7	53	1.50368	181.5	105	40
15	572	5.8	72.2	.918	22.6	53	1.50829	-	200	54
Residuum		26.8	99.0	.965	15.1					

Carbon residue, Conradson Residuum 7.7 percent crude 2.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	10.4	0.682	76.0	
Total gasoline and naphtha	31.6	0.740	59.7	
Kerosene distillate	5.4	.818	41.5	
Gas oil	18.8	.856	33.8	
Nonviscous lubricating distillate	7.6	.881-.910	29.1-24.0	50 100
Medium lubricating distillate	5.9	.910-.918	24.0-22.6	100 200
Viscous lubricating distillate	2.9	.918-.922	22.6-22.0	Above 200
Residuum	26.8	.965	15.1	
Distillation loss	1.0			

Bureau of Mines Item 555
Bartlesville Laboratory
Sample 62033 --

IDENTIFICATION

Wasson (66) field
Clear Fork, Permian
6,338 - 6,686 feet

Texas
Yoakum County

GENERAL CHARACTERISTICS

Gravity, specific 0.866 Gravity, ° API, 31.9 -- Pour point, ° F, -- 10
Sulfur, percent 1.40 Color, brownish_black
Viscosity, Saybolt Universal at 100° F 44 sec. Nitrogen, percent, 0.07

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 742 -- mm. Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.4	1.4	0.683	75.7					
2	167	3.3	4.7	.683	75.7	14	1.38334	135.7		
3	212	6.8	11.5	.732	61.8	27	1.40917	148.1		
4	257	7.2	18.7	.764	53.7	33	1.42716	154.1		
5	302	6.1	24.8	.783	49.2	35	1.43874	160.1		
6	347	4.5	29.3	.793	46.9	32	1.44327	158.2		
7	392	4.6	33.9	.801	45.2	30	1.44764	155.6		
8	437	4.6	38.5	.814	42.3	31	1.45470	156.8		
9	482	6.5	45.0	.831	38.8	33	1.46624	164.4		
10	527	6.3	51.3	.855	34.0	40	1.47973	176.1		

STAGE 2—Distillation continued at 40 mm Hg

11	392	0.7	52.0	0.880	29.3	48	1.47983	165.9	40	20
12	437	5.8	57.8	.889	27.7	48	1.49580	190.1	45	40
13	482	5.4	63.2	.905	24.9	53	1.50469	197.7	57	50
14	527	4.6	67.8	.927	21.1	60	1.51144	-	84	80
15	572	5.6	73.4	.931	20.5	59		155		90
Residuum		24.1	97.5	1.005	9.3					

Carbon residue, Conradson Residuum 13.6 percent crude 3.8 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	11.5	0.713	67.0	
Total gasoline and naphtha	33.9	0.759	54.9	
Kerosene distillate	4.6	.814	42.3	
Gas oil	18.8	.857	33.6	
Nonviscous lubricating distillate	9.4	.896-.928	26.4-21.0	50 100
Medium lubricating distillate	6.7	.928-.933	21.0-20.2	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.1	1.005	9.3	
Distillation loss	2.5			

Bureau of Mines Item 556
Bartlesville Laboratory
Sample 62034 --

IDENTIFICATION

Wasson (72) field
Clear Fork, Permian
7,006 - 7,340 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific 0.859 Gravity, ° API, 33.2 -- Pour point, ° F, -- below 5
Sulfur, percent 1.10 Color, greenish_black
Viscosity, Saybolt Universal at 100° F 42 sec. Nitrogen, percent, 0.06 --

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.2	1.2	0.686	74.8					
2	167	3.1	4.3	.686	74.8	15	1.38389	135.2		
3	212	7.3	11.6	.734	61.3	28	1.41058	144.8		
4	257	8.1	19.7	.761	54.4	32	1.42636	154.4		
5	302	6.3	26.0	.782	49.5	34	1.43683	159.1		
6	347	5.4	31.4	.794	46.7	33	1.44282	156.6		
7	392	4.5	35.9	.802	44.9	31	1.44731	155.3		
8	437	4.9	40.8	.813	42.6	30	1.45362	156.0		
9	482	5.8	46.6	.831	38.8	33	1.46417	161.7		
10	527	5.4	52.0	.848	35.4	37	1.47493	174.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.8	55.8	0.878	29.7	47	1.48913	183.6	40	20
12	437	6.0	61.8	.887	28.0	47	1.49497	187.4	46	35
13	482	6.0	67.8	.903	25.2	52	1.50427	197.1	62	60
14	527	4.4	72.2	.917	22.8	55			100	70
15	572	4.8	77.0	.924	21.6	55			180	90
Residuum		21.7	98.7	.993	11.0					

Carbon residue, Conradson Residuum 11.9 percent crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr	° API	Viscosity
Light gasoline	11.6	0.718	65.6	
Total gasoline and naphtha	35.9	0.761	54.4	
Kerosene distillate	4.9	.813	42.6	
Gas oil	19.6	.858	33.4	
Nonviscous lubricating distillate	9.6	.891-.916	27.3-23.0	50 100
Medium lubricating distillate	7.0	.916-.928	23.0-21.0	100 200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.7	.993	11.0	
Distillation loss	1.3			

1/ Distillation discontinued at 514° F.

Item 557
Bureau of Mines Bartlesville Laboratory
Sample 58004

IDENTIFICATION

Wasson field
San Andres, Permian
4,900 - 5,150 feet

Texas
Gaines County

GENERAL CHARACTERISTICS

Gravity, specific 0.861 Gravity, ° API, 32.8 Pour point, ° F, below 5
Sulfur, percent, 1.76 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 43 sec. Nitrogen, percent, 0.081

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 750 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.645	87.9					
2	167	2.6	5.0	.679	76.9	12	1.38199	128.5		
3	212	5.3	10.3	.723	64.2	23	1.40351	137.4		
4	257	7.0	17.3	.754	56.2	28	1.42009	144.8		
5	302	6.4	23.7	.775	51.1	31	1.43256	146.2		
6	347	5.1	28.8	.787	48.3	30	1.43924	147.0		
7	392	4.5	33.3	.798	45.8	29	1.44477	143.3		
8	437	4.5	37.8	.813	42.6	30	1.45135	138.9		
9	482	4.9	42.7	.830	39.0	33	1.46051	142.6		
10	527	5.6	48.3	.848	35.4	37	1.47087	161.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.6	50.9	0.860	33.0	38	1.47973	-	39	10
12	437	6.4	57.3	.872	30.8	40	1.48630	-	44	30
13	482	4.3	61.6	.886	28.2	44	1.49372	-	54	54
14	527	5.3	66.9	.904	25.0	49	1.50091	-	77	70
15	572	4.8	71.7	.914	23.3	51	-	-	140	90
Residuum		27.8	99.5	.987	11.9					

Carbon residue, Conradson Residuum 5.2 percent, crude 1.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.3	0.694	72.4	
Total gasoline and naphtha	33.3	0.750	57.2	
Kerosene distillate	4.5	.813	42.6	
Gas oil	19.6	.854	34.2	
Nonviscous lubricating distillate	8.7	.880-.907	29.3-24.5	50-100
Medium lubricating distillate	5.6	.907-.917	24.5-22.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.8	.987	11.9	
Distillation loss	.5			

Item 558
Bureau of Mines Bartlesville Laboratory
Sample 63210

IDENTIFICATION

Wasson field
Wichita-Albany, Leonard, Permian
8,204 - 8,404 feet

Texas
Yoakum County

GENERAL CHARACTERISTICS

Gravity, specific, 0.819 Gravity, ° API, 41.3 Pour point, ° F, below 5
Sulfur, percent, 0.31 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 37 sec. Nitrogen, percent, 0.047

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.2	3.2	0.642	88.9					
2	167	4.0	7.2	.676	77.8	10	1.37947	130.0		
3	212	8.0	15.2	.723	64.2	23	1.40312	132.7		
4	257	6.7	21.9	.749	57.4	26	1.41634	138.1		
5	302	6.5	28.4	.768	52.7	27	1.42710	142.5		
6	347	6.4	34.8	.787	48.3	30	1.43761	144.5		
7	392	4.9	39.7	.800	45.4	30	1.44571	151.0		
8	437	4.5	44.2	.813	42.5	30	1.45296	149.1		
9	482	5.8	50.0	.827	39.6	31	1.46085	155.2		
10	527	5.3	55.3	.842	36.6	34	1.47003	161.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	59.0	0.861	32.8	39	1.47705	164.8	40	15
12	437	5.4	64.4	.872	30.8	40	1.48054	165.8	46	30
13	482	4.9	69.3	.878	29.7	40	1.48763	172.8	60	55
14	527	4.6	73.9	.890	27.5	42	1.49365	-	87	70
15	572	5.0	78.9	.897	26.2	43	-	-	150	90
Residuum		17.2	96.1	.955	16.7					

Carbon residue, Conradson Residuum 5.8 percent, crude 1.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.2	0.694	72.5	
Total gasoline and naphtha	39.7	0.743	58.9	
Kerosene distillate	4.5	.813	42.5	
Gas oil	19.0	.847	35.5	
Nonviscous lubricating distillate	9.4	.874-.891	30.5-27.2	50-100
Medium lubricating distillate	6.3	.891-.901	27.2-25.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.2	.955	16.7	
Distillation loss	3.9			

Item 559
Bureau of Mines Bartlesville Laboratory
Sample 58007

IDENTIFICATION

Webster field
Marginulina, Frio, Oligocene
5,090 - 5,110 feet

Texas
Harris County

GENERAL CHARACTERISTICS

Gravity, specific 0.880 Gravity, ° API, 29.3 Pour point, ° F, below 5
Sulfur, percent, 0.21 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 64 sec., 130° F, 49 sec. Nitrogen, percent, 0.046

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 746 mm. Hg
First drop 127 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122									
2	167	0.7	0.7	0.705	69.2	-				
3	212	2.2	2.9	.738	60.2	30	1.40393	125.6		
4	257	2.9	5.8	.761	54.4	32	1.41829	124.7		
5	302	2.0	7.8	.780	49.9	33	1.42868	129.0		
6	347	3.0	10.8	.801	45.2	36	1.44020	135.3		
7	392	3.7	14.5	.821	40.9	40	1.45103	149.5		
8	437	5.5	20.0	.837	37.6	42	1.45997	138.5		
9	482	6.8	26.8	.854	34.2	44	1.46819	146.8		
10	527	10.1	36.9	.867	31.7	46	1.47643	151.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.4	43.3	0.872	30.8	44	1.48213	-	43	Below 5
12	437	7.3	50.6	.884	28.6	46	1.48456	-	51	do.
13	482	6.6	57.2	.890	27.5	46	1.48953	-	73	do.
14	527	6.3	63.5	.907	24.5	50	1.49551	-	125	do.
15	572	7.6	71.1	.915	23.1	51	1.50021	-	290	do.
Residuum		27.6	98.7	.944	18.4					

Carbon residue, Conradson Residuum 4.6 percent, crude 1.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.730	62.3	
Total gasoline and naphtha	14.5	0.781	49.7	
Kerosine distillate	-	-	-	
Gas oil	31.4	.861	32.8	
Nonviscous lubricating distillate	11.4	.882-.899	28.9-25.9	50-100
Medium lubricating distillate	5.9	.899-.911	25.9-23.8	100-200
Viscous lubricating distillate	7.9	.911-.919	23.8-22.5	Above 200
Residuum	27.6	.944	18.4	
Distillation loss	1.3			

Item 560
Bureau of Mines Bartlesville Laboratory
Sample 48036

IDENTIFICATION

Welch field
San Andres, Permian
4,830 - 4,935 feet

Texas
Dawson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.864 Gravity, ° API, 32.3 Pour point, ° F, below 5
Sulfur, percent, 2.14 Color, greenish black
Viscosity, Saybolt Universal at 100° F, 45 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U Visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.636	91.0					
2	167	3.6	5.2	.689	73.9	17	1.38728	136.0		
3	212	4.4	9.6	.732	61.8	27	1.40944	141.1		
4	257	6.2	15.8	.756	55.7	29	1.42143	146.1		
5	302	6.0	21.8	.775	51.1	31	1.43198	149.8		
6	347	5.4	27.2	.788	48.1	30	1.43892	147.8		
7	392	4.5	31.7	.800	45.4	30	1.44464	145.6		
8	437	4.9	36.6	.813	42.6	30	1.45171	145.9		
9	482	5.2	41.8	.830	39.0	33	1.46122	153.6		
10	527	6.8	48.6	.850	35.0	38	1.47236	162.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	0.9	49.5	0.871	31.0	44	-	-	44	30
12	437	6.0	55.5	.876	30.0	42	-	-	44	40
13	482	5.5	61.0	.888	27.9	45	-	-	45	50
14	527	5.7	66.7	.903	25.2	49	-	-	79	do.
15	572	5.3	72.0	.913	23.5	50	-	-	145	80
Residuum		27.0	99.0	.983	12.5					

Carbon residue, Conradson Residuum 11.7 percent, crude 3.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.6	0.700	70.6	
Total gasoline and naphtha	31.7	0.754	56.2	
Kerosine distillate	4.9	.813	42.6	
Gas oil	19.0	.854	34.2	
Nonviscous lubricating distillate	10.0	.882-.906	28.9-24.7	50-100
Medium lubricating distillate	6.4	.906-.918	24.7-22.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.0	.983	12.5	
Distillation loss	1.0			

Bureau of Mines Item 561
Bartlesville Sample 56020 Laboratory

IDENTIFICATION

West Columbia field
Frio, Z, Oligocene
5,484 - 5,585 feet

Texas
Brazoria County

GENERAL CHARACTERISTICS

Gravity, specific 0.887 Gravity, ° API, 28.0 Pour point, ° F, below 5
Sulfur, percent 0.23 Color, brownish green
Viscosity, Saybolt Universal at 77° F., 89 sec., 100° F., 65 sec. Nitrogen, percent, 0.055

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 742 mm Hg
First drop 147 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.4	1.4	0.705	69.2	-				
4	257	2.2	3.6	.754	56.2	28	1.41094	142.1		
5	302	3.0	6.6	.773	51.6	30	1.43230	145.8		
6	347	3.2	9.8	.787	48.3	30	1.43936	145.2		
7	392	3.9	13.7	.800	45.4	30	1.44485	141.5		
8	437	5.3	19.0	.817	41.7	32	1.45296	142.8		
9	482	7.6	26.6	.839	37.2	37	1.46422	148.4		
10	527	9.5	36.1	.858	33.4	41	1.47532	152.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.9	40.0	0.875	30.2	46	1.48436	152.4	42	Below 5
12	437	8.5	48.5	.886	28.2	47	1.48728	162.7	48	10
13	482	7.7	56.2	.894	26.8	47	1.49394	160.3	64	35
14	527	6.9	63.1	.912	23.7	53	1.50085	164.6	105	50
15	572	8.0	71.1	.921	22.1	54	1.50640	-	240	65
Residuum		28.6	99.7	.957	16.4					

Carbon residue, Conradson Residuum 4.2 percent crude 1.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.4	0.705	69.2	
Total gasoline and naphtha	13.7	0.774	51.3	
Kerosene distillate	5.3	.817	41.7	
Gas oil	22.7	.856	33.8	
Nonviscous lubricating distillate	17.1	.881-.910	29.1-24.0	50-100
Medium lubricating distillate	10.9	.910-.924	24.0-21.6	100-200
Viscous lubricating distillate	1.4	.924-.926	21.6-21.3	Above 200
Residuum	28.6	.957	16.4	
Distillation loss	.3			

Bureau of Mines Item 562
Bartlesville Sample 52083 Laboratory

IDENTIFICATION

West Columbia, New field
Frio, Oligocene
4 918 - 4,934 feet

Texas
Brazoria County

GENERAL CHARACTERISTICS

Gravity, specific 0.884 Gravity, ° API, 28.6 Pour point, ° F, below 5
Sulfur, percent 0.19 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 86 sec., 100° F., 63 sec. Nitrogen, percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 753 mm Hg
First drop 158 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispers on	S U vise 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.3	1.3	0.738	60.2	-				
4	257	2.1	3.4	.754	56.2	28	1.41743	142.8		
5	302	2.9	6.3	.775	51.1	31	1.43365	153.2		
6	347	3.7	10.0	.789	47.8	31	1.44060	153.5		
7	392	4.1	14.1	.797	46.0	28	1.44509	143.1		
8	437	5.7	19.8	.819	41.3	33	1.45330	145.6		
9	482	8.3	28.1	.840	37.0	38	1.46503	150.1		
10	527	10.1	38.2	.863	32.5	44	1.47631	156.3		

Stage 2—Distillation continued at 40 mm Hg

11	392	5.7	43.9	0.880	29.3	48			43	Below 5
12	437	7.2	51.1	.885	28.4	46			50	15
13	482	6.9	58.0	.896	26.4	48			69	40
14	527	7.3	65.3	.909	24.2	51			120	55
15	572	7.5	72.8	.920	22.3	54			330	75
Residuum		26.9	99.7	.958	16.2					

Carbon residue, Conradson Residuum 6.2 percent crude 1.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.3	0.738	60.2	
Total gasoline and naphtha	14.1	0.779	50.1	
Kerosene distillate	5.7	.819	41.3	
Gas oil	27.7	.862	32.7	
Nonviscous lubricating distillate	11.4	.885-.904	28.4-25.0	50-100
Medium lubricating distillate	5.7	.904-.913	25.0-23.5	100-200
Viscous lubricating distillate	8.2	.913-.925	23.5-21.5	Above 200
Residuum	26.9	.958	16.2	
Distillation loss	.3			

Item 563
Bureau of Mines Bartlesville Laboratory
Sample 58121

IDENTIFICATION

West Ranch, field
Frio, 41-A, Oligocene
5,736 feet

Texas
Jackson County

GENERAL CHARACTERISTICS

Gravity, specific 0.868 Gravity, ° API 31.5 Pour point, ° F, below 5
Sulfur percent 0.17 Color, green
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen, percent, 0.035

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 752 mm Hg
First drop 91 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.4	0.4							
2	167	1.2	1.6	.677	77.5	-	1.37681	118.8		
3	212	3.5	5.1	.724	63.9	23	1.40111	120.4		
4	257	4.5	9.6	.755	55.9	29	1.41569	127.6		
5	302	3.8	13.4	.773	51.6	30	1.42687	129.5		
6	347	4.9	18.3	.797	46.0	34	1.43969	136.7		
7	392	7.4	25.7	.820	41.1	39	1.45184	149.1		
8	437	7.6	33.3	.841	36.8	43	1.46315	146.4		
9	482	9.2	42.5	.860	33.0	47	1.47285	151.8		
10	527	13.2	55.7	.879	29.5	51	1.48416	160.2		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	7.0	62.7	0.887	28.0	51	1.49273	165.0	43	Below 5
12	437	8.7	71.4	.898	26.1	53	1.49745	169.7	50	30
13	482	6.4	77.8	.916	23.0	58	1.50582	170.1	76	46
14	527	4.9	82.7	.937	19.5	65	1.51595	183.2	195	66
15	572	5.4	88.1	.958	16.2	72			Over 400	90
Residuum		9.7	97.8	.987	11.9					

Carbon residue, Conradson Residuum 3.5 percent crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.1	0.709	68.1	
Total gasoline and naphtha	25.7	0.775	51.1	
Kerosine distillate	-	-	-	
Gas oil	41.4	.871	31.0	
Nonviscous lubricating distillate	8.7	.898-.920	26.1-22.3	50-100
Medium lubricating distillate	4.7	.920-.938	22.3-19.4	100-200
Viscous lubricating distillate	7.6	.938-.970	19.4-14.4	Above 200
Residuum	9.7	.987	11.9	
Distillation loss	2.2			

Item 564
Bureau of Mines Bartlesville Laboratory
Sample 58126

IDENTIFICATION

West Ranch field
Frio 98-A, Oligocene
6,145 feet

Texas
Jackson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.826 Gravity, ° API, 39.8 Pour point, ° F, 15
Sulfur percent 0.11 Color, green
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen, percent, 0.024

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.675	78.1					
2	167	.3	2.3	.678	77.2	11	1.39154	130.6		
3	212	4.3	6.6	.721	64.8	22	1.40243	127.5		
4	257	6.7	13.3	.745	58.4	24	1.41409	132.0		
5	302	7.3	20.6	.760	54.7	24	1.42420	137.2		
6	347	7.2	27.8	.776	50.9	24	1.43230	137.1		
7	392	7.4	35.2	.790	47.6	25	1.43967	138.1		
8	437	8.8	44.0	.806	44.1	27	1.44742	137.0		
9	482	11.0	55.0	.826	39.8	31	1.45778	141.2		
10	527	12.5	67.5	.847	35.6	36	1.46875	148.5		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	6.0	73.5	0.861	32.8	39	1.47798	155.7	42	14
12	437	7.0	80.5	.865	32.1	37	1.48090	156.7	47	34
13	482	5.2	85.7	.883	28.8	42	1.48936	156.2	62	60
14	527	3.9	89.6	.902	25.4	48			115	74
15	572	3.5	93.1	.930	20.7	58			310	90
Residuum		5.6	98.7	.992	11.1					

Carbon residue, Conradson Residuum 3.9 percent crude 0.3 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	6.6	0.705	69.2	
Total gasoline and naphtha	35.2	0.756	55.7	
Kerosine distillate	8.8	.806	44.1	
Gas oil	34.2	.845	36.0	
Nonviscous lubricating distillate	8.2	.868-.893	31.5-27.0	50-100
Medium lubricating distillate	2.9	.893-.901	27.0-25.6	100-200
Viscous lubricating distillate	3.8	.901-.942	25.6-18.7	Above 200
Residuum	5.6	.992	11.1	
Distillation loss	1.3			

Item 565
Bureau of Mines Bartlesville Laboratory
Sample 59067

IDENTIFICATION

Westbrook field
Clear Fork, Permian
3,100 feet

Texas
Mitchell County

GENERAL CHARACTERISTICS

Gravity, specific, 0.906 Gravity, ° API, 24.7 Pour point, ° F, 40
Sulfur, percent, 2.51 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 78 sec., 130° F, 52 sec Nitrogen, percent, 0.140

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 737 mm. Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.5	1.5	0.655	84.5					
2	167	3.4	4.9	.711	67.5	27	1.39698	135.9		
3	212	2.4	7.3	.745	58.4	33	1.41537	146.4		
4	257	5.4	12.7	.768	52.7	35	1.42874	156.5		
5	302	5.6	18.3	.787	48.3	36	1.44020	158.1		
6	347	4.1	22.4	.796	46.3	34	1.44452	156.8		
7	392	3.9	26.3	.805	44.3	32	1.44861	151.7		
8	437	4.7	31.0	.820	41.1	33	1.45681	153.2		
9	482	4.2	35.2	.837	37.6	36	1.46740	159.1		
10	527	6.6	41.8	.864	32.3	44	1.48200	176.4		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.3	45.1	0.890	27.5	53	1.49755	172.9	42	14
12	437	2.4	47.5	.897	26.3	52	1.50144	166.9	46	30
13	482	5.7	53.2	.910	24.0	55	1.50903	188.7	58	50
14	527	5.6	58.8	.928	21.0	60			89	66
15	572	5.7	64.5	.936	19.7	61			180	80
Residuum		33.7	98.2	1.043	4.2					

Carbon residue, Conradson Residuum 9.9 percent, crude 3.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.3	0.711	67.8	
Total gasoline and naphtha	26.3	0.766	53.2	
Kerosene distillate	4.7	.820	41.1	
Gas oil	16.7	.868	31.5	
Nonviscous lubricating distillate	9.0	.901-.929	25.6-20.8	50-100
Medium lubricating distillate	6.2	.929-.938	20.8-19.4	100-200
Viscous lubricating distillate	1.6	.938-.940	19.4-19.0	Above 200
Residuum	33.7	1.043	4.2	
Distillation loss	1.8			

Item 566
Bureau of Mines Bartlesville Laboratory
Sample 55045

IDENTIFICATION

White Point, East field
5,600' Brigham, Frio, Oligocene
5,550 - 5,580 feet

Texas
San Patricio County

GENERAL CHARACTERISTICS

Gravity, specific 0.833 Gravity, ° API, 38.4 Pour point, ° F, below 5
Sulfur, percent, 0.13 Color, NPA 8
Viscosity, Saybolt Universal at 100° F, 35 sec. Nitrogen, percent, 0.020

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	4.2	4.2	0.662	82.2	-	1.37697	127.5		
3	212	6.8	11.0	.727	63.1	25	1.40452	129.3		
4	257	7.7	18.7	.754	56.2	28	1.41870	135.0		
5	302	6.8	25.5	.775	51.1	31	1.43113	142.5		
6	347	7.8	33.3	.793	46.9	32	1.44115	146.6		
7	392	7.2	40.5	.807	43.8	33	1.44908	145.2		
8	437	7.0	47.5	.825	40.0	36	1.45735	147.0		
9	482	10.4	57.9	.844	36.2	40	1.46785	147.3		
10	527	12.3	70.2	.866	31.9	45	1.47914	159.5		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	6.7	76.9	0.884	28.6	50	1.48896	167.6	43	Below 5
12	437	5.0	81.9	.898	26.1	53	1.49472	167.8	52	10
13	482	4.0	85.9	.914	23.3	57	1.50336	166.9	75	25
14	527	3.1	89.0	.929	20.8	61			125	45
15	572	3.6	92.6	.947	17.9	66			Over 400	60
Residuum		6.6	99.2	.980	12.9					

Carbon residue, Conradson Residuum 3.5 percent, crude 0.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.0	0.702	70.1	
Total gasoline and naphtha	40.5	0.760	54.7	
Kerosene distillate	7.0	.825	42.0	
Gas oil	30.8	.864	32.3	
Nonviscous lubricating distillate	6.7	.895-.919	26.6-22.5	50-100
Medium lubricating distillate	3.1	.919-.932	22.5-20.3	100-200
Viscous lubricating distillate	4.5	.932-.956	20.3-16.5	Above 200
Residuum	6.6	.980	12.9	
Distillation loss	8			

Bureau of Mines Item 567
Bartlesville Laboratory
Sample 52093

IDENTIFICATION

Willamar, West field
Frio 1, Oligocene
7,920 - 7,950 feet

Texas
Willacy County

GENERAL CHARACTERISTICS

Gravity, specific, 0.877 Gravity, ° API, 29.9 Pour point, ° F, 20
Sulfur, percent, 0.44 Color, brownish green
Viscosity, Saybolt Universal at 77° F, 105 sec.; at 100° F, 73 sec. Nitrogen, percent, - - -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm. Hg
First drop 142 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302	1.5	1.5							
6	347	1.8	3.3	0.753	56.4	-	1.41888	134.3		
7	392	3.1	6.4	.778	50.4	19	1.43229	128.3		
8	437	4.7	11.1	.799	45.6	24	1.44155	128.4		
9	482	8.1	19.2	.814	42.3	25	1.44969	134.7		
10	527	12.1	31.3	.830	39.0	28	1.45830	134.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.2	37.5	0.847	35.6	32			41	Below 5
12	437	11.2	48.7	.853	34.4	31			46	25
13	482	7.5	56.2	.865	32.1	34			58	40
14	527	7.6	63.8	.881	29.1	38			87	55
15	572	7.3	71.1	.900	25.7	44			180	70
Residuum		27.6	98.7	.967	14.8					

Carbon residue, Conradson Residuum 9.4 percent, crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	6.4	0.765	53.5	
Kerosene distillate	12.8	.808	43.6	
Gas oil	27.3	.843	36.6	
Nonviscous lubricating distillate	14.6	.857-.883	33.6-28.8	50-100
Medium lubricating distillate	8.0	.883-.904	28.8-25.0	100-200
Viscous lubricating distillate	2.0	.904-.910	25.0-24.0	Above 200
Residuum	27.6	.967	14.8	
Distillation loss	1.3			

Bureau of Mines Item 568
Bartlesville Laboratory
Sample 63010

IDENTIFICATION

Wilshire field
Ellenburger, Cambro-Ordovician
11,995 - 12,158

Texas
Upton County

GENERAL CHARACTERISTICS

Gravity, specific, 0.764 Gravity, ° API, 53.7 Pour point, ° F, below 5
Sulfur, percent, 0.07 Color, green
Viscosity, Saybolt Universal at 100° F, 33 sec. Nitrogen, percent, 0.001

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 744 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	6.2	6.2	0.630	93.1					
2	167	4.5	10.7	.664	81.6	4.6	1.37514	127.9		
3	212	6.0	16.7	.697	71.5	10	1.39175	127.6		
4	257	7.0	23.7	.718	65.6	11	1.40366	131.9		
5	302	7.1	30.8	.737	60.5	13	1.41370	135.1		
6	347	6.8	37.6	.752	56.7	13	1.42117	133.2		
7	392	6.1	43.7	.764	53.7	13	1.42710	131.8		
8	437	6.8	50.5	.775	51.1	12	1.43275	132.0		
9	482	6.5	57.0	.788	48.1	13	1.43880	132.8		
10	527	7.1	64.1	.800	45.4	14	1.44526	131.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.3	70.4	0.817	41.7	18	1.45362	134.1	41	35
12	437	6.2	76.6	.826	39.8	18	1.45854	-	44	40
13	482	5.1	81.7	.841	36.8	22	1.46539	-	60	65
14	527	3.8	85.5	.856	33.8	26		-	90	75
15	572	2.9	88.4	.865	32.1	27		-	145	90
Residuum		6.8	95.2	.897	26.2			-		

Carbon residue, Conradson Residuum 2.3 percent, crude 0.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	16.7	0.663	81.8	
Kerosene distillate	43.7	0.712	67.3	
Gas oil	20.4	.788	48.1	
Nonviscous lubricating distillate	11.5	.821	40.9	
Medium lubricating distillate	8.6	.832-.858	38.6-33.5	50-100
Viscous lubricating distillate	4.2	.858-.869	33.5-31.4	100-200
Residuum	-	-	-	Above 200
Distillation loss	6.8	.897	26.2	

Bureau of Mines Item 569
Sample Bartlesville
55073 Laboratory

IDENTIFICATION

Withers, North field
Frio C, Oligocene
5,312 - 5,318 feet

Texas
Wharton County

GENERAL CHARACTERISTICS

Gravity, specific 0.843 Gravity, ° API, 36.4 Pour point, ° F, 35
Sulfur, percent, 0.10 Color, dark green
Viscosity, Saybolt Universal at 100° F, 40 sec. Nitrogen, percent, 0.019

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 745 mm Hg
First drop 135 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.0	2.0	0.713	67.0	-				
4	257	2.9	4.9	.752	56.7	27				
5	302	3.6	8.5	.770	52.3	28				
6	347	4.4	12.9	.785	48.8	29	1.43833	124.6		
7	392	5.0	17.9	.796	46.3	28	1.45193	126.9		
8	437	8.2	26.1	.812	42.8	30	1.46267	134.3		
9	482	11.2	37.3	.829	39.2	32	1.47377	144.6		
10	527	15.6	52.9	.845	36.0	35	1.48210	155.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	11.2	64.1	0.860	33.0	38			40	25
12	437	8.9	73.0	.863	32.5	36			46	40
13	482	6.1	79.1	.871	31.0	37			59	50
14	527	5.0	84.1	.883	28.8	39			87	60
15	572	4.5	88.6	.900	25.7	44			180	75
Residuum		10.2	98.8	.936	19.7					

Carbon residue, Conradson Residuum 3.7 percent, crude 0.4 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.0	0.713	67.0	
Total gasoline and naphtha	17.9	0.772	51.8	
Kerosine distillate	8.2	.812	42.8	
Gas oil	44.9	.848	35.4	
Nonviscous lubricating distillate	11.2	.865-.885	32.1-28.4	50-100
Medium lubricating distillate	5.2	.885-.903	28.4-25.2	100-200
Viscous lubricating distillate	1.2	.903-.907	25.2-24.5	Above 200
Residuum	10.2	.936	19.7	
Distillation loss	1.2			

Bureau of Mines Item 570
Sample Bartlesville
54177 Laboratory

IDENTIFICATION

World field
Grayburg, Permian
2 600 feet

Texas
Crockett County

GENERAL CHARACTERISTICS

Gravity specific 0.886 Gravity, ° API, 28.2 Pour point, ° F, 15
Sulfur percent 0.70 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 105 sec., 130° F, 76 sec Nitrogen percent, 0.250

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 743 mm Hg
First drop 118 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	1.4	1.4	0.709	68.1	-				
4	257	3.2	4.6	.742	59.2	23				
5	302	4.1	8.7	.769	52.5	27	1.42282	124.8		
6	347	4.4	13.1	.790	47.6	31	1.43492	130.4		
7	392	4.2	17.3	.816	41.9	37	1.44782	133.9		
8	437	3.6	20.9	.834	38.2	40	1.45765	136.7		
9	482	5.1	26.0	.845	36.0	40	1.46535	140.6		
10	527	6.6	32.6	.855	34.0	40	1.47224	148.8		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.4	35.0	0.867	31.7	42	1.47804	150.6	42	Below 5
12	437	6.6	41.6	.877	29.9	43	1.48177	153.3	49	10
13	482	4.7	46.3	.888	27.9	45	1.48882	161.8	68	35
14	527	5.4	51.7	.899	25.9	47			110	55
15	572	8.4	60.1	.911	23.8	49			200	70
Residuum		39.1	99.2	.955	16.7					

Carbon residue, Conradson Residuum 6.9 percent, crude 2.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.4	0.709	68.1	
Total gasoline and naphtha	17.3	0.776	50.9	
Kerosine distillate	-	.854	34.2	
Gas oil	21.5	.878-.896	29.7-26.4	50-100
Nonviscous lubricating distillate	9.1	.896-.911	26.4-23.8	100-200
Medium lubricating distillate	4.2	.911-.918	23.8-22.6	Above 200
Viscous lubricating distillate	39.1	.955	16.7	
Residuum	.8			
Distillation loss				

Bureau of Mines Item 571
Bartlesville
Sample 63057 Laboratory

IDENTIFICATION

Yarborough and Allen field
Ellenburger, Cambro - Ordovician
10,650 - 10,714 feet

Texas
Ector County

GENERAL CHARACTERISTICS

Gravity specific 0.819 Gravity, ° API, 41.3 Pour point, ° F, below 5
Sulfur percent 0.14 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 39 sec. Nitrogen, percent, 0.036

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 748 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.2	2.2	0.642	88.9					
2	167	3.1	5.3	.660	82.9	2.7	1.37422	129.3		
3	212	4.2	9.5	.695	72.1	9.4	1.39048	128.6		
4	257	4.4	13.9	.717	65.9	11	1.40246	132.0		
5	302	4.9	18.8	.735	61.0	12	1.41224	133.4		
6	347	5.1	23.9	.750	57.2	12	1.42064	133.5		
7	392	5.6	29.5	.765	53.5	13	1.42876	135.1		
8	437	5.9	35.4	.780	49.9	14	1.43694	139.6		
9	482	6.5	41.9	.795	46.5	16	1.44515	144.4		
10	527	6.7	48.6	.808	43.6	18	1.45208	145.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.6	53.2	0.826	39.8	22	1.45870	146.8	39	30
12	437	7.1	60.3	.838	37.4	24	1.46544	151.0	45	35
13	482	5.0	65.3	.854	34.2	28	1.48144	166.7	54	45
14	527	3.6	68.9	.875	30.2	35	1.48627	-	71	50
15	572	4.4	73.3	.888	27.8	38			120	80
Residuum		23.7	97.0	.951	17.3					

Carbon residue, Conradson Residuum 7.2 percent, crude 2.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.5	0.671	79.3	
Total gasoline and naphtha	29.5	0.720	65.0	
Kerosene distillate	19.1	.795	46.5	
Gas oil	11.5	.833	38.3	
Nonviscous lubricating distillate	9.4	.847-.883	35.6-28.8	50-100
Medium lubricating distillate	3.8	.883-.895	28.8-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	23.7	.951	17.3	
Distillation loss	3.0			

Bureau of Mines Item 572
Bartlesville Laboratory
Sample 59156

IDENTIFICATION

Yates field
San Andres, Permian
973 - 1,038 feet

Texas
Pecos County

GENERAL CHARACTERISTICS

Gravity, specific 0.875 Gravity, ° API, 30.2 Pour point, ° F, below 5
Sulfur, percent, 1.54 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 66 sec., 100° F., 59 sec. Nitrogen, percent, 0.150

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 747 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.3	1.3	0.642	88.9					
2	167	1.4	2.7	.669	80.0	7.0	1.37474	123.0		
3	212	2.6	5.3	.704	69.5	14	1.39764	126.6		
4	257	4.3	9.6	.736	60.8	20	1.40961	124.5		
5	302	4.4	14.0	.761	54.4	24	1.42114	126.4		
6	347	4.9	18.9	.783	49.2	28	1.43324	129.9		
7	392	5.2	24.1	.805	44.3	32	1.44521	134.5		
8	437	4.4	28.5	.824	40.2	35	1.45484	139.4		
9	482	5.5	34.0	.841	36.8	38	1.46428	144.8		
10	527	7.0	41.0	.859	33.2	42	1.47493	154.6		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.5	43.5	0.876	30.0	46	1.48054	152.4	43	Below 5
12	437	5.4	48.9	.882	28.9	45	1.49011	169.4	49	do
13	482	5.7	54.6	.900	25.7	50	1.49854	176.3	55	do
14	527	5.2	59.8	.918	22.6	56	1.50512	181.6	110	do
15	572	6.9	66.7	.922	22.0	55	1.51039	-	230	do
Residuum		31.6	98.3	.969	14.5					

Carbon residue, Conradson Residuum 9.9 percent, crude 3.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.680	76.6	
Total gasoline and naphtha	24.1	0.753	56.4	
Kerosene distillate	4.4	.824	40.2	
Gas oil	17.9	.860	33.0	
Nonviscous lubricating distillate	9.2	.883-.914	28.8-23.3	50-100
Medium lubricating distillate	6.2	.914-.921	23.3-22.1	100-200
Viscous lubricating distillate	4.9	.921-.924	22.1-21.6	Above 200
Residuum	31.6	.969	14.5	
Distillation loss	1.7			

Bureau of Mines ^{Item 573}
Sample ^{Bartlesville}
59164 Laboratory

IDENTIFICATION

Aneth field
Aneth, Upper Paradox
Hermosa, Pennsylvanian
5,700 - 5,840 feet

Utah
San Juan County

GENERAL CHARACTERISTICS

Gravity, specific, 0.823 Gravity, ° API, 40.4 Pour point, ° F, 25
Sulfur, percent, 0.20 Color, dark green
Viscosity, Saybolt Universal at 100° F, 38 sec. Nitrogen, percent, 0.059

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 741 mm. Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.1	3.1	0.648	86.9					
2	167	3.7	6.8	.676	77.8	10	1.38064	126.5		
3	212	5.1	11.9	.721	64.8	22	1.40165	128.6		
4	257	6.9	18.8	.745	58.4	24	1.41505	135.9		
5	302	5.0	23.8	.761	54.4	24	1.42544	138.0		
6	347	5.8	29.6	.780	49.9	26	1.43494	135.7		
7	392	5.4	35.0	.794	46.7	27	1.44247	140.9		
8	437	4.9	39.9	.808	43.6	28	1.44941	142.7		
9	482	5.3	45.2	.821	40.9	29	1.45657	147.5		
10	527	6.9	52.1	.833	38.4	30	1.46374	153.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	3.0	55.1	0.840	37.0	29	1.46993	154.9	40	20
12	437	6.2	61.3	.849	35.2	29	1.47179	154.3	44	34
13	482	6.4	67.7	.858	33.4	30	1.47752	159.1	54	50
14	527	5.0	72.7	.868	31.5	32	1.48274	-	74	70
15	572	5.1	77.8	.870	31.1	30	-	-	115	80
Residuum		21.2	99.0	.915	23.1					

Carbon residue, Conradson Residuum 3.5 percent, crude 0.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	11.9	0.688	74.2	
Total gasoline and naphtha	35.0	0.741	59.5	
Kerosene distillate	10.2	.815	42.1	
Gas oil	16.9	.841	36.8	
Nonviscous lubricating distillate	11.3	.854-.869	34.2-31.3	50-100
Medium lubricating distillate	4.4	.869-.871	31.3-31.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.2	.915	23.1	
Distillation loss	1.0			

Bureau of Mines ^{Item 574}
Sample ^{Laramie}
PC-57-12 Laboratory

IDENTIFICATION

Ismay field
Upper Paradox, Pennsylvanian
5,585 - 5,625 feet

Utah
San Juan County

GENERAL CHARACTERISTICS

Gravity specific 0.806 Gravity, ° API 44.1 Pour point ° F 10
Sulfur percent 0.05 Color brownish green
Viscosity, Saybolt Universal at 100° F, 33 sec Nitrogen percent 0.022

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	4.2	4.2	0.650	86.2					
2	167	5.7	9.9	.681	76.3	13	1.38313	129.9		
3	212	5.4	15.3	.724	63.9	23	1.40379	135.6		
4	257	8.3	23.6	.748	57.7	26	1.41635	142.0		
5	302	6.3	29.9	.759	54.9	23	1.42705	148.5		
6	347	6.1	36.0	.780	49.9	26	1.43574	147.4		
7	392	6.2	42.2	.795	46.5	27	1.44325	147.0		
8	437	4.5	46.7	.806	44.1	27	1.44955	146.9		
9	482	5.8	52.5	.820	41.1	28	1.45787	154.1		
10	527	6.0	58.5	.832	38.6	29	1.46535	162.3		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	5.3	63.8	0.846	35.8	32			39	15
12	437	4.2	68.0	.849	35.2	29			44	30
13	482	4.9	72.9	.858	33.4	30			53	55
14	527	5.1	78.0	.872	30.8	34			73	75
15	572	4.8	82.8	.881	29.1	35			125	95
Residuum		14.0	96.8	.917	22.8					

Carbon residue, Conradson Residuum 3.1 percent, crude 0.5 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	15.3	0.688	74.2	
Total gasoline and naphtha	42.2	0.739	60.0	
Kerosene distillate	10.3	.814	42.3	
Gas oil	16.2	.843	36.4	
Nonviscous lubricating distillate	9.3	.855-.877	34.0-29.9	50-100
Medium lubricating distillate	4.8	.877-.885	29.9-28.4	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	14.0	.917	22.8	
Distillation loss	3.2			

Item 575
Bureau of Mines Laramie Laboratory
Sample PC-60-194

IDENTIFICATION

Lisbon field
Mississippian
8,738 - 8,750 feet

Utah
San Juan County

GENERAL CHARACTERISTICS

Gravity, specific, 0.729 Gravity, ° API, 62.6 Pour point, ° F., below 5
Sulfur, percent, 0.21 Color, NPA 2
Viscosity, Saybolt Universal at 100° F., less than 32 sec. Nitrogen, percent, 0.001

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 760 mm. Hg
First drop, 82 ° F.

Fraction No.	Cut temp ° F.	Percent	Sum, percent	Sp. gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1	122	14.2	14.2	0.633	92.0					
2	167	14.0	28.2	.661	82.6	3.2	1.37136	135.6		
3	212	13.3	41.5	.701	70.4	12	1.39141	137.4		
4	257	14.0	55.5	.731	62.1	18	1.40965	141.3		
5	302	11.3	66.8	.759	54.9	23	1.42464	152.3		
6	347	7.0	73.8	.777	50.6	25	1.43461	156.4		
7	392	5.4	79.2	.785	48.8	23	1.43861	149.8		
8	437	3.6	82.8	.791	47.4	20	1.44024	144.6		
9	482	2.9	85.7	.801	45.2	19	1.44514	143.2		
10	527	3.5	89.2	.814	42.3	21	1.45141	147.3		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	2.6	91.8	0.847	35.6	32	1.46688	152.7	39	20
12	437	2.1	93.9	.869	31.3	39	1.47608	161.8	46	45
13	482	1.1	95.0	.877	29.9	39			58	80
14	527	.9	95.9	.882	28.9	39			-	110
15	572	.3	96.2	.900	25.7	44			-	120
Residuum		1.8	98.0	.926	21.3					

Carbon residue, Conradson Residuum, 0.0 percent; crude, 0.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	41.5	0.664	81.6	
Total gasoline and naphth.	79.2	0.708	68.4	
Kerosene distillate	10.0	.802	44.9	
Gas oil	4.2	.854	34.2	
Non-viscous lubricating distillate	2.8	.875-.893	30.6-27.0	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	1.8	.926	21.3	
Distillation loss	2.0			

Item 576
Bureau of Mines Laramie Laboratory
Sample PC-62-42

IDENTIFICATION

Red Wash (Walker Hollow) field
Green River, Tertiary
5,520 - 5,626 feet

Utah
Uintah County

GENERAL CHARACTERISTICS

Gravity, specific, 0.909 Gravity, ° API, 24.2 Pour point, ° F., 60
Sulfur, percent, .11 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 360 sec.; 130° F., 170 sec. Nitrogen, percent, 0.255

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 760 mm. Hg
First drop, 205 ° F.

Fraction No.	Cut temp ° F.	Percent	Sum, percent	Sp. gr. 60/60° F.	° API, 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. visc. 100° F.	Cloud test, ° F.
1	122									
2	167									
3	212									
4	257	1.2	1.2	0.744	58.7	24	1.41083	130.1		
5	302	2.0	3.2	.767	53.0	27	1.42395	132.2		
6	347	2.3	5.5	.791	47.4	32	1.43562	137.1		
7	392	2.3	7.8	.810	43.2	34	1.44762	142.9		
8	437	2.2	10.0	.828	39.4	37	1.45792	146.5		
9	482	2.6	12.6	.842	36.6	39	1.46662	153.5		
10	527	5.4	18.0	.852	34.6	39	1.47447	162.3		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	1.3	19.3	0.860	33.0	38	1.47881	165.4	39	10
12	437	4.0	23.3	.863	32.5	36	1.48131	165.3	44	30
13	482	4.9	28.2	.868	31.5	35	1.48375	158.4	53	50
14	527	5.1	33.3	.885	28.4	40			72	70
15	572	6.8	40.1	.893	27.0	41			120	90
Residuum		59.7	99.8	.952	17.1					

Carbon residue, Conradson: Residuum, 7.7 percent; crude, 4.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline				
Total gasoline and naphth.	7.8	0.783	49.2	
Kerosene distillate				
Gas oil	16.5	.851	34.8	
Non-viscous lubricating distillate	9.9	.867-.890	31.7-27.5	50-100
Medium lubricating distillate	5.9	.890-.897	27.5-26.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	59.7	.952	17.1	
Distillation loss	.2			

Bureau of Mines
Sample
Item 577
Laramie
PC-51-145

Laboratory

IDENTIFICATION

Beaver Creek field
Steele (Cody), Upper Cretaceous
3,632 - 3,785 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity, specific, 0.856 Gravity, ° API, 33.8 Pour point, ° F, below 5
Sulfur, percent, 0.20 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 48 sec. Nitrogen, percent, 0.117

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 172 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.1	2.1	0.715	66.4	-	1.39720	123.9		
4	257	5.4	7.5	.740	59.7	22	1.40856	125.0		
5	302	5.8	13.3	.758	55.2	23	1.41902	130.4		
6	347	5.7	19.0	.775	51.1	24	1.42830	131.6		
7	392	5.4	24.4	.791	47.4	25	1.43684	134.4		
8	437	5.5	29.9	.805	44.3	26	1.44470	136.3		
9	482	6.2	36.1	.818	41.5	27	1.45199	139.4		
10	527	7.5	43.6	.830	39.0	28	1.45921	143.5		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.0	45.6	0.845	36.0	31			39	15
12	437	7.3	52.9	.849	35.2	29			43	35
13	482	6.6	59.5	.860	33.0	31			53	50
14	527	5.8	65.3	.879	29.5	37			73	70
15	572	7.0	72.3	.892	27.1	40			125	85
Residuum		26.8	99.1	.955	16.7					

Carbon residue, Conradson Residuum 5.6 percent, crude 1.7 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	2.1	0.715	66.4	
Total gasoline and naphtha	24.4	0.762	54.2	
Kerosene distillate	11.7	.812	42.8	
Gas oil	18.1	.842	36.6	
Nonviscous lubricating distillate	11.6	.856-.886	33.8-28.2	50-100
Medium lubricating distillate	6.5	.886-.899	28.2-25.9	100-200
Viscous lubricating distillate				Above 200
Residuum	26.8	.955	16.7	
Distillation loss	.9			

Bureau of Mines
Sample
Item 578
Laramie
PC-50-357

Laboratory

IDENTIFICATION

Big Muddy field
Wall Creek, Frontier, Upper Cretaceous
3,069 - 3,180 feet

Wyoming
Converse County

GENERAL CHARACTERISTICS

Gravity, specific, 0.846 Gravity, ° API, 35.8 Pour point, ° F, 15
Sulfur, percent, 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 47 sec. Nitrogen percent, 0.08

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Pt	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.7	1.7	0.643	88.6					
2	167	1.8	3.5	.669	80.0	7.0	1.37855	124.4		
3	212	4.2	7.7	.717	65.8	20	1.39777	124.5		
4	257	5.8	13.5	.743	58.9	23	1.41089	126.3		
5	302	4.4	17.9	.763	53.9	25	1.42198	133.7		
6	347	4.6	22.5	.783	49.2	28	1.43265	135.6		
7	392	3.8	26.3	.799	45.6	29	1.44155	136.0		
8	437	3.5	29.8	.814	42.3	31	1.44944	139.4		
9	482	4.4	34.2	.826	39.8	31	1.45673	142.8		
10	527	5.4	39.6	.838	37.3	32	1.46367	147.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.6	44.2	0.851	34.8	34			39	15
12	437	5.5	49.7	.855	34.0	32			44	30
13	482	5.9	55.6	.864	32.3	33			54	45
14	527	4.7	60.3	.879	29.5	37			73	65
15	572	6.5	66.8	.890	27.5	39			120	85
Residuum		31.2	98.0	.935	19.8					

Carbon residue, Conradson Residuum 4.7 percent, crude 1.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.7	0.689	73.9	
Total gasoline and naphtha	26.3	0.746	58.2	
Kerosene distillate	3.5	.814	42.3	
Gas oil	20.5	.844	36.1	
Nonviscous lubricating distillate	10.8	.860-.885	33.0-28.4	50-100
Medium lubricating distillate	5.7	.885-.896	28.4-26.4	100-200
Viscous lubricating distillate				Above 200
Residuum	31.2	.935	19.8	
Distillation loss	2.0			

Bureau of Mines
Sample
Item 579
Laramie
PC-49-78
Laboratory

IDENTIFICATION

Big Sand Draw field
Phosphoria, Permian
6,850 - 7,257 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity specific 0.731 Gravity, ° API 62.1 Pour point, ° F below 5
Sulfur percent 0.32 Color, less than NPA 1
Viscosity, Saybolt Universal 100° F., less than 32 sec. Nitrogen percent 0.000

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Initial temp ° F	Sum percent	Sp. gr. 60/60° F	° API (60° F)	Refractive index at 20° C	Specific gravity at 60° F	S. U. visc 100° F	Cloud test ° F
1	122	11.4	11.4	0.640	89.6				
2	167	10.4	21.8	.663	81.9	4.2			
3	212	16.2	38.0	.702	70.1	13			
4	257	14.6	52.6	.733	61.5	18			
5	302	14.0	66.6	.755	55.9	21			
6	347	10.1	76.7	.773	51.5	23			
7	392	6.7	83.4	.783	49.2	22			
8	437	4.5	87.9	.795	46.5	22			
9	482	3.8	91.7	.803	44.7	20			
10	527	3.4	95.1	.816	41.9	22			

STAGE 2 Distillation continued at 40 mm Hg

11	392								
12	437								
13	482								
14	527								
15	572								
Residue	1/	2.7	97.8	0.860	33.0				

Carbon residue (pyrolytic) 0.0 percent crude 0.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gas oil	38.0	0.673	78.7	
Total gasoline and nap	83.4	0.718	65.6	
Kerosene distillate	11.7	.804	44.5	
Gas oil	2.7	.860	33.0	
Nonviscous lubricating distillate	-	-	-	0-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	1/ included in gas oil			
Distillation loss	2.2			

Bureau of Mines
Sample
Item 580
Laramie
PC-48-33
Laboratory

IDENTIFICATION

Big Sand Draw field
Tensleep, Pennsylvanian
7,281 - 7,593 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity specific 0.854 Gravity, ° API 34.2 Pour point, ° F below 5
Sulfur percent 1.35 Color, brownish black
Viscosity, Saybolt Universal 100° F., 43 sec. Nitrogen, percent, 0.093

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 115 ° F

Fraction No	Cut temp ° F	Initial temp ° F	Sum percent	Sp. gr. 60/60° F	° API (60° F)	Refractive index at 20° C	Specific gravity at 60° F	S. U. visc 100° F	Cloud test ° F
1	122	0.2	0.2						
2	167	1.6	1.8	0.656	84.2	-			
3	212	3.0	4.8	.686	74.8	5.2			
4	257	4.9	9.7	.717	65.8	11			
5	302	5.5	15.2	.742	59.2	15			
6	347	5.9	21.1	.764	53.7	19			
7	392	5.5	26.6	.785	48.7	23			
8	437	6.0	32.6	.800	45.4	24			
9	482	6.8	39.4	.816	41.9	26			
10	527	7.9	47.3	.835	38.0	31			

STAGE 2 Distillation continued at 40 mm Hg

11	392	4.1	51.4	0.857	33.6	37		40	10
12	437	6.9	58.3	.869	31.3	39		45	25
13	482	6.6	64.9	.884	28.6	43		56	45
14	527	5.6	70.5	.902	25.4	48		79	60
15	572	6.4	76.9	.917	22.8	52		140	80
Residue		21.8	98.7	.989	11.6				

Carbon residue (pyrolytic) 12.4 percent crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gas oil	4.8	0.675	78.1	
Total gasoline and nap	26.6	0.739	60.0	
Kerosene distillate	12.8	.808	43.6	
Gas oil	17.8	.851	34.8	
Nonviscous lubricating distillate	12.6	.874-.907	30.4-24.5	0-100
Medium lubricating distillate	7.1	.907-.925	24.5-21.5	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	21.8	.989	11.6	
Distillation loss	1.3			

Bureau of Mines
Sample

Item 581
Laramie
PC-50-630

Laboratory

IDENTIFICATION

Byron field
Tensleep, Pennsylvanian
5,163 - 5,314 feet

Wyoming
Big Horn County

GENERAL CHARACTERISTICS

Gravity, specific, 0.908 Gravity, ° API, 24.3 Pour point, ° F., below 5
Sulfur, percent, 2.50 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 140 sec., 130° F., 84 sec. Nitrogen percent, 0.24

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	0.4	0.4							
2	167	.8	1.2	0.662	82.2	-	1.37386	124.7		
3	212	1.4	2.6	.687	74.5	5.6	1.38600	123.8		
4	257	1.9	4.5	.718	65.6	11	1.40104	122.4		
5	302	2.5	7.0	.746	58.2	17	1.41433	130.0		
6	347	2.6	9.6	.768	52.7	21	1.42602	131.0		
7	392	2.7	12.3	.787	48.3	23	1.43571	132.7		
8	437	3.2	15.5	.805	44.3	26	1.44520	135.3		
9	482	4.0	19.5	.823	40.4	30	1.45476	140.8		
10	527	5.3	24.8	.842	36.6	34	1.46526	148.0		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.5	27.3	0.867	31.7	42			41	Below 5
12	437	6.9	34.2	.875	30.2	42			45	5
13	482	6.2	40.4	.890	27.5	46			59	25
14	527	5.8	46.2	.905	24.9	49			90	45
15	572	7.0	53.2	.924	21.6	55			170	65
Residuum		45.9	99.1	.988	11.7					

Carbon residue, Conradson Residuum 12.2 percent, crude 6.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.675	78.1	
Total gasoline and naphth	12.3	0.740	59.7	
Kerosene distillate	7.2	.815	42.1	
Gas oil	13.4	.861	32.8	
Nonviscous lubricating distillate	11.2	.880-.907	29.3-24.5	50-100
Medium lubricating distillate	8.0	.907-.931	24.5-20.5	100-200
Viscous lubricating distillate	1.1	.931-.934	20.5-20.0	Above 200
Residuum	45.9	.988	11.7	
Distillation loss	.9			

Bureau of Mines
Sample

Item 582
Laramie
PC-56-148

Laboratory

IDENTIFICATION

Cottonwood Creek field
Phosphria, Permian
7,270 - 7,323 feet

Wyoming
Washakie County

GENERAL CHARACTERISTICS

Gravity, specific, 0.884 Gravity, ° API, 28.6 Pour point, ° F., below 5
Sulfur, percent, 2.52 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 63 sec., 77° F., 78 sec. Nitrogen percent, 0.190

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U Visc. 100° F	Cloud test ° F
1	122	1.3	1.3	0.656	84.2					
2	167	1.5	2.8	.663	81.9	4.2	1.37690	124.0		
3	212	2.4	5.2	.700	70.6	12	1.39546	133.2		
4	257	3.2	8.4	.732	61.8	18	1.40906	136.2		
5	302	3.9	12.3	.758	55.2	23	1.42418	143.3		
6	347	4.1	16.4	.779	50.1	26	1.43551	146.8		
7	392	3.8	20.2	.793	46.9	26	1.44303	144.4		
8	437	3.8	24.0	.809	43.4	28	1.44966	143.7		
9	482	4.7	28.7	.823	40.4	30	1.45733	144.0		
10	527	6.0	34.7	.841	36.8	33	1.46630	150.5		

Stage 2—Distillation continued at 40 mm Hg

11	392	6.7	41.4	0.867	31.7	42			41	Below 5
12	437	6.7	48.1	.880	29.3	44			49	20
13	482	7.8	55.9	.900	25.7	50			70	50
14	527	5.5	61.4	.922	22.0	58			130	70
15	572	7.5	68.9	.932	20.3	59			260	85
Residuum		28.9	97.8	.999	10.1					

Carbon residue, Conradson Residuum 13.9 percent, crude 4.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.2	0.678	77.2	
Total gasoline and naphth	20.2	0.744	58.7	
Kerosene distillate	8.5	.817	41.7	
Gas oil	16.3	.859	33.2	
Nonviscous lubricating distillate	10.3	.881-.912	29.1-23.7	50-100
Medium lubricating distillate	6.8	.912-.927	23.7-21.1	100-200
Viscous lubricating distillate	6.8	.927-.938	21.1-19.4	Above 200
Residuum	28.9	.999	10.1	
Distillation loss	2.2			

Bureau of Mines
Sample
Item 583
Laramie
PC-60-111

Laboratory

IDENTIFICATION

Coyote Creek field
Minnelusa, Pennsylvanian
6,368 - 6,409 feet

Wyoming
Crook County

GENERAL CHARACTERISTICS

Gravity, specific 0.821 Gravity, ° API 40.9 Pour point, ° F below 5
Sulfur percent 0.06 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 36 sec. Nitrogen percent 0.059

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 90 ° F

Fraction No	Cut temp ° F	Initial	Sum p rec t	Sp gr 60/60° F	° API 60° F	C I	R fraction index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.645	87.9					
2	167	2.7	5.4	.675	78.1	9.8	1.37752	130.1		
3	212	5.1	10.5	.710	67.8	17	1.39172	130.3		
4	257	8.6	19.1	.739	60.0	21	1.40682	129.2		
5	302	6.5	25.6	.760	54.7	24	1.41896	135.6		
6	347	5.7	31.3	.776	50.9	24	1.42824	140.9		
7	392	5.2	36.5	.792	47.2	26	1.43636	140.7		
8	437	4.3	40.8	.805	44.3	26	1.44308	140.7		
9	482	4.9	45.7	.816	41.9	26	1.44955	144.3		
10	527	6.8	52.5	.829	39.2	28	1.45808	149.7		

STAGE 2—Distillation continued at 40 mm Hg

11	392	4.5	57.0	0.845	36.0	31	1.46646	153.5	37	Below 5
12	437	4.7	61.7	.848	35.4	29	1.46773	153.9	42	30
13	482	5.2	66.9	.855	34.0	29	1.47176	158.9	50	50
14	527	4.7	71.6	.873	30.6	34			64	60
15	572	6.2	77.8	.883	28.8	36			97	85
Residue		21.2	99.0	.930	20.7					

Carbon resid 4.6 percent crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.5	0.684	75.4	
Total gasoline and naphtha	36.5	0.740	59.7	
Kerosene distillate	9.2	.811	43.0	
Gas oil	18.6	.842	36.6	
Nonviscous lubricating distillate	10.9	.855-.884	34.0-28.6	50-100
Medium lubricating distillate	2.6	.884-.889	28.6-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	21.2	.930	20.7	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 584
Laramie
PC-57-147

Laboratory

IDENTIFICATION

Donkey Creek field
Dakota, Lower Cretaceous
6,259 - 6,293 feet

Wyoming
Crook County

GENERAL CHARACTERISTICS

Gravity, specific 0.828 Gravity, ° API 39.4 Pour point, ° F below 5
Sulfur percent 0.12 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 37 sec. Nitrogen percent, 0.072

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Initial	Sum p rec t	Sp gr 60/60° F	° API 60° F	C I	R fraction index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.0	3.0	0.642	88.9					
2	167	2.8	5.8	.679	76.9	12	1.38404	124.9		
3	212	6.3	12.1	.719	65.3	21	1.39924	130.7		
4	257	7.1	19.2	.744	58.7	24	1.41266	131.5		
5	302	5.1	24.3	.762	54.2	25	1.42349	137.8		
6	347	5.3	29.6	.780	49.9	26	1.43314	140.8		
7	392	4.8	34.4	.796	46.3	28	1.44180	143.6		
8	437	5.0	39.4	.810	43.2	29	1.44993	143.6		
9	482	5.8	45.2	.825	40.0	31	1.45884	151.3		
10	527	6.5	51.7	.836	37.8	31	1.46572	157.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.4	53.1	0.848	35.4	33			40	15
12	437	4.3	57.4	.848	35.4	29			43	25
13	482	5.5	62.9	.856	33.8	29			50	45
14	527	5.1	68.0	.874	30.4	35			65	70
15	572	5.9	73.9	.884	28.6	37			100	85
Residue		24.3	98.2	.937	19.5					

Carbon resid 4.0 percent crude 1.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	12.1	0.691	73.3	
Total gasoline and naphtha	34.4	0.741	59.5	
Kerosene distillate	10.8	.818	41.5	
Gas oil	14.9	.845	36.0	
Nonviscous lubricating distillate	10.8	.856-.884	33.8-28.6	50-100
Medium lubricating distillate	3.0	.884-.889	28.6-27.7	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	24.3	.937	19.5	
Distillation loss	1.8			

Bureau of Mines
Sample
Item 585
Laramie
PC-50-552

Laboratory

IDENTIFICATION

Elk Basin field
Frontier, Upper or Middle Cretaceous
1,540 - 1,556 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific, 0.804 Gravity, ° API, 44.5 Pour point, ° F, below 5
Sulfur, percent, 0.07 Color, green
Viscosity, Saybolt Universal at 100° F., 33 sec. Nitrogen, percent, 0.030

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	4.0	4.0	0.644	88.2					
2	167	4.6	8.6	.668	80.3	6.5	1.37461	121.7		
3	212	9.2	17.8	.682	76.0	3.3	1.39810	136.6		
4	257	11.4	29.2	.747	57.9	25	1.41337	132.6		
5	302	6.2	35.4	.767	53.0	27	1.42550	138.8		
6	347	6.8	42.2	.782	49.5	27	1.43393	143.5		
7	392	5.0	47.2	.797	46.0	28	1.44186	143.4		
8	437	5.2	52.4	.811	43.0	29	1.45004	144.9		
9	482	5.5	57.9	.827	39.6	31	1.45932	153.2		
10	527	6.2	64.1	.838	37.4	32	1.46657	158.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.3	66.4	0.853	34.4	35			39	25
12	437	5.1	71.5	.857	33.6	33			43	35
13	482	4.9	76.4	.869	31.3	36			52	55
14	527	4.1	80.5	.876	30.0	36			69	75
15	572	5.4	85.9	.886	28.2	37			110	90
Residuum		12.5	98.4	.938	19.4					

Carbon residue, Conradson Residuum 3.6 percent crude 0.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	17.8	0.669	80.0	
Total gasoline and naphth	47.2	0.731	62.1	
Kerosene distillate	5.2	.811	43.0	
Gas oil	20.4	.845	36.0	
Nonviscous lubricating distillate	9.0	.866-.883	31.9-28.8	50 100
Medium lubricating distillate	4.1	.883-.892	28.8-27.1	100 200
Viscous lubricating distillate				Above 200
Residuum	12.5	.938	19.4	
Distillation loss	1.6			

Bureau of Mines
Sample
Item 586
Laramie
PC-50-550

Laboratory

IDENTIFICATION

Elk Basin field
Tensleep, Pennsylvanian
4,676 - 4,856 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific, 0.872 Gravity, ° API, 30.8 Pour point, ° F, below 5
Sulfur, percent, 1.95 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 49 sec. Nitrogen percent, 0.15

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U vise 100° F	Cloud test ° F
1	122	1.8	1.8	0.642	88.9					
2	167	2.6	4.4	.661	82.6	3.2	1.37297	128.4		
3	212	3.7	8.1	.702	70.1	13	1.39235	130.1		
4	257	4.7	12.8	.734	61.3	19	1.40897	134.6		
5	302	4.9	17.7	.761	54.4	24	1.42458	142.9		
6	347	4.8	22.5	.784	49.0	28	1.43622	146.0		
7	392	4.3	26.8	.800	45.4	30	1.44400	144.8		
8	437	4.5	31.3	.815	42.1	31	1.45054	139.0		
9	482	5.1	36.4	.832	38.6	34	1.45983	146.4		
10	527	6.1	42.5	.853	34.4	39	1.47122	154.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.4	43.9	0.876	30.0	46			43	Below 5
12	437	5.8	49.7	.883	28.7	46			47	20
13	482	5.5	55.2	.896	26.4	48			59	30
14	527	6.1	61.3	.912	23.6	53			90	50
15	572	6.4	67.8	.931	20.5	59			195	65
Residuum		30.1	97.9	.992	11.1					

Carbon residue, Conradson Residuum 11.4 percent crude 3.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.1	0.676	77.8	
Total gasoline and naphth	26.8	0.741	59.5	
Kerosene distillate	4.5	.815	42.1	
Gas oil	16.9	.856	33.8	
Nonviscous lubricating distillate	10.6	.886-.914	28.2-23.3	50 100
Medium lubricating distillate	6.0	.914-.932	22.3-20.3	100 200
Viscous lubricating distillate	3.0	.932-.941	20.3-18.9	Above 200
Residuum	30.1	.992	11.1	
Distillation loss	2.1			

Bureau of Mines
Sample
Item 587
Laramie
PC-50-551

Laboratory

IDENTIFICATION

Elk Basin field
Madison, Mississippian
5,156 - 5,668 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific 0.891 Gravity, ° API 27.3 Pour point, ° F below 5
Sulfur percent 1.92 Color brownish black
Viscosity, Saybolt Universal 100° F., 68 sec., 77° F., 100 sec. Nitrogen percent, 0.20

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No.	Cut temperature, ° F	Volume, l	Specific gravity, 60° F	Refractive index, 60° F	API gravity, 60° F	Cloud point, ° F	Refractive index, 60° F	Specific gravity, 60° F	Cloud point, ° F
1	122	0.9	0.9	0.651	85.9				
2	167	1.5	2.4	.658	83.6	1.8	1.37046	124.5	
3	212	2.8	5.2	.695	72.1	9.4	1.38831	120.3	
4	257	3.7	8.9	.723	64.2	14	1.40242	128.7	
5	302	4.0	12.9	.748	57.7	18	1.41617	134.1	
6	347	4.2	17.1	.770	52.3	22	1.42841	138.4	
7	392	4.0	21.1	.789	47.8	24	1.43788	141.1	
8	437	4.1	25.2	.806	44.1	27	1.44619	141.3	
9	482	5.0	30.2	.824	40.2	30	1.45565	143.5	
10	527	6.3	36.5	.844	36.2	35	1.46678	151.4	

STAGE 2—Distillation continued at 40 mm Hg

Fraction No.	Cut temperature, ° F	Volume, l	Specific gravity, 60° F	Refractive index, 60° F	API gravity, 60° F	Cloud point, ° F
11	392	1.7	38.2	0.868	31.5	42
12	437	6.6	44.8	.876	30.0	42
13	482	6.8	51.6	.898	26.1	49
14	527	6.0	57.6	.916	23.0	55
15	572	6.5	64.1	.928	21.0	57
Residue		34.9	99.0	1.009	8.7	

Carbon residue on carbon Residue 16.2 percent crude 6.4 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.2	0.677	77.5	
Total gasoline and naphtha	21.1	0.738	60.2	
Kerosene distillate	9.1	.816	41.9	
Gas oil	13.1	.858	33.4	
Non viscous lubricating distillate	11.6	.882-.917	28.9-22.8	50-100
Medium lubricating distillate	5.8	.917-.928	22.8-21.0	100-200
Viscous lubricating distillate	3.4	.928-.934	21.0-20.0	200-300
Residue	34.9	1.009	8.7	
Distillation loss	1.0			

Bureau of Mines
Sample
Item 588
Laramie
PC-62-116

Laboratory

IDENTIFICATION

Elk Basin field
Jefferson, Devonian
5,468 - 5,510 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific 0.894 Gravity, ° API 26.8 Pour point, ° F below 5
Sulfur percent 1.50 Color brownish black
Viscosity, Saybolt Universal 100° F., 71 sec., 77° F., 110 sec. Nitrogen percent, 0.187

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 104 ° F

Fraction No.	Cut temperature, ° F	Volume, l	Specific gravity, 60° F	Refractive index, 60° F	API gravity, 60° F	Cloud point, ° F	Refractive index, 60° F	Specific gravity, 60° F	Cloud point, ° F
1	122								
2	167	1.6	1.6	0.665	81.3	-	1.38459	130.3	
3	212	2.1	3.7	.694	72.4	8.9	1.38764	124.6	
4	257	3.2	6.9	.721	64.8	13	1.40295	131.6	
5	302	4.0	10.9	.746	58.2	17	1.41629	134.2	
6	347	3.6	14.5	.767	53.0	20	1.42756	139.3	
7	392	4.1	18.6	.786	48.5	23	1.43726	139.1	
8	437	4.5	23.1	.804	44.5	26	1.44630	140.7	
9	482	3.9	27.0	.820	41.1	28	1.45463	139.5	
10	527	6.4	33.4	.839	37.2	32	1.46482	147.7	

STAGE 2—Distillation continued at 40 mm Hg

Fraction No.	Cut temperature, ° F	Volume, l	Specific gravity, 60° F	Refractive index, 60° F	API gravity, 60° F	Cloud point, ° F
11	392	2.6	36.0	0.864	32.3	40
12	437	5.8	41.8	.871	31.0	40
13	482	6.4	48.2	.886	28.2	44
14	527	5.8	54.0	.903	25.2	49
15	572	6.8	60.8	.918	22.6	53
Residue		38.6	99.4	.995	10.7	

Carbon residue on carbon Residue 17.0 percent crude 7.3 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.7	0.681	76.3	
Total gasoline and naphtha	18.6	0.742	59.2	
Kerosene distillate	8.4	.811	43.0	
Gas oil	15.4	.858	33.4	
Non viscous lubricating distillate	9.9	.880-.906	29.3-24.7	50-100
Medium lubricating distillate	8.5	.906-.926	24.7-21.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	38.6	.995	10.7	
Distillation loss	.6			

Bureau of Mines
Sample
Item 589
Laramie
PC-62-117
Laboratory

IDENTIFICATION

Elk Basin field
Bighorn, Ordovician
5,918 - 5,928 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific 0.900 Gravity, ° API, 25.7 Pour point, ° F below 5
Sulfur, percent, 1.77 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 98 sec., 77° F., 160 sec. Nitrogen, percent 0.203

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 100 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.3	0.3							
2	167	1.1	1.4	0.656	84.2	-	1.37083	121.9		
3	212	1.8	3.2	.688	74.2	6.1	1.38703	123.8		
4	257	2.8	6.0	.718	65.6	11	1.40080	125.8		
5	302	3.6	9.6	.742	59.2	15	1.41371	129.5		
6	347	3.3	12.9	.761	54.4	17	1.42401	133.9		
7	392	4.0	16.9	.782	49.5	21	1.43523	140.0		
8	437	3.5	20.4	.801	45.2	24	1.44481	139.5		
9	482	3.6	24.0	.817	41.7	27	1.45229	143.4		
10	527	6.1	30.1	.835	38.0	31	1.46280	147.8		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	2.9	33.0	0.859	33.2	38	1.47551	155.0	38	Below 5
12	437	6.1	39.1	.871	31.0	40	1.48238	161.1	43	do.
13	482	6.6	45.7	.885	28.4	43	1.49101	172.9	55	20
14	527	6.0	51.7	.902	25.4	48			82	40
15	572	6.7	58.4	.921	22.1	54			150	60
Residuum		40.8	99.2	.998	10.3					

Carbon residu. Conradson Residuum 17.7 percent crude 8.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.2	0.674	78.4	
Total gasoline and naphth	16.9	0.738	60.2	
Kerosene distillate	7.1	.809	43.4	
Gas oil	15.7	.854	34.2	
Nonviscous lubricating distillate	10.7	.879-.907	29.5-24.5	50-100
Medium lubricating distillate	8.0	.907-.932	24.5-20.3	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	40.8	.998	10.3	
Distillation loss	.8			

Bureau of Mines
Sample
Item 590
Laramie
PC-54-46
Laboratory

IDENTIFICATION

Fiddler Creek field
Newcastle (Muddy), Lower or Middle Cretaceous
5,266 - 5,276 feet

Wyoming
Weston County

GENERAL CHARACTERISTICS

Gravity, specific 0.813 Gravity, ° API 42.6 Pour point, ° F below 5
Sulfur percent 0.10 Color, green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen percent, 0.049

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 77 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	4.0	4.0	0.644	88.2					
2	167	4.3	8.3	.679	76.9	12	1.38110	119.0		
3	212	8.6	16.9	.722	64.5	22	1.40116	127.1		
4	257	8.3	25.2	.746	58.2	25	1.41389	133.1		
5	302	6.1	31.3	.764	53.7	26	1.42475	137.8		
6	347	5.8	37.1	.780	49.9	26	1.43466	142.5		
7	392	4.9	42.0	.791	47.4	25	1.44225	140.8		
8	437	5.4	47.4	.811	43.0	29	1.45045	145.1		
9	482	5.7	53.1	.826	39.8	31	1.45911	150.4		
10	527	6.3	59.4	.836	37.8	31	1.46572	156.9		

Stage 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
11	392	2.1	61.5	0.851	34.8	34			41	20
12	437	4.6	66.1	.852	34.6	31			45	35
13	482	4.9	71.0	.866	31.9	34			55	50
14	527	4.6	75.6	.875	30.2	35			73	75
15	572	4.9	80.5	.886	28.2	37			120	90
Residuum		17.7	98.2	.934	20.0					

Carbon residu. Conradson Residuum 3.1 percent crude 0.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	16.9	0.693	72.7	
Total gasoline and naphth	42.0	0.737	60.5	
Kerosene distillate	5.4	.811	43.0	
Gas oil	18.8	.839	37.2	
Nonviscous lubricating distillate	9.8	.859-.881	33.2-29.1	50-100
Medium lubricating distillate	4.5	.881-.892	29.1-27.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	17.7	.934	20.0	
Distillation loss	1.8			

Bureau of Mines
Sample
Item 591
Laramie
PC-56-333
Laboratory

IDENTIFICATION

Four Bear field
Madison, Mississippian
3,470 - 3,702 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific 0.974 Gravity, ° API 13.8 Pour point, ° F 30
Sulfur percent, 3.58 Color, brownish black
Viscosity, Saybolt Universal at 100° F., over 6,000 sec.,
at 130° F., 2,260 sec. Nitrogen percent, 0.426

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 194 ° F

Fraction No	Cut temperature ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.4	0.4	0.755	55.9	-	1.41925	130.4		
4	257									
5	302	.8	1.2	.765	53.5	-	1.42297	127.1		
6	347									
7	392	.9	2.1	.777	50.6	19	1.43098	126.4		
8	437	2.1	4.2	.797	46.0	23	1.44102	125.9		
9	482	3.3	7.5	.819	41.3	28	1.45120	129.2		
10	527	10.6	18.1	.841	36.8	33	1.46445	138.3		
STAGE 2—Distillation continued at 40 mm Hg										
11	572	.9	19.0	0.875	30.2	46			41	Below 5
12	437	7.8	26.8	.899	25.9	53			64	5
13	482	7.2	34.0	.918	22.6	59			105	35
14	527	5.9	39.9	.934	20.0	63			210	50
15	572	7.3	47.2	.956	16.5	71			410	70
Residue		52.9	100.1	1.044	4.0					

Carbon residue, Conradson Residue, 22.7 percent crude 12.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.4	0.755	55.9	
Total gasoline and kerosene	2.1	0.768	52.7	
Kerosene distillate	5.4	.810	43.2	
Gas oil	12.8	.847	35.6	
Nonviscous lubricating distillate	9.1	.884-.915	28.6-23.1	50-100
Medium lubricating distillate	6.9	.915-.932	23.1-20.3	100-200
Viscous lubricating distillate	10.9	.932-.967	20.3-14.8	Above 200
Residue	52.9	1.044	4.0	
Distillation loss	.0			

Bureau of Mines
Sample
Item 592
Laramie
PC-50-559
Laboratory

IDENTIFICATION

Frannie field
Tensleep, Pennsylvanian
2,734 - 2,940 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific 0.890 Gravity, ° API 27.5 Pour point, ° F below 5
Sulfur percent, 2.43 Color, brownish black
Viscosity, Saybolt Universal at 77° F., 100 sec., 100° F., 66 sec. Nitrogen percent, 0.18

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 77 ° F

Fraction No	Cut temperature ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7							
2	167	1.7	2.4	0.672	79.1	-	1.37771	127.1		
3	212	2.1	4.5	.692	73.0	8.0	1.38691	125.9		
4	257	3.0	7.5	.722	64.5	13	1.40325	129.8		
5	302	3.9	11.4	.751	56.9	19	1.41827	137.8		
6	347	3.9	15.3	.774	51.3	23	1.43058	142.6		
7	392	3.7	19.0	.792	47.2	26	1.44007	142.3		
8	437	4.3	23.3	.809	43.4	28	1.44861	141.2		
9	482	4.5	27.8	.826	39.8	31	1.45706	146.6		
10	527	7.3	35.1	.846	35.8	36	1.46831	153.1		
STAGE 2—Distillation continued at 40 mm Hg										
11	572	2.9	38.0	0.872	30.8	44			41	Below 5
12	437	6.2	44.2	.887	28.0	47			48	15
13	482	5.9	50.1	.912	23.7	56			64	35
14	527	6.2	56.3	.918	22.6	56			100	55
15	572	7.3	63.6	.931	20.5	59			220	70
Residue		35.2	98.8	.994	10.9					

Carbon residue, Conradson Residue, 11.6 percent crude 4.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.5	0.681	76.3	
Total gasoline and kerosene	19.0	0.743	58.9	
Kerosene distillate	4.3	.809	43.4	
Gas oil	18.6	.853	34.4	
Nonviscous lubricating distillate	11.3	.890-.918	27.5-22.6	50-100
Medium lubricating distillate	5.6	.918-.929	22.6-20.8	100-200
Viscous lubricating distillate	4.8	.929-.938	20.8-19.4	Above 200
Residue	35.2	.994	10.9	
Distillation loss	1.2			

Bureau of Mines
Sample
Item 593
Laramie
PC-50-625
Laboratory

IDENTIFICATION

Garland field
Amsden, Pennsylvanian
4,026-4,060 feet
Wyoming
Big Horn County

GENERAL CHARACTERISTICS

Gravity, specific, 0.922 Gravity, ° API 22.0 Pour point, ° F, below 5
Sulfur, percent, 2.88 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 180 sec., 130° F, 105 sec. Nitrogen percent, 0.27

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 133 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.4	0.4	0.688	74.2	-	1.38496	124.3		
4	267	1.1	1.5	.722	64.5	13	1.40269	128.3		
5	302	2.0	3.5	.748	57.7	18	1.41535	136.0		
6	347	2.8	6.3	.768	52.7	21	1.42619	136.4		
7	392	3.4	9.7	.786	48.5	23	1.43532	135.9		
8	437	3.6	13.3	.803	44.7	25	1.44359	135.4		
9	482	3.8	17.1	.820	41.1	28	1.45212	138.2		
10	527	4.6	21.7	.839	37.1	32	1.46218	143.1		
		5.5	27.2							

Stage 2—Distillation continued at 40 mm Hg

11	392	3.8	31.0	0.865	32.1	41		41	Below 5
12	437	7.1	38.1	.880	29.3	44		47	15
13	482	5.4	43.5	.897	26.2	49		62	35
14	527	5.8	49.3	.914	23.3	54		96	50
15	572	7.6	56.9	.935	19.8	61		210	65
Residuum		42.8	99.7	1.021	7.1				

Carbon residue, Conradson Residuum 18.8 percent crude 8.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	1.5	0.688	74.2	
Total gasoline and naphtha	13.3	0.753	56.4	
Kerosene distillate	8.4	.812	42.8	
Gas oil	14.1	.859	33.2	
Nonviscous lubricating distillate	10.9	.884-.915	28.6-23.1	50-100
Medium lubricating distillate	5.8	.915-.933	23.1-20.2	100-200
Viscous lubricating distillate	4.4	.933-.947	20.2-17.9	Above 200
Residuum	42.8	1.021	7.1	
Distillation loss	.3			

Bureau of Mines
Sample
Item 594
Laramie
PC-50-626
Laboratory

IDENTIFICATION

Garland field
Madison, Mississippian
4,025 - 4,100 feet
Wyoming
Big Horn County

GENERAL CHARACTERISTICS

Gravity specific 0.935 Gravity ° API 19.8 Pour point ° F below 5
Sulfur percent 3.10 Color brownish black
Viscosity, Saybolt Universal at 100° F, 410 sec.,
at 130° F, 175 sec. Nitrogen percent 0.31

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 136 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	0.7	0.7	0.700	70.6	-	1.39148	125.3		
4	267	2.5	3.2	.716	66.1	10	1.39948	124.3		
5	302	1.8	5.0	.746	58.2	17	1.41488	130.9		
6	347	2.2	7.2	.764	53.7	19	1.42369	131.6		
7	392	2.6	9.8	.782	49.4	21	1.43240	130.5		
8	437	3.2	13.0	.800	45.4	24	1.44139	133.7		
9	482	4.2	17.2	.819	41.3	28	1.45122	133.0		
10	527	5.4	22.6	.839	37.1	32	1.46160	140.6		

Stage 2—Distillation continued at 40 mm Hg

11	392	3.0	25.6	0.863	32.5	40		40	Below 5
12	437	6.1	31.7	.877	29.8	43		46	15
13	482	6.4	38.1	.896	26.4	48		60	30
14	527	5.9	44.0	.914	23.3	54		96	45
15	572	7.3	51.3	.934	20.2	60		200	60
Residuum		47.6	98.9	1.021	7.1				

Carbon residue, Conradson Residuum 18.5 percent crude 9.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	0.7	0.700	70.6	
Total gasoline and naphtha	9.8	0.749	57.4	
Kerosene distillate	7.4	.811	43.0	
Gas oil	13.2	.858	33.4	
Nonviscous lubricating distillate	10.9	.883-.915	28.8-23.1	50-100
Medium lubricating distillate	6.3	.915-.934	23.1-20.0	100-200
Viscous lubricating distillate	3.7	.934-.945	20.0-18.2	Above 200
Residuum	47.6	1.021	7.1	
Distillation loss	1.1			

Bureau of Mines
Sample

Item 595
Laramie
PC-58-65

Laboratory

IDENTIFICATION

Glenrock, South field
Dakota, Lower Cretaceous
6,090 - 6,118 feet

Wyoming
Converse County

GENERAL CHARACTERISTICS

Gravity specific 0.853 Gravity, ° API, 34.4 Pour point, ° F, 50
Sulfur percent 0.16 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 55 sec., 77° F., 100 sec. Nitrogen percent, 0.115

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 102 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.7	(0.7)							
2	167	1.0	1.7	0.699	70.9	-	1.39395	127.8		
3	212	3.4	5.1	.725	63.7	24	1.40134	127.2		
4	257	5.5	10.6	.742	59.2	23	1.41070	128.0		
5	302	5.3	15.9	.758	55.2	23	1.42030	133.0		
6	347	6.0	21.9	.781	49.7	27	1.43195	135.5		
7	392	3.0	24.9	.798	45.8	29	1.44091	137.0		
8	437	2.7	27.6	.805	44.3	26	1.44548	138.9		
9	482	4.0	31.6	.814	42.3	25	1.45168	141.8		
10	527	5.9	37.5	.826	39.8	26	1.45830	148.0		

STAGE 2—Distillation continued at 40 mm Hg

11	392	2.4	39.9	0.845	36.0	31	1.46710	151.0	39	10
12	437	5.7	45.6	.845	36.0	28	1.46920	152.9	42	25
13	482	6.0	51.6	.852	34.6	28	1.47333	152.6	50	50
14	527	5.3	56.9	.870	31.1	33			64	65
15	572	6.8	63.7	.881	29.1	35			99	85
Residue		34.7	98.4	.942	18.7					

Carbon residue, Conradson Residue 6.5 percent crude 2.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.1	0.716	66.1	
Total gasoline and naphtha	24.9	0.756	55.7	
Kerosene distillate	6.7	.810	43.2	
Gas oil	17.0	.840	37.0	
Nonviscous lubricating distillate	11.9	.852-.881	34.6-29.1	50-100
Medium lubricating distillate	3.2	.881-.887	29.1-28.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	34.7	.942	18.7	
Distillation loss	1.6			

Bureau of Mines
Sample

Item 596
Laramie
PC-56-144

Laboratory

IDENTIFICATION

Grass Creek field
Crow Mountain, Curtis, Triassic
3,717 - 3,781 feet

Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity, specific 0.909 Gravity, ° API, 24.2 Pour point, ° F, below 5
Sulfur percent, 2.58 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 175 sec., 130° F., 84 sec. Nitrogen, percent, 0.314

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc. 100° F	Cloud test ° F
1	122	0.5	(0.5)							
2	167	1.4	1.9	0.672	79.1	-	1.38103	130.6		
3	212	2.2	4.1	.703	69.8	13	1.39292	128.8		
4	257	2.1	6.2	.726	63.4	15	1.40545	131.5		
5	302	2.8	9.0	.747	57.9	18	1.41623	131.8		
6	347	3.3	12.3	.766	53.2	20	1.42608	134.6		
7	392	3.3	15.6	.785	48.8	23	1.43653	138.5		
8	437	3.4	19.0	.803	44.7	25	1.44597	143.1		
9	482	3.4	22.4	.818	41.5	27	1.45354	142.4		
10	527	5.7	28.1	.830	39.0	28	1.46296	152.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	11.2	39.3	0.870	31.1	43			43	10
12	437	6.7	46.0	.899	25.9	53			66	30
13	482	5.2	51.2	.923	21.8	61			115	60
14	527	5.0	56.2	.936	19.7	64			230	75
15	572	5.4	61.6	.946	18.1	66			400	90
Residue		36.0	97.6	1.022	7.0					

Carbon residue, Conradson Residue 22.3 percent crude 9.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.1	0.689	73.9	
Total gasoline and naphtha	15.6	0.741	69.5	
Kerosene distillate	6.8	.811	43.0	
Gas oil	14.1	.851	34.8	
Nonviscous lubricating distillate	10.3	.879-.915	29.5-23.1	50-100
Medium lubricating distillate	5.6	.915-.933	23.1-20.2	100-200
Viscous lubricating distillate	9.2	.933-.951	20.2-17.3	Above 200
Residue	36.0	1.022	7.0	
Distillation loss	2.4			

Bureau of Mines
Sample

Item 597
Laramie
PC-50-728

Laboratory

IDENTIFICATION

Grass Creek field
Embar, Permian
3,838 - 3,897 feet

Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity, specific, 0.907 Gravity, ° API, 24.5 Pour point, ° F, below 5
Sulfur, percent, 2.64 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 145 sec.; 130° F., 84 sec. Nitrogen, percent, 0.31

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	0.5	0.5							
2	167	1.4	1.9	0.660	82.9	-				
3	212	1.8	3.7	.694	72.4	8.9	1.38844	124.1		
4	257	2.8	6.5	.721	64.8	13	1.40197	127.3		
5	302	2.9	9.4	.749	57.4	18	1.41544	130.9		
6	347	3.1	12.5	.770	52.3	22	1.42741	135.8		
7	392	3.9	16.4	.791	47.4	25	1.43899	138.9		
8	437	4.4	20.8	.812	42.8	30	1.45141	134.0		
9	482	2.7	23.5	.829	39.2	32	1.45829	146.6		
10	527	6.1	29.6	.845	36.0	35	1.46763	153.2		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.5	31.1	0.869	31.3	43			42	5
12	437	6.1	37.2	.878	29.7	43			47	20
13	482	6.1	43.3	.893	27.0	47			59	40
14	527	5.1	48.4	.910	24.0	52			89	55
15	572	7.4	55.8	.929	20.8	58			180	70
Residuum		41.7	97.5	1.011	8.5					

Carbon residue, Conradson Residuum 15.9 percent, crude, 7.4 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.7	0.677	77.5	
Total gasoline and naphtha	16.4	0.742	59.2	
Kerosene distillate	4.4	.812	42.8	
Gas oil	15.1	.855	34.0	
Nonviscous lubricating distillate	10.7	.883-.912	28.8-23.7	50-100
Medium lubricating distillate	6.9	.912-.933	23.7-20.2	100-200
Viscous lubricating distillate	2.3	.933-.940	20.2-19.0	Above 200
Residuum	41.7	1.011	8.5	
Distillation loss	2.5			

Bureau of Mines
Sample

Item 598
Laramie
PC-50-727

Laboratory

IDENTIFICATION

Grass Creek field
Tensleep, Pennsylvanian
4,236 - 4,370 feet

Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity, specific, 0.909 Gravity, ° API, 24.2 Pour point, ° F, below 5
Sulfur, percent, 2.68 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 135 sec.; 130° F., 86 sec. Nitrogen, percent, 0.31

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visco 100° F	Cloud test ° F
1	122	0.4	0.4							
2	167	1.2	1.6	0.653	85.2	-	1.36996	139.8		
3	212	1.9	3.5	.683	75.7	3.7	1.38258	123.5		
4	257	2.7	6.2	.716	66.1	10	1.39909	139.7		
5	302	3.1	9.3	.741	59.5	15	1.41272	132.5		
6	347	3.2	12.5	.764	53.7	19	1.42503	135.2		
7	392	3.4	15.9	.784	49.0	22	1.43558	139.0		
8	437	3.8	19.7	.803	44.7	25	1.44524	141.0		
9	482	4.4	24.1	.821	40.9	29	1.45489	144.1		
10	527	6.9	31.0	.842	36.6	34	1.46667	153.9		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.2	32.2	0.867	31.7	42			41	15
12	437	6.5	38.7	.878	29.7	43			47	30
13	482	6.0	44.7	.894	26.8	47			61	45
14	527	4.4	49.1	.911	23.8	52			92	60
15	572	7.1	56.2	.929	20.8	58			175	75
Residuum		42.5	98.7	1.010	8.6					

Carbon residue, Conradson Residuum 16.6 percent crude 7.8 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	3.5	0.669	80.0	
Total gasoline and naphtha	15.9	0.735	61.0	
Kerosene distillate	8.2	.813	42.6	
Gas oil	12.7	.856	33.8	
Nonviscous lubricating distillate	10.7	.881-.913	29.1-23.5	50-100
Medium lubricating distillate	6.8	.913-.934	23.5-20.0	100-200
Viscous lubricating distillate	1.9	.934-.940	20.0-19.0	Above 200
Residuum	42.5	1.010	8.6	
Distillation loss	1.3			

Bureau of Mines
Sample

Item 599
Laramie
PC-58-66

Laboratory

IDENTIFICATION

Grieve field
Muddy, Lower or Middle Cretaceous
6,723 - 6,780 feet

Wyoming
Natrona County

GENERAL CHARACTERISTICS

Gravity, specific, 0.834 Gravity, ° API, 38.2 Pour point, ° F, 50
Sulfur, percent, 0.08 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 42 sec. Nitrogen, percent, 0.086

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.0	3.0	0.659	83.2					
2	167	2.6	5.6	.683	75.7	14	1.38239	127.4		
3	212	4.1	9.7	.715	66.4	19	1.39750	129.1		
4	257	6.1	15.8	.746	58.2	25	1.41360	134.4		
5	302	4.7	20.5	.766	53.2	27	1.42550	139.6		
6	347	4.6	25.1	.783	49.2	28	1.43376	143.1		
7	392	3.7	28.8	.797	46.0	28	1.44264	142.7		
8	437	4.9	33.7	.813	42.6	30	1.45004	144.4		
9	482	3.4	37.1	.826	39.8	31	1.45760	148.0		
10	527	8.2	45.3	.834	38.2	30	1.46280	153.2		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	1.3	46.6	0.849	35.2	33	1.47030	155.0	40	20
12	437	7.7	54.3	.850	35.0	30	1.47224	156.0	45	40
13	482	5.4	59.7	.866	31.9	34	1.47721	152.2	56	50
14	527	5.0	64.7	.877	29.9	36			77	75
15	572	6.5	71.2	.888	27.9	38			125	90
Residuum		25.8	97.0	.939	19.2					

Carbon residue, Conradson Residuum 4.0 percent, crude 1.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.7	0.689	73.9	
Total gasoline and naphtha	28.8	0.743	58.9	
Kerosene distillate	4.9	.813	42.6	
Gas oil	19.8	.840	37.0	
Nonviscous lubricating distillate	11.4	.857-.882	33.6-28.9	50-100
Medium lubricating distillate	6.3	.882-.894	28.9-26.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	25.8	.939	19.2	
Distillation loss	3.0			

Bureau of Mines
Sample

Item 600
Laramie
PC-50-715

Laboratory

IDENTIFICATION

Hamilton Dome field
Embar, Permian
2,325 - 2,617 feet

Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity, specific, 0.911 Gravity, ° API, 23.8 Pour point, ° F, below 5
Sulfur, percent, 2.68 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 165 sec., 130° F., 105 sec. Nitrogen, percent, 0.32

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.3	0.3							
2	167	1.3	1.6	0.678	77.2	-	1.38417	135.9		
3	212	1.3	2.9	.697	71.5	10	1.38795	129.4		
4	257	1.9	4.8	.716	66.1	10	1.39864	127.4		
5	302	2.8	7.6	.737	60.5	13	1.41130	129.9		
6	347	3.3	10.9	.760	54.7	17	1.42239	133.9		
7	392	3.5	14.4	.779	50.1	20	1.43308	134.8		
8	437	3.8	18.2	.800	45.4	24	1.44308	138.1		
9	482	4.5	22.7	.817	41.7	27	1.45218	142.1		
10	527	6.4	29.1	.837	37.6	32	1.46376	148.4		

Stage 2—Distillation continued at 40 mm. Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr. 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	1.4	30.5	0.864	32.3	40			40	5
12	437	6.5	37.0	.875	30.2	42			45	20
13	482	6.2	43.2	.891	27.3	46			58	40
14	527	5.3	48.5	.907	24.5	50			87	55
15	572	6.8	55.3	.925	21.5	56			165	70
Residuum		44.1	99.4	1.008	8.9					

Carbon residue, Conradson Residuum 15.9 percent, crude, 7.8 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.687	74.5	
Total gasoline and naphtha	14.4	0.740	59.7	
Kerosene distillate	8.3	.809	43.4	
Gas oil	13.4	.855	34.0	
Nonviscous lubricating distillate	10.8	.881-.910	29.1-24.0	50-100
Medium lubricating distillate	7.7	.910-.933	24.0-20.2	100-200
Viscous lubricating distillate	.7	.933-.935	20.2-19.8	Above 200
Residuum	44.1	1.008	8.9	
Distillation loss	.6			

Bureau of Mines
Sample
Item 601
Laramie
PC-50-716
Laboratory

IDENTIFICATION

Hamilton Dome field
Tensleep, Pennsylvanian
2,602 - 2,773 feet
Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity, specific 0.918 Gravity, ° API 22.6 Pour point, ° F below 5
Sulfur, percent 2.98 Color brownish black
Viscosity, Saybolt Universal at 100° F., 230 sec., 130° F., 135 sec. Nitrogen percent, 0.30

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 153 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index 1, at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	0.3	0.3)							
3	212	.7	1.0)	0.699	70.9	-	1.39154	121.9		
4	257	1.6	2.6	.705	69.2	5.2	1.39341	122.3		
5	302	2.5	5.1	.731	62.1	9.9	1.40759	126.7		
6	347	3.0	8.1	.754	56.2	14	1.41896	129.6		
7	392	3.1	11.2	.775	51.1	18	1.42978	130.2		
8	437	3.9	15.1	.795	46.5	22	1.43990	132.4		
9	482	4.8	19.9	.815	42.1	26	1.45081	135.9		
10	527	6.6	26.5	.838	37.4	32	1.46365	146.3		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index 1, at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392									
12	437	6.8	33.3	0.874	30.4	-			46	20
13	482	6.8	40.1	.889	27.7	45			59	40
14	527	6.4	46.5	.913	23.5	53			90	60
15	572	8.0	54.5	.928	21.0	57			185	75
Residuum		45.1	99.6	1.007	9.0					

Carbon residue, Conradson Residuum 15.2 percent crude 7.5 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.0	0.699	70.9	
Total gasoline and naphth	11.2	0.743	58.9	
Kerosene distillate	8.7	.806	44.1	
Gas oil	12.2	.854	34.2	
Nonviscous lubricating distillate	12.0	.879-.915	29.5-23.1	0-100
Medium lubricating distillate	7.6	.915-.930	23.1-20.7	100-200
Viscous lubricating distillate	2.8	.930-.936	20.7-19.7	200-200
Residuum	45.1	1.007	9.0	
Distillation loss	.4			

Bureau of Mines
Sample
Item 602
Laramie
PC-56-143
Laboratory

IDENTIFICATION

Hamilton Dome field
Big Horn, Ordovician
3,522 - 3,536 feet
Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity specific 0.969 Gravity ° API 14.5 Pour point, ° F 20
Sulfur percent 3.47 Color brownish black
Viscosity, Saybolt Universal at 100° F., 2,860 sec., 130° F., 960 sec. Nitrogen percent, 0.409

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 271 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index 1, at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257									
5	302	0.4	0.4)							
6	347	.5	.9)	0.774	51.3	-	1.42676	128.9		
7	392	1.3	2.2	.795	46.5	27	1.43715	123.8		
8	437	2.6	4.8	.817	41.7	32	1.44823	129.6		
9	482	4.1	8.9	.836	37.8	36	1.45900	134.9		
10	527	5.2	14.1	.854	34.2	40	1.46983	144.6		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index 1, at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	1.6	15.7	0.880	29.3	48			44	Below 5
12	437	9.3	25.0	.897	26.3	52			56	do.
13	482	4.4	29.4	.919	22.5	59			91	do.
14	527	7.0	36.4	.933	20.2	63			165	10
15	572	10.6	47.0	.945	18.2	65			710	15
Residuum		52.9	99.9	1.030	5.9					

Carbon residue, Conradson Residuum 18.9 percent crude 10.6 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline				
Total gasoline and naphth	2.2	0.786	48.5	
Kerosene distillate	2.6	.817	41.7	
Gas oil	12.8	.856	33.8	
Nonviscous lubricating distillate	10.3	.888-.921	27.9-22.1	0-100
Medium lubricating distillate	5.6	.921-.934	22.1-20.0	100-200
Viscous lubricating distillate	13.5	.934-.952	20.0-17.1	Above 200
Residuum	52.9	1.030	5.9	
Distillation loss	.1			

Bureau of Mines
Sample
Item 603
Laramie
PC-50-640
Laboratory

IDENTIFICATION

Little Buffalo Basin field
Phosphoria, Permian
4,404 - 4,488 feet
Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity specific 0.930 Gravity ° API 20.7 Pour point, ° F below 5
Sulfur percent 3.31 Color brownish black
Viscosity, Saybolt Universal at 100° F., 340 sec., 130° F., 170 sec. Nitrogen percent 0.35

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 100 ° F

Fraction No.	Temp ° F	Temp ° C	Sp gr at 60° F	Sp gr at 15.6° C	API °	Refractive index at 20° C	Refractive index at 60° F	Cloud test ° F
1	122							
2	167	1.2	1.2	0.650	86.2	-	1.36627	124.5
3	212	1.4	2.6	.690	73.6	7.1	1.38990	124.1
4	257	1.9	4.5	.718	65.6	11	1.40137	124.6
5	302	2.4	6.9	.742	59.2	15	1.41257	127.8
6	347	2.7	9.6	.767	53.0	20	1.42527	132.9
7	392	2.5	12.1	.788	48.1	24	1.43636	137.0
8	437	2.6	14.7	.806	44.1	27	1.44553	139.5
9	482	3.7	18.4	.824	40.2	30	1.45479	143.3
10	27	6.7	25.1	.847	35.6	36	1.46731	153.6

STAGE 2—Distillation continued at 40 mm Hg

Fraction No.	Temp ° F	Temp ° C	Sp gr at 60° F	Sp gr at 15.6° C	API °	Refractive index at 20° C	Refractive index at 60° F	Cloud test ° F
11	512	1.2	26.3	0.874	30.4	45		41 Below 5
12	437	4.7	31.0	.885	28.4	46		46 15
13	482	5.5	36.5	.898	26.1	49		58 35
14	27	6.5	43.0	.916	23.0	55		94 50
15	72	6.8	49.8	.936	19.7	61		200 65
Residue		49.3	99.1	1.013	8.2			

Carbon residue 15.3 percent crude 8.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.6	0.672	79.1	
Total gasoline and light	12.1	0.738	60.2	
Kerosene distillate	6.3	.817	41.7	
Gas oil	12.0	.862	32.7	
Nonviscous lubricating oil	9.7	.890-.917	27.5-22.8	100
Medium lubricating oil	6.3	.917-.936	22.8-19.7	100-200
Viscous lubricating oil	3.4	.936-.946	19.7-18.1	200
Residue	49.3	1.013	8.2	
Distillate	9			

Bureau of Mines
Sample
Item 604
Laramie
PC-50-639
Laboratory

IDENTIFICATION

Little Buffalo Basin field
Tensleep, Pennsylvanian
4,594 - 4,853 feet
Wyoming
Hot Springs County

GENERAL CHARACTERISTICS

Gravity specific 0.930 Gravity ° API 20.7 Pour point ° F below 5
Sulfur percent 3.14 Color brownish black
Viscosity, Saybolt Universal at 100° F., 320 sec., 130° F., 165 sec. Nitrogen percent 0.38

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 79 ° F

Fraction No.	Temp ° F	Temp ° C	Sp gr at 60° F	Sp gr at 15.6° C	API °	Refractive index at 20° C	Refractive index at 60° F	Cloud test ° F
1	122							
2	167	1.2	1.2	0.680	76.6	-	1.38392	115.6
3	212	1.5	2.9	.688	74.2	6.1	1.38539	123.4
4	257	2.0	4.9	.715	66.4	9.9	1.39894	126.2
5	302	2.5	7.4	.740	59.7	14	1.41219	131.3
6	347	2.6	10.0	.764	53.7	19	1.42470	136.1
7	392	2.8	12.8	.784	49.0	22	1.43551	137.7
8	437	3.0	15.8	.804	44.5	26	1.44509	140.6
9	482	3.8	19.6	.824	40.2	30	1.45549	143.3
10	27	6.0	25.6	.846	35.8	36	1.46773	153.2

STAGE 2—Distillation continued at 40 mm Hg

Fraction No.	Temp ° F	Temp ° C	Sp gr at 60° F	Sp gr at 15.6° C	API °	Refractive index at 20° C	Refractive index at 60° F	Cloud test ° F
11	512	1.2	26.5	0.870	31.1	43		41 Below 5
12	437	5.7	32.2	.882	28.9	45		47 20
13	482	5.8	38.0	.899	25.9	50		64 35
14	27	5.5	43.5	.923	21.8	58		100 55
15	72	7.1	50.6	.936	19.7	61		210 70
Residue		49.2	99.8	1.019	7.4			

Carbon residue 17.6 percent crude 9.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.684	75.4	
Total gasoline and light	12.8	0.738	60.2	
Kerosene distillate	6.8	.815	42.1	
Gas oil	10.8	.859	33.2	
Nonviscous lubricating oil	10.3	.885-.923	28.4-21.8	100
Medium lubricating oil	5.7	.923-.934	21.8-20.0	100-200
Viscous lubricating oil	4.2	.934-.943	20.0-18.6	200
Residue	49.2	1.019	7.4	
Distillate	2			

Bureau of Mines
Sample

Item 605
Laramie
PC-50-89

Laboratory

IDENTIFICATION

Lost Soldier field
Tensleep, Pennsylvanian
4,074 - 4,456 feet

Wyoming
Sweetwater County

GENERAL CHARACTERISTICS

Gravity, specific 0.848 Gravity, ° API, 35.4 Pour point, ° F below 5
Sulfur percent, 1.18 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen percent, 0.062

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Perce t	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.7	2.7	0.636	91.0					
2	167	2.8	5.5	.664	81.6	4.6	1.37486	120.6		
3	212	4.0	9.5	.700	70.6	12	1.39123	124.5		
4	267	4.6	14.1	.729	62.6	17	1.40560	130.5		
5	302	5.5	19.6	.753	56.4	20	1.41975	136.4		
6	347	5.7	25.3	.775	51.1	24	1.43109	140.8		
7	392	4.7	30.0	.792	47.2	26	1.43968	139.4		
8	437	5.1	35.1	.806	44.1	27	1.44682	141.6		
9	482	5.8	40.9	.823	40.4	30	1.45584	143.0		
10	527	6.8	47.7	.843	36.3	34	1.46722	151.4		

STAGE 2—Distillation continued at 40 mm Hg

11	392	1.8	49.5	0.864	32.3	40			41	15
12	437	7.5	57.0	.871	31.0	40			45	35
13	482	6.3	63.3	.885	28.4	43			58	50
14	527	4.6	67.9	.904	25.0	49			84	65
15	572	6.9	74.8	.915	23.1	51			160	80
Residuum		23.5	98.3	.977	13.3					

Carbon residue, Conradson Residuum 10.1 percent, crude 2.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	9.5	0.671	79.4	
Total gasoline and naphth	30.0	0.734	61.3	
Kerosene distillate	10.9	.815	42.1	
Gas oil	15.0	.857	55.4	
Nonviscous lubricating distillate	10.9	.876-.906	30.0-24.7	50-100
Medium lubricating distillate	7.5	.906-.920	24.7-22.3	100-200
Viscous lubricating distillate	.5	.920-.922	22.3-22.0	Above 200
Residuum	23.5	.977	13.3	
Distillation loss	1.7			

Bureau of Mines
Sample

Item 606
Laramie
PC-48-25

Laboratory

IDENTIFICATION

Lost Soldier field
Madison, Mississippian
4,794 - 5,410 feet

Wyoming
Sweetwater County

GENERAL CHARACTERISTICS

Gravity, specific 0.847 Gravity, ° API 35.6 Pour point, ° F below 5
Sulfur percent 1.22 Color brownish black
Viscosity, Saybolt Universal at 100° F, 42 sec. Nitrogen percent 0.082

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 88 ° F

Fraction No	Cut temp ° F	Perce t	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.8	1.8	0.658	83.5					
2	167	2.8	4.6	.659	83.2	2.3				
3	212	3.5	8.1	.695	72.1	9.4				
4	257	4.3	12.4	.722	64.5	13				
5	302	5.5	17.9	.747	57.9	18				
6	347	5.5	23.4	.770	52.3	22				
7	392	5.2	28.6	.786	48.5	23				
8	437	4.7	33.3	.800	45.4	24				
9	482	5.7	39.0	.817	41.7	27				
10	527	7.4	46.4	.836	37.8	31				

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.0	49.4	0.865	32.1	41			41	10
12	437	6.5	55.9	.870	31.1	39			45	25
13	482	6.0	61.9	.884	28.6	43			56	40
14	527	7.4	69.3	.908	24.3	51			89	60
15	572	4.3	73.6	.918	22.6	53			170	80
Residuum		24.1	97.7	.976	13.5					

Carbon residue, Conradson Residuum 10.9 percent, crude 3.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.1	0.674	78.4	
Total gasoline and naphth	28.6	0.734	61.3	
Kerosene distillate	10.4	.809	43.4	
Gas oil	15.9	.853	34.4	
Nonviscous lubricating distillate	11.5	.875-.909	30.2-24.2	50-100
Medium lubricating distillate	7.2	.909-.922	24.2-22.0	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	24.1	.976	13.5	
Distillation loss	2.3			

Bureau of Mines
Sample

Item 607
Laramie
PC-50-87

Laboratory

IDENTIFICATION

Lost Soldier field
Cambrian
6,348 - 7,323 feet

Wyoming
Sweetwater County

GENERAL CHARACTERISTICS

Gravity, specific 0.849 Gravity, ° API 35.2 Pour point, ° F below 5
Sulfur percent 1.23 Color black
Viscosity, Saybolt Universal at 100° F., 41 sec. Nitrogen percent, 0.084

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 75 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.0	2.0	0.652	85.5					
2	167	2.7	4.7	.659	83.2	2.3	1.37070	120.6		
3	212	3.7	8.4	.696	71.8	10	1.38898	126.6		
4	257	4.9	13.3	.725	63.7	15	1.40403	128.6		
5	302	5.3	18.6	.750	57.2	19	1.41751	135.5		
6	347	5.6	24.2	.771	52.0	22	1.42944	139.8		
7	392	4.9	29.1	.789	47.8	24	1.43822	140.9		
8	437	5.2	34.3	.803	44.7	25	1.44537	141.3		
9	482	5.5	39.8	.820	41.1	28	1.45419	142.0		
10	527	7.3	47.1	.839	37.2	32	1.46524	152.3		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.7	50.8	0.863	32.5	40			41	5
12	437	6.5	57.3	.872	30.8	40			47	25
13	482	6.5	63.8	.891	27.3	46			61	45
14	527	5.3	69.1	.904	25.0	49			95	65
15	572	6.0	75.1	.915	23.1	51			180	80
Residue		23.5	98.6	.978	13.2					

Carbon residue, Conradson Residue 11.4 percent crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	8.4	0.674	78.4	
Total gasoline and naphtha	29.1	0.734	61.3	
Kerosene distillate	10.7	.812	42.8	
Gas oil	15.5	.854	34.2	
Nonviscous lubricating distillate	11.4	.875-.905	30.2-24.9	100
Medium lubricating distillate	6.7	.905-.917	24.9-22.8	100-200
Viscous lubricating distillate	1.7	.917-.921	22.8-22.1	Above 200
Residue	23.5	.978	13.2	
Distillation loss	1.4			

Bureau of Mines
Sample

Item 608
Laramie
PC-53-150

Laboratory

IDENTIFICATION

Meadow Creek field
Shannon, Upper Cretaceous
4,255 - 4,262 feet

Wyoming
Johnson County

GENERAL CHARACTERISTICS

Gravity, specific 0.817 Gravity, ° API 41.7 Pour point, ° F below 5
Sulfur percent 0.08 Color green
Viscosity, Saybolt Universal at 100° F., 35 sec. Nitrogen percent, 0.043

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 79 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	3.4	3.4	0.642	88.9					
2	167	3.7	7.1	.668	80.3	6.5	1.37368	124.4		
3	212	6.5	13.6	.711	67.5	17	1.39443	125.1		
4	257	7.4	21.0	.739	60.0	21	1.40847	130.7		
5	302	6.4	27.4	.757	55.4	22	1.41954	132.4		
6	347	5.8	33.2	.773	51.6	23	1.42859	137.1		
7	392	5.0	38.2	.787	48.3	23	1.43619	135.8		
8	437	5.0	43.2	.801	45.2	24	1.44392	138.8		
9	482	5.3	48.5	.816	41.9	26	1.45245	143.9		
10	527	6.9	55.4	.829	39.2	28	1.46007	149.8		

STAGE 2—Distillation continued at 40 mm Hg

11	392	3.6	59.0	0.847	35.6	32			40	15
12	437	6.1	65.1	.851	34.8	30			46	35
13	482	5.5	70.6	.868	31.5	35			57	55
14	527	4.9	75.5	.879	29.5	37			84	75
15	572	5.2	80.7	.892	27.1	40			145	85
Residue		17.4	98.1	.937	19.5					

Carbon residue, Conradson Residue 3.3 percent crude 0.7 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	13.6	0.682	76.0	
Total gasoline and naphtha	38.2	0.733	61.5	
Kerosene distillate	10.3	.809	43.4	
Gas oil	15.8	.841	36.8	
Nonviscous lubricating distillate	10.1	.858-.883	33.4-28.8	100-100
Medium lubricating distillate	6.3	.883-.899	28.8-25.9	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residue	17.4	.937	19.5	
Distillation loss	1.9			

Bureau of Mines
Sample
Item 609
Laramie
PC-53-149

Laboratory

IDENTIFICATION

Meadow Creek field
Tensleep, Pennsylvanian
9,060 - 9,100 feet

Wyoming
Johnson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.878 Gravity, ° API, 29.7 Pour point, ° F, below 5
Sulfur, percent, 1.91 Color, black
Viscosity, Saybolt Universal at 100° F., 62 sec., 77° F., 87 sec. Nitrogen percent, 0.135

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 108 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.7	1.7	0.655	84.5	-	1.36984	122.8		
3	212	2.4	4.1	.691	73.3	7.5	1.38520	121.1		
4	257	3.5	7.6	.715	66.4	9.9	1.39798	124.2		
5	302	4.3	11.9	.738	60.2	13	1.41018	125.5		
6	347	4.6	16.5	.760	54.7	17	1.42123	129.1		
7	392	4.8	21.3	.780	49.9	20	1.43201	131.4		
8	437	5.2	26.5	.798	45.8	23	1.44186	133.2		
9	482	5.9	32.4	.817	41.7	27	1.45147	140.6		
10	527	7.3	39.7	.836	37.8	31	1.46280	149.8		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	4.1	43.8	0.861	32.8	39			41	10
12	437	7.6	51.4	.873	30.6	41			47	30
13	482	6.9	58.3	.891	27.3	46			62	50
14	527	6.2	64.5	.906	24.7	50			94	70
15	572	6.5	71.0	.918	22.6	53			180	85
Residuum		29.0	100.0	1.007	9.0					

Carbon residuum, Conradson Residuum 18.3 percent, crude 6.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	4.1	0.676	77.8	
Total gasoline and naphth	21.3	0.737	60.5	
Kerosene distillate	11.1	.808	43.6	
Gas oil	16.5	.853	34.4	
Nonviscous lubricating distillate	12.9	.876-.907	30.0-24.5	50 100
Medium lubricating distillate	6.1	.907-.921	24.5-22.1	100 200
Viscous lubricating distillate	3.1	.921-.928	22.1-21.0	Above 200
Residuum	29.0	1.007	9.0	
Distillation loss	.0			

Bureau of Mines
Sample
Item 610
Laramie
PC-56-142

Laboratory

IDENTIFICATION

Murphy Dome field
Tensleep, Pennsylvanian
4,752 - 5,012 feet

Wyoming
Washakie County

GENERAL CHARACTERISTICS

Gravity, specific, 0.861 Gravity, ° API, 32.8 Pour point, ° F, below 5
Sulfur, percent, 1.82 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen percent, 0.131

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0							
2	167	2.6	3.6	0.662	82.2	-	1.37374	126.5		
3	212	3.4	7.0	.696	71.8	10	1.38953	128.4		
4	257	5.1	12.1	.719	65.3	12	1.40156	127.0		
5	302	5.7	17.8	.742	59.2	15	1.41401	128.9		
6	347	5.4	23.2	.765	53.5	19	1.42648	136.4		
7	392	5.4	28.6	.787	48.3	23	1.43743	140.7		
8	437	5.6	34.2	.805	44.3	26	1.44669	141.6		
9	482	6.1	40.3	.821	40.9	29	1.45517	144.4		
10	527	6.2	46.5	.838	37.4	32	1.46429	151.1		

STAGE 2—Distillation continued at 40 mm Hg

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n_D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
11	392	10.1	56.6	0.866	31.9	41			42	10
12	437	7.4	64.0	.892	27.1	50			56	30
13	482	4.8	68.8	.921	22.1	60			85	60
14	527	4.1	72.9	.929	20.8	61			140	80
15	572	4.8	77.7	.936	19.7	61			250	90
Residuum		21.6	99.3	1.006	9.2					

Carbon residuum, Conradson Residuum 15.7 percent, crude 3.9 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.0	0.679	76.9	
Total gasoline and naphth	28.6	0.735	61.0	
Kerosene distillate	11.7	.813	42.6	
Gas oil	16.3	.855	34.0	
Nonviscous lubricating distillate	11.0	.881-.923	29.1-21.8	50 100
Medium lubricating distillate	5.7	.923-.933	21.8-20.2	100 200
Viscous lubricating distillate	4.4	.933-.939	20.2-19.2	Above 200
Residuum	21.6	1.006	9.2	
Distillation loss	.7			

Bureau of Mines Item 611
Laramie Laboratory
Sample PC-56-340

IDENTIFICATION

Oregon Basin, West field
Phosphoria, Permian
4,311 - 4,348 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific, 0.960 Gravity, ° API, 15.9 Pour point, ° F., below 5
Sulfur, percent, 3.93 Color, black
Viscosity, Saybolt Universal at 100° F., 1,420 sec.; 130° F., 570 sec. Nitrogen, percent, 0.417

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 760 mm. Hg
First drop, 115° F.

Fraction No.	Cut temp ° F.	Percent	Sum percent	Sp. gr. 60/60° F.	° API 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. vis., 100° F.	Cloud test, ° F.
1	122	0.1	0.1							
2	167	1.4	1.5	0.698	71.2		1.39111	128.3		
3	212	1.7	2.2	.722	64.5	13	1.40128	127.1		
4	257	1.0	3.2	.757	55.4	22	1.41535	126.7		
5	302	1.8	5.0	.776	50.9	24	1.42990	136.2		
6	347	2.2	7.2	.797	46.0	28	1.44292	137.9		
7	392	2.4	9.6	.820	41.1	33	1.45571	144.0		
8	437	3.0	12.6	.837	37.6	36	1.46593	153.1		
9	482	5.6	18.2	.856	33.8	41	1.47582	163.2		
10	527									

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No.	Cut temp ° F.	Percent	Sum percent	Sp. gr. 60/60° F.	° API 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. vis., 100° F.	Cloud test, ° F.
11	392	3.0	21.2	0.891	27.3	53			43	Below 5
12	437	5.4	26.6	.899	25.9	53			52	10
13	482	5.2	31.8	.909	24.2	55			72	25
14	527	5.8	37.6	.927	21.1	60			125	45
15	572	8.5	46.1	.944	18.4	65			280	60
Residuum		52.9	99.0	1.028	6.2					

Carbon residue, Conradson: Residuum, 18.9 percent; crude, 10.7 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	1.5	0.698	71.2	
Total gasoline and naphtha	7.2	0.758	55.2	
Kerosine distillate	2.4	.820	41.1	
Gas oil	13.4	.865	32.1	
Nonviscous lubricating distillate	9.1	.897-.918	26.3-22.6	50-100
Medium lubricating distillate	6.0	.918-.935	22.6-19.8	100-200
Viscous lubricating distillate	8.0	.935-.954	19.8-16.8	Above 200
Residuum	52.9	1.028	6.2	
Distillation loss	1.0			

Bureau of Mines Item 612
Laramie Laboratory
Sample PC-50-565

IDENTIFICATION

Oregon Basin, North field
Tensleep, Pennsylvanian
3,380 - 3,398 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific, 0.916 Gravity, ° API, 23.0 Pour point, ° F., below 5
Sulfur, percent, 3.20 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 170 sec.; 130° F., 99 sec. Nitrogen, percent, 0.30

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure, 760 mm. Hg
First drop, 88° F.

Fraction No.	Cut temp ° F.	Percent	Sum percent	Sp. gr. 60/60° F.	° API 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. vis., 100° F.	Cloud test, ° F.
1	122	0.7	0.7	0.652	85.5					
2	167	1.2	1.9	.655	84.5	0.4	1.37473	123.2		
3	212	2.2	4.1	.695	72.1	9.4	1.38889	122.6		
4	257	2.6	6.7	.724	63.9	14	1.40313	126.1		
5	302	3.0	9.7	.747	57.9	18	1.41559	132.2		
6	347	3.1	12.8	.769	52.5	21	1.42813	137.9		
7	392	3.1	15.9	.790	47.6	25	1.43839	141.1		
8	437	3.2	19.1	.808	43.6	28	1.44762	141.5		
9	482	3.8	22.9	.825	40.0	31	1.45637	145.3		
10	527	5.0	27.9	.846	35.8	36	1.46768	152.6		

STAGE 2—Distillation continued at 40 mm. Hg

Fraction No.	Cut temp ° F.	Percent	Sum percent	Sp. gr. 60/60° F.	° API 60° F.	C. I.	Refractive index, n _D at 20° C.	Specific dispersion	S. U. vis., 100° F.	Cloud test, ° F.
11	392	2.2	30.1	0.874	30.4	45			40	Below 5
12	437	5.7	35.8	.883	28.8	46			45	15
13	482	6.0	41.8	.898	26.1	49			59	30
14	527	5.9	47.7	.915	23.1	54			96	50
15	572	6.3	54.0	.936	19.7	61			200	70
Residuum		44.9	98.9	1.014	8.1					

Carbon residue, Conradson: Residuum, 14.4 percent; crude, 7.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.1	0.676	77.8	
Total gasoline and naphtha	15.9	0.738	60.2	
Kerosine distillate	7.0	.817	41.7	
Gas oil	12.0	.866	31.9	
Nonviscous lubricating distillate	10.1	.888-.916	27.9-23.0	50-100
Medium lubricating distillate	5.9	.916-.936	23.0-19.7	100-200
Viscous lubricating distillate	3.1	.936-.947	19.7-17.9	Above 200
Residuum	44.9	1.014	8.1	
Distillation loss	1.1			

Bureau of Mines
Sample
Item 613
Laramie
PC-50-566
Laboratory

IDENTIFICATION

Oregon Basin, North field
Madison, Mississippian
3,930 - 3,965 feet

Wyoming
Park County

GENERAL CHARACTERISTICS

Gravity, specific, 0.922 Gravity, ° API 22.0 Pour point, ° F, below 5
Sulfur, percent, 3.18 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 230 sec., 130° F, 125 sec. Nitrogen, percent, 0.35

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 77° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D , at 20° C	Specific dispersion	8 U visc 100° F	Cloud test ° F
1	122	0.7	0.7							
2	167	2.0	2.7	0.674	78.4	-	1.37833	125.7		
3	212	1.8	4.5	.702	70.1	13	1.39172	123.1		
4	257	3.0	7.5	.723	64.2	14	1.40236	124.3		
5	302	3.0	10.5	.743	58.9	16	-	-		
6	347	2.9	13.4	.762	54.2	18	1.42320	132.1		
7	392	3.0	16.4	.783	49.2	22	1.43438	137.4		
8	437	3.5	19.9	.802	44.9	25	1.44537	140.1		
9	482	4.0	23.9	.824	40.2	30	1.45625	145.4		
10	527	6.2	30.1	.847	35.6	36	1.46910	154.3		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	1.3	31.4	0.874	30.4	45			41	Below 5
12	437	4.9	36.3	.881	29.1	45			46	20
13	482	5.7	42.0	.896	26.4	48			60	40
14	527	5.7	47.7	.920	22.3	57			93	55
15	572	6.7	54.4	.936	19.7	61			200	70
Residuum		45.5	99.9	1.025	6.6					

Carbon residue, Conradson Residuum 17.7 percent crude 9.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.5	0.685	75.1	
Total gasoline and naphtha	16.4	0.734	61.3	
Kerosene distillate	7.5	.814	42.3	
Gas oil	11.5	.862	32.7	
Nonviscous lubricating distillate	9.8	.885-.920	28.4-22.3	50-100
Medium lubricating distillate	5.8	.920-.936	22.3-19.7	100-200
Viscous lubricating distillate	3.4	.936-.945	19.7-18.2	Above 200
Residuum	45.5	1.025	6.6	
Distillation loss	.1			

Bureau of Mines
Sample
Item 614
Laramie
PC-63-78
Laboratory

IDENTIFICATION

Patrick Draw field
Almond, Upper Cretaceous
4,232 - 4,249 feet

Wyoming
Sweetwater County

GENERAL CHARACTERISTICS

Gravity, specific, 0.811 Gravity, ° API 43.0 Pour point, ° F, 55
Sulfur, percent, 0.01 Color, NPA-3
Viscosity, Saybolt Universal at 100° F, 32 sec. Nitrogen, percent, 0.003

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

STAGE 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 97° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp. gr. 60/60° F	° API 60° F	C I	Refractive index, n _D , at 20° C	Specific dispersion	8 U visc 100° F	Cloud test ° F
1	122	0.6	0.6	0.673	78.8					
2	167	2.1	2.7	.677	77.5	11	1.39510	136.7		
3	212	3.2	5.9	.728	62.9	25	1.40711	135.5		
4	257	10.1	16.0	.759	54.9	31	1.42297	145.0		
5	302	8.4	24.4	.778	50.4	32	1.43562	156.5		
6	347	7.1	31.5	.790	47.6	31	1.44297	157.8		
7	392	6.0	37.5	.795	46.5	27	1.44526	153.3		
8	437	5.8	43.3	.803	44.7	25	1.44966	151.6		
9	482	7.7	51.0	.817	41.7	27	1.45765	165.3		
10	527	10.9	61.9	.834	38.2	30	1.46810	168.2		

STAGE 2—Distillation continued at 40 mm. Hg

11	392	6.9	68.8	.846	35.8	32	1.47468	173.5	37	20
12	437	8.4	77.2	.841	36.8	26	1.47093	162.4	40	45
13	482	6.1	83.3	.849	35.2	26	1.47072	157.6	47	70
14	527	5.3	88.6	.851	34.8	24			46	85
15	572	4.2	92.8	.902	25.4	45			67	100
Residuum		5.1	97.9	.919	22.5					

Carbon residue, Conradson Residuum 0.3 percent crude 0.0 percent

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	5.9	0.704	69.5	
Total gasoline and naphtha	37.5	0.766	53.2	
Kerosene distillate	13.5	.811	43.0	
Gas oil	31.1	.841	36.8	
Nonviscous lubricating distillate	10.7	.850-.924	35.0-21.6	50-100
Medium lubricating distillate	-	-	-	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	5.1	.919	22.5	
Distillation loss	2.1			

Bureau of Mines
Sample
Item 615
Laramie
PC-60-109
Laboratory

IDENTIFICATION

Rozet field
Muddy, Middle Cretaceous
6,935-6,954 feet

Wyoming
Campbell County

GENERAL CHARACTERISTICS

Gravity, specific, 0.848 Gravity, ° API, 35.4 Pour point, ° F, 30
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 44 sec. Nitrogen, percent, 0.132

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 86 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S. U. vis. 100° F	Cloud test, ° F
1	122	1.6	1.6	0.684	75.4					
2	167	1.4	3.0	.675	78.1	9.8	1.37405	129.7		
3	212	7.5	10.5	.727	63.1	25	1.39942	125.7		
4	287	4.3	14.8	.751	56.9	27	1.41248	130.1		
5	302	4.1	18.9	.766	53.2	27	1.42123	134.1		
6	347	2.9	21.8	.782	49.5	27	1.42967	138.6		
7	392	4.1	25.9	.795	46.5	27	1.43631	139.3		
8	437	5.2	31.1	.812	42.8	30	1.44608	144.3		
9	482	4.0	35.1	.826	39.8	31	1.45343	146.2		
10	527	5.3	40.4	.837	37.6	32	1.46049	152.2		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.7	43.1	.854	34.2	36	1.46301	145.9	38	Below 5
12	437	5.9	49.0	.852	34.6	31	1.46899	151.6	42	25
13	482	5.4	54.4	.860	33.0	31	1.47354	151.8	50	50
14	527	4.7	59.1	.878	29.7	37			65	65
15	572	5.8	64.9	.886	28.2	37			97	80
Residuum		31.9	96.8	.948	17.8					

Carbon residue, Conradson Residuum 9.0 percent crude 3.2 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.5	0.713	67.0	
Total gasoline and naphtha	25.9	0.749	57.4	
Kerosene distillate	5.2	.812	42.8	
Gas oil	20.6	.846	35.8	
Nonviscous lubricating distillate	10.8	.860-.887	33.0-28.0	50-100
Medium lubricating distillate	2.4	.887-.891	28.0-27.3	100-200
Viscous lubricating distillate	-	-	-	Above 300
Residuum	31.9	.948	17.8	
Distillation loss	3.2			

Bureau of Mines
Sample
Item 616
Laramie
PC-53-98
Laboratory

IDENTIFICATION

Salt Creek field
Second Wall Creek, Upper or Middle Cretaceous
2,605-2,668 feet

Wyoming
Natrona County

GENERAL CHARACTERISTICS

Gravity, specific, 0.852 Gravity, ° API, 34.6 Pour point, ° F, 20
Sulfur, percent, 0.13 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 45 sec. Nitrogen, percent, 0.103

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm. Hg
First drop 77 ° F

Fraction No	Out temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S. U. vis. 100° F	Cloud test, ° F
1	122	2.7	2.7	0.667	80.6	-	1.37349	122.7		
2	167	4.4	7.1	.724	63.9	23	1.40038	127.3		
3	212	6.7	13.8	.751	56.9	27	1.41418	130.6		
4	287	4.6	18.4	.771	52.0	29	1.42608	135.9		
5	302	4.7	23.1	.792	47.2	32	1.43811	141.9		
6	347	3.8	26.9	.807	43.8	33	1.44636	143.3		
7	392	4.1	31.0	.820	41.1	33	1.45359	145.5		
8	437	4.7	35.7	.832	38.6	34	1.46120	150.1		
9	482	6.7	42.4	.843	36.4	34	1.46784	156.2		
10	527									

Stage 2—Distillation continued at 40 mm Hg

11	392	5.1	47.5	0.857	33.6	37			42	10
12	437	6.5	54.0	.862	32.7	36			48	25
13	482	6.6	60.6	.877	29.9	39			64	55
14	527	5.0	65.6	.886	28.2	40			100	75
15	572	9.8	75.4	.898	26.1	43			220	95
16	572									
Residuum		23.4	98.8	.946	18.1					

Carbon residue, Conradson Residuum, 5.9 percent, crude 1.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.1	0.702	70.1	
Total gasoline and naphtha	26.9	0.757	55.4	
Kerosene distillate	4.1	.820	41.1	
Gas oil	20.6	.848	35.4	
Nonviscous lubricating distillate	11.5	.864-.886	32.3-28.2	50-100
Medium lubricating distillate	6.2	.886-.896	28.2-26.4	100-200
Viscous lubricating distillate	6.1	.896-.906	26.4-24.7	Above 200
Residuum	23.4	.946	18.1	
Distillation loss	1.2			

Bureau of Mines
Sample
Item 617
Laramie
PC-53-102
Laboratory

IDENTIFICATION

Salt Creek field
Morrison, Jurassic
2,592-2,610 feet

Wyoming
Natrona County

GENERAL CHARACTERISTICS

Gravity, specific, 0.873 Gravity, ° API 30.6 Pour point, ° F 45
Sulfur, percent, 0.32 Color, brownish black
Viscosity, Saybolt Universal at 100° F, 73 sec.; 77° F, 145 sec. Nitrogen percent, 0.115

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 131 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212	2.4	2.4	0.700	70.6	-	1.38911	124.7		
4	257	2.5	4.9	.740	59.7	22	1.40823	126.2		
5	302	3.2	8.1	.761	54.4	24	1.42082	133.4		
6	347	3.4	11.5	.782	49.5	27	1.43263	137.8		
7	392	5.0	16.5	.802	44.9	31	1.44319	140.6		
8	437	3.7	20.2	.817	41.7	32	1.45147	142.6		
9	482	5.3	25.5	.828	39.4	32	1.45841	149.2		
10	527	7.4	32.9	.838	37.4	32	1.46487	151.8		

Stage 2—Distillation continued at 40 mm Hg

11	592	4.6	37.5	0.852	34.6	35			42	15
12	487	8.2	45.7	.856	33.8	33			47	35
13	482	6.7	52.4	.870	31.1	36			59	55
14	527	6.6	59.0	.880	29.3	38			83	75
15	572	7.5	66.5	.890	27.5	39			140	95
Residuum		33.1	99.6	.953	17.0					

Carbon residue, Conradson Residuum 8.5 percent, crude 3.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.4	0.700	70.6	
Total gasoline and naphtha	16.5	0.766	53.2	
Kerosene distillate	3.7	.817	41.7	
Gas oil	23.2	.843	36.4	
Nonviscous lubricating distillate	14.5	.859-.883	33.2-28.8	50-100
Medium lubricating distillate	8.6	.883-.895	28.8-26.6	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	33.1	.953	17.0	
Distillation loss	4			

Bureau of Mines
Sample
Item 618
Laramie
PC-53-106
Laboratory

IDENTIFICATION

Salt Creek field
Tensleep, Pennsylvanian
3,908-3,938 feet

Wyoming
Natrona County

GENERAL CHARACTERISTICS

Gravity, specific, 0.902 Gravity, ° API 25.4 Pour point, ° F 20
Sulfur, percent, 2.36 Color, black
Viscosity, Saybolt Universal at 100° F, 135 sec.; 130° F, 79 sec. Nitrogen percent, 0.174

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 176 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index, n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167									
3	212									
4	257	1.6	1.6	0.705	69.2	-	1.39341	123.0		
5	302	2.8	4.4	.730	62.3	9.4	1.40616	123.4		
6	347	3.9	8.3	.751	56.9	13	1.41635	123.7		
7	392	3.6	11.9	.769	52.5	15	1.42602	124.7		
8	437	4.6	16.5	.787	48.3	18	1.43506	125.8		
9	482	5.8	22.3	.803	44.7	20	1.44403	130.5		
10	527	6.8	29.1	.821	40.9	24	1.45381	137.1		

Stage 2—Distillation continued at 40 mm Hg

11	592	3.6	32.7	0.847	35.6	32			42	10
12	487	8.0	40.7	.859	33.2	34			47	30
13	482	6.6	47.3	.884	28.6	43			62	50
14	527	6.0	53.3	.897	26.3	46			90	70
15	572	8.0	61.3	.912	23.7	50			160	90
Residuum		38.7	100.0	1.007	9.0					

Carbon residue, Conradson Residuum 17.7 percent, crude 7.6 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline				
Total gasoline and naphtha	11.9	0.745	58.4	
Kerosene distillate	17.2	.806	44.1	
Gas oil	9.0	.854	34.2	
Nonviscous lubricating distillate	13.2	.864-.899	32.3-25.9	50-100
Medium lubricating distillate	10.0	.899-.921	25.9-22.1	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	38.7	1.007	9.0	
Distillation loss	.0			

Item 619
Bureau of Mines Laramie Laboratory
Sample PC-55-443

IDENTIFICATION

Steamboat Butte field
Crow Mountain, Curtis, Triassic
5,524-5,540 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity, specific, 0.880 Gravity, ° API, 29.3 Pour point, ° F., below 5
Sulfur, percent, 1.65 Color, brownish black
Viscosity, Saybolt Universal at 100° F., 62 sec.; 77° F., 87 sec. Nitrogen, percent, 0.152

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 760 mm Hg
First drop, 90 ° F

Fraction No.	Cut temp. ° F.	Percent	Sum. percent	Sp. gr. 60/60° F.	° API 60° F.	C I	Refractive index, n _D at 20° C	Specific dispersion	S U. visc. 100° F.	Cloud test, ° F.
1	122	1.0	1.0	0.680	76.6					
2	167	3.8	4.8	.689	73.9	17	1.38691	127.3		
3	212	2.2	7.0	.715	66.4	19	1.40044	128.9		
4	257	2.1	9.1	.736	60.8	20	1.41083	132.6		
5	302	3.4	12.5	.755	55.9	21	1.42082	135.5		
6	347	4.6	17.1	.774	51.3	23	1.43104	139.0		
7	392	4.3	21.4	.793	46.9	26	1.44102	141.0		
8	437	4.2	25.6	.808	43.6	28	1.44927	144.6		
9	482	6.1	31.7	.824	40.2	30	1.45911	146.9		
10	527	6.7	38.4	.844	36.2	35	1.46999	159.8		

Stage 2—Distillation continued at 40 mm. Hg

11	392	5.6	44.0	0.864	32.3	40			41	Below 5
12	437	6.1	50.1	.872	30.8	40			49	25
13	482	4.3	54.4	.887	28.0	44			63	45
14	527	6.4	60.8	.896	26.4	45			92	65
15	572	6.5	67.3	.919	22.5	53			175	80
Residuum		31.3	98.6	.994	10.9					

Carbon residue, Conradson: Residuum, 15.1 percent; crude, 5.3 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	7.0	0.696	71.8	
Total gasoline and naphtha	21.4	0.745	58.4	
Kerosine distillate	10.3	.817	41.7	
Gas oil	15.7	.857	33.6	
Nonviscous lubricating distillate	10.8	.872-.895	30.8-26.6	50-100
Medium lubricating distillate	7.7	.895-.927	26.6-21.1	100-200
Viscous lubricating distillate	1.4	.927-.932	21.1-20.3	Above 200
Residuum	31.3	.994	10.9	
Distillation loss	1.4			

Item 620
Bureau of Mines Laramie Laboratory
Sample PC-49-120

IDENTIFICATION

Steamboat Butte field
Tensleep, Pennsylvanian
6,830-6,923 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity, specific, 0.886 Gravity, ° API, 28.2 Pour point, ° F., below 5
Sulfur, percent, 2.18 Color, black
Viscosity, Saybolt Universal at 100° F., 66 sec.; 77° F., 90 sec. Nitrogen, percent, 0.18

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure, 760 mm Hg
First drop, 77 ° F

Fraction No.	Cut temp. ° F.	Percent	Sum. percent	Sp. gr. 60/60° F.	° API 60° F.	C I	Refractive index, n _D at 20° C	Specific dispersion	S U. visc. 100° F.	Cloud test, ° F.
1	122	1.2	1.2	0.647	87.2					
2	167	1.0	2.2	.667	80.6	6.1				
3	212	2.1	4.3	.693	72.7	8.5				
4	257	3.2	7.5	.719	65.3	12				
5	302	3.6	11.1	.742	59.2	15				
6	347	4.2	15.3	.761	54.4	17				
7	392	4.0	19.3	.782	49.4	21				
8	437	4.3	23.6	.797	46.0	23				
9	482	4.8	28.4	.814	42.3	25				
10	527	5.8	34.2	.836	37.8	31				

Stage 2—Distillation continued at 40 mm. Hg

11	392	6.0	40.2	0.864	32.3	40			40	5
12	437	6.8	47.0	.875	30.2	42			46	25
13	482	6.4	53.4	.891	27.3	46			60	40
14	527	5.7	59.1	.907	24.5	50			91	60
15	572	6.9	66.0	.921	22.1	54			170	80
Residuum		33.1	99.1	1.004	9.4					

Carbon residue, Conradson: Residuum, 16.1 percent; crude, 6.0 percent.

APPROXIMATE SUMMARY

	Percent	Sp. gr.	° API	Viscosity
Light gasoline	4.3	0.674	78.4	
Total gasoline and naphtha	19.3	0.735	61.0	
Kerosine distillate	9.1	.806	44.1	
Gas oil	17.0	.858	33.4	
Nonviscous lubricating distillate	11.5	.879-.909	29.5-24.2	50-100
Medium lubricating distillate	7.9	.909-.926	24.2-21.3	100-200
Viscous lubricating distillate	1.2	.926-.929	21.3-20.8	Above 200
Residuum	33.1	1.004	9.4	
Distillation loss	.9			

Bureau of Mines
Sample

Item 621
Laramie
PC-58-42

Laboratory

IDENTIFICATION

Sussex (Unit A) field
Upper Parkman, Upper Cretaceous
3,073-3,110 feet

Wyoming
Johnson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.849 Gravity, ° API, 35.2 Pour point, ° F, below 5
Sulfur, percent, 0.22 Color, brownish green
Viscosity, Saybolt Universal at 100° F, 41 sec. Nitrogen percent, 0.100

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 84 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.6	1.6	0.656	84.2					
2	167	2.6	4.2	.680	76.6	12	1.38624	124.1		
3	212	2.9	7.1	.718	65.6	20	1.40062	125.6		
4	267	5.0	12.1	.739	60.0	21	1.41065	128.6		
5	302	5.4	17.5	.758	55.2	23	1.42239	131.2		
6	347	5.0	22.5	.780	49.9	26	1.43314	136.1		
7	392	4.7	27.2	.797	46.0	28	1.44248	136.8		
8	437	4.5	31.7	.812	42.8	30	1.45004	141.7		
9	482	5.3	37.0	.825	40.0	31	1.45798	144.2		
10	527	7.0	44.0	.837	37.6	32	1.46551	151.5		

Stage 2—Distillation continued at 40 mm Hg

11	302	2.4	46.4	0.857	33.6	37	1.47250	154.6	38	Below 5
12	437	6.5	52.9	.855	34.0	32	1.47499	156.9	43	10
13	482	6.4	59.3	.866	31.9	34	1.48080	160.4	52	30
14	527	5.1	64.4	.880	29.3	38			70	50
15	572	6.2	70.6	.900	25.7	44			115	70
Residuum		27.9	98.5	.947	17.9					

Carbon residue, Conradson Residuum 4.1 percent, crude 1.6 percent.

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.1	0.690	73.6	
Total gasoline and naphtha	27.2	0.748	57.7	
Kerosene distillate	9.8	.819	41.3	
Gas oil	17.5	.850	35.0	
Nonviscous lubricating distillate	11.0	.863-.893	32.5-27.0	30-100
Medium lubricating distillate	5.1	.893-.911	27.0-23.8	100-200
Viscous lubricating distillate	-	-	-	Above 200
Residuum	27.9	.947	17.9	
Distillation loss	1.5			

Bureau of Mines
Sample

Item 622
Laramie
PC-53-147

Laboratory

IDENTIFICATION

Sussex (Unit B) field
Amsden, Pennsylvanian
8,917 - 9,098 feet

Wyoming
Johnson County

GENERAL CHARACTERISTICS

Gravity, specific, 0.866 Gravity, ° API, 31.9 Pour point, ° F, below 5
Sulfur, percent, 1.81 Color, black
Viscosity, Saybolt Universal at 100° F, 50 sec., 77° F., 63 sec. Nitrogen percent, 0.110

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.5	2.5	0.658	83.6	-	1.36965	119.3		
2	167	2.8	5.3	.692	73.0	8.0	1.38648	123.0		
3	212	4.1	9.4	.719	65.3	12	1.39936	123.6		
4	267	4.6	14.0	.741	59.5	15	1.41130	126.7		
5	302	4.5	18.5	.762	54.2	18	1.42279	130.6		
6	347	4.8	23.3	.781	49.7	21	1.43319	133.8		
7	392	5.0	28.3	.798	45.8	23	1.44192	136.5		
8	437	5.6	33.9	.816	41.9	26	1.45120	141.9		
9	482	7.3	41.2	.836	37.8	31	1.46291	150.2		

Stage 2—Distillation continued at 40 mm Hg

11	302	4.0	45.2	0.860	33.0	38			41	10
12	437	7.4	52.6	.869	31.3	39			46	30
13	482	6.3	58.9	.888	27.9	45			59	45
14	527	5.8	64.7	.904	25.0	49			87	70
15	572	6.6	71.3	.916	23.0	52			165	85
Residuum		28.3	99.6	.986	12.0					

Carbon residue, Conradson Residuum 12.6 percent, crude 4.1 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	5.3	0.676	77.8	
Total gasoline and naphtha	23.3	0.735	61.0	
Kerosene distillate	10.6	.808	43.6	
Gas oil	17.2	.853	34.4	
Nonviscous lubricating distillate	11.7	.875-.906	30.2-24.7	30-100
Medium lubricating distillate	7.9	.906-.921	24.7-22.1	100-200
Viscous lubricating distillate	.6	.921-.923	22.1-21.8	Above 200
Residuum	28.3	.986	12.0	
Distillation loss	4			

Bureau of Mines
Sample

Item 623
Laramie
PC-50-80

Laboratory

IDENTIFICATION

Wertz field
Tensleep, Pennsylvanian
5,999-6,200 feet

Wyoming
Carbon County

GENERAL CHARACTERISTICS

Gravity, specific, 0.857 Gravity, ° API, 33.6 Pour point, ° F, below 5
Sulfur, percent, 1.32 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 43 sec. Nitrogen, percent, 0.056

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 93 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	1.0	1.0	0.660	82.9					
2	167	2.7	3.7	.665	81.3	5.1	1.3778	-		
3	212	3.9	7.6	.701	70.3	12	1.3934	-		
4	257	4.9	12.5	.728	62.9	16	1.4062	-		
5	302	5.3	17.8	.752	56.7	20	1.4192	-		
6	347	5.7	23.5	.774	51.3	23	1.4320	-		
7	392	5.0	28.5	.790	47.6	25	1.4391	-		
8	437	5.1	33.6	.805	44.3	26	1.4472	-		
9	482	5.7	39.3	.821	40.8	29	1.4548	-		
10	527	7.3	46.6	.841	36.7	33	1.4673	-		

Stage 2—Distillation continued at 40 mm Hg

11	392	2.7	49.3	0.866	31.9	41			41	15
12	437	7.6	56.9	.873	30.6	41			46	30
13	482	6.8	63.7	.888	27.8	45			59	45
14	527	5.2	68.9	.908	24.3	51			90	65
15	572	6.4	75.3	.928	21.0	57			170	80
Residuum		24.3	99.6	.976	13.5					

Carbon residu., Conradson Residuum 10.1 percent, crude 2.8 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	7.6	0.683	75.7	
Total gasoline and naphtha	28.5	0.740	59.7	
Kerosene distillate	10.8	.813	42.5	
Gas oil	16.1	.857	33.6	
Nonviscous lubricating distillate	11.6	.877-.911	29.9-23.8	50-100
Medium lubricating distillate	7.3	.911-.936	23.8-19.7	100-200
Viscous lubricating distillate	1.0	.936-.939	19.7-19.2	Above 200
Residuum	24.3	.976	13.5	
Distillation loss	.4			

Bureau of Mines
Sample

Item 624
Laramie
PC-50-79

Laboratory

IDENTIFICATION

Wertz field
Madison, Mississippian
6,670-7,017 feet

Wyoming
Carbon County

GENERAL CHARACTERISTICS

Gravity, specific, 0.847 Gravity, ° API, 35.6 Pour point, ° F, below 5
Sulfur, percent, 1.17 Color, greenish black
Viscosity, Saybolt Universal at 100° F., 41 sec. Nitrogen, percent, 0.085

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 81 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	2.4	2.4	0.637	90.6					
2	167	4.7	7.1	.672	79.1	8.4	1.37585	123.1		
3	212	2.9	10.0	.710	67.8	17	1.39570	124.4		
4	257	3.4	13.4	.730	62.3	17	1.40616	130.9		
5	302	5.1	18.5	.751	56.9	19	1.41769	136.0		
6	347	5.4	23.9	.772	51.8	23	1.42944	139.6		
7	392	5.0	28.9	.789	47.8	24	1.43856	141.7		
8	437	4.6	33.5	.804	44.5	26	1.44592	139.9		
9	482	5.9	39.4	.820	41.1	28	1.45490	147.7		
10	527	6.7	46.1	.842	36.6	34	1.46699	156.1		

Stage 2—Distillation continued at 40 mm Hg

11	392	4.9	51.0	0.866	31.9	41			41	5
12	437	6.2	57.2	.874	30.4	41			48	20
13	482	6.1	63.3	.894	26.8	47			63	45
14	527	5.7	69.0	.909	24.2	51			96	65
15	572	5.9	74.9	.919	22.5	53			190	80
Residuum		22.3	97.2	.975	13.6					

Carbon residu., Conradson Residuum, 9.8 percent, crude 2.5 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	10.0	0.675	78.1	
Total gasoline and naphtha	28.9	0.733	61.5	
Kerosene distillate	10.5	.813	42.6	
Gas oil	15.4	.857	33.6	
Nonviscous lubricating distillate	11.6	.876-.909	30.0-24.2	50-100
Medium lubricating distillate	6.2	.909-.920	24.2-22.3	100-200
Viscous lubricating distillate	2.3	.920-.924	22.3-21.6	Above 200
Residuum	22.3	.975	13.6	
Distillation loss	2.8			

Bureau of Mines
Sample
Item 625
Laramie
PC-49-96

Laboratory

IDENTIFICATION

Winkelman Dome field
Phosphoria, Permian
2,600-2,921 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity, specific, 0.900 Gravity, ° API 25.7 Pour point, ° F below 5
Sulfur, percent, 2.59 Color, black
Viscosity, Saybolt Universal at 100° F., 93 sec.; 77° F., 140 sec. Nitrogen, percent 0.23

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 760 mm Hg
First drop 82 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122									
2	167	1.3	1.3	0.670	79.7	-				
3	212	1.7	3.0	.699	70.9	11				
4	257	2.4	5.4	.725	63.7	15				
5	302	3.3	8.7	.750	57.2	19				
6	347	3.5	12.2	.769	52.5	21				
7	392	3.8	16.0	.790	47.6	25				
8	437	4.1	20.1	.807	43.8	27				
9	482	4.3	24.4	.821	40.8	29				
10	527	5.9	30.3	.840	36.9	33				

Stage 2—Distillation continued at 40 mm Hg

11	392	4.1	34.4	0.870	31.1	43			41	Below 5
12	437	7.6	42.0	.880	29.3	44			47	20
13	482	6.4	48.4	.897	26.2	49			62	40
14	527	5.9	54.3	.912	23.6	53			100	60
15	572	6.8	61.1	.928	21.0	57			200	75
Residuum		37.3	98.4	1.006	9.2					

Carbon residuc, Conradson Residuum 16.8 percent, crude 7.0 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	3.0	0.686	74.8	
Total gasoline and naphtha	16.0	0.748	57.7	
Kerosene distillate	8.4	.814	42.3	
Gas oil	15.2	.861	32.8	
Nonviscous lubricating distillate	11.7	.883-.912	28.7-23.6	50-100
Medium lubricating distillate	6.4	.912-.928	23.6-21.0	100-200
Viscous lubricating distillate	3.4	.928-.937	21.0-19.5	Above 200
Residuum	37.3	1.006	9.2	
Distillation loss	1.6			

Bureau of Mines
Sample
Item 626
Laramie
44L-23

Laboratory

IDENTIFICATION

Winkelman Dome field
Tensleep, Pennsylvanian
2,915-3,315 feet
3,190-3,534 feet

Wyoming
Fremont County

GENERAL CHARACTERISTICS

Gravity, specific, 0.915 Gravity, ° API 23.1 Pour point ° F below 5
Sulfur, percent, 3.17 Color, brownish green
Viscosity, Saybolt Universal at 100° F., 165 sec.; 77° F., 300 sec. Nitrogen percent, -

DISTILLATION, BUREAU OF MINES ROUTINE METHOD

Stage 1—Distillation at atmospheric pressure 593 mm Hg
First drop 86 ° F

Fraction No	Cut temp ° F	Percent	Sum percent	Sp gr 60/60° F	° API 60° F	C I	Refractive index n _D at 20° C	Specific dispersion	S U visc 100° F	Cloud test ° F
1	122	0.7	0.7	0.654	84.9					
2	167	.7	1.4	.664	81.6	1 4				
3	212	1.5	2.9	.700	70.6	8.6				
4	257	2.3	5.2	.731	62.1	15				
5	302	2.8	8.0	.756	55.7	19				
6	347	3.2	11.2	.779	50.1	23				
7	392	3.4	14.6	.800	45.4	27				
8	437	3.7	18.3	.818	41.5	30				
9	482	5.9	24.2	.836	37.8	34				
10	527	7.3	31.5	.857	33.6	39				

Stage 2—Distillation continued at 40 mm Hg

11	392	.7	32.2						44	5
12	437	6.6	38.8	0.882	28.9	43			50	20
13	482	6.8	45.6	.902	25.4	50			65	40
14	527	6.4	52.0	.917	22.8	53			110	65
15	572	6.9	58.9	.926	21.3	55			190	80
Residuum		41.8	100.7	1.009	8.7					

Carbon residuc, Conradson Residuum 15.6 percent crude 7.2 percent

APPROXIMATE SUMMARY

	Percent	Sp gr	° API	Viscosity
Light gasoline	2.9	0.680	76.6	
Total gasoline and naphtha	14.6	0.752	56.7	
Kerosene distillate	3.7	.818	41.5	
Gas oil	17.2	.854	34.2	
Nonviscous lubricating distillate	11.9	.882-.914	28.9-23.3	50-100
Medium lubricating distillate	9.0	.914-.928	23.3-21.0	100-200
Viscous lubricating distillate	2.5	.928-.931	21.0-20.5	Above 200
Residuum	41.8	1.009	8.7	
Distillation loss	0			

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