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NO STOCK

MASTER

DOE/ET/28460-1 (Vol.2)

U-66-C

IN OF
ELLS

to. 2 Well

By
M. H. Willits
R. L. McCoy
R. J. Dobson
J. H. Hartsock

December 1979
Date Published

Work Performed Under Contract No. AC08-77ET28460

Gruy Federal, Inc.
Houston, Texas

U. S. DEPARTMENT OF ENERGY

Geothermal Energy

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INVESTIGATION AND EVALUATION OF
GEOPRESSURED-GEOTHERMAL WELLS

FINAL REPORT
FAIRFAX FOSTER SUTTER NO. 2 WELL
ST. MARY PARISH, LOUISIANA

VOLUME II: WELL TEST DATA

M. H. Willits
R. L. McCoy
R. J. Dobson
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GRUY FEDERAL, INC.
2500 Tanglewilde, Suite 150
Houston, Texas 77063

950 8533
Date Published--December 1979

Prepared for the
U.S. Department of Energy
Division of Geothermal Energy
Under Contract No. DE-AC08-77ET28460

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COMPANY: GRUY FEDERAL

SUPERVISOR: Marvin Matula

RUN DEPTH: 13,865'

HEWLETT PACKARD GAUGE # : 381

DATE : JUNE 7, 1979 through July 10, 1979

FIELD: EAST FRANKLIN, ST. MARY

LEASE & WELL #: FAIRFAX, FOSTER, SUTTER
2

STATUS OF WELL: SHUT-IN

<u>DATE & TIME</u>	<u>BOTTOM HOLE PRESSURE (PSIA)</u>	<u>REMARKS</u>
6-7-79 11:00:00		Reservoir Data, Inc. personnel arrived on location. Rigged up for ring gauge run. (2,275') 21 ' Elevation. 0' at T.H.F. Tag cross over from 3 1/2" to 2 7/8" at 13,885'. Pulled out of Well. Rigged up to run Hewlett Packard Quartz Probe. Monitoring Tubing Pressure. Tubing Pressure equals 4410.90 PSIA and with Dead Weight, Tubing Pressure equals 4426 PSIG.
20:00:00		Started into Well.
20:30:00	5913.76	Gradient stop at 3000'. Temperature = 260° F.
20:55:00	6873.76	Gradient stop at 5000'. Temperature = 260° F.
21:22:00	7827.71	Gradient stop at 7000'. Temperature = 260° F.
21:49:00	8773.77	Gradient stop at 9000'. Temperature = 260° F.
22:15:00	9705.67	Gradient stop at 11,000' Temperature = 260° F.
		Run Tool String to 13,920', then pull back to 13,865' to test.
23:00:00	11,018.27	
6-8-79		
00:00:00	11,017.98	
01:00:00	11,018.85	
02:00:00	11,019.76	
03:00:00	11,020.68	
04:00:00	11,021.61	
05:00:00	11,022.48	Monitoring Pressure build-up prior to flowing of well.
06:00:00	11,023.34	
07:00:00	11,024.24	
08:00:00	11,025.08	
09:00:00	11,025.90	
10:00:00	11,026.73	
11:00:00	11,027.59	
12:00:00	11,028.42	

Reservoir Data Inc.

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AFFILIATE OF MILTON S. COOK COMPANY
Petroleum Engineers

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-8-79		
13:00:00	11,029.25	Continued to monitor Bottom Hole Pressure while Well is shut-in.
14:00:00	11,030.12	
15:00:00	11,030.92	
16:00:00	11,031.75	
17:00:00	11,032.58	
18:00:00	11,033.43	
19:00:00	11,034.22	
20:00:00	11,035.05	
21:00:00	11,035.82	
22:00:00	11,036.59	
23:00:00	11,037.34	
6-9-79		
00:00:00		Temporary loss of data due to electronics failure.
01:00:00		
02:00:00		
03:00:00		
04:00:00	11,041.12	
05:00:00		
06:00:00	11,042.61	
07:00:00	11,043.31	
08:00:00	11,043.98	
09:00:00	11,044.65	
10:00:00	11,045.38	
11:00:00	11,046.07	
12:00:00	11,046.74	Started opening Well with adjustable choke.
13:00:00	10,997.48	
13:01:00	10,933.31	
13:02:00	10,935.80	
13:03:00	10,718.80	
13:04:00	10,476.13	
13:05:00	10,215.98	
13:06:00	10,228.39	
13:07:00	10,157.16	
13:08:00	10,171.90	
13:09:00	10,171.45	
13:10:00	10,087.81	
13:11:00	10,064.63	
13:12:00	9880.58	
13:13:00	9443.47	
13:14:00	9421.64	
13:15:00	9378.09	
13:16:00	9357.18	
13:17:00	9339.53	
13:18:00	9184.92	
13:19:00	9151.05	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-9-79		
13:20:00	9139.76	Continued to monitor Bottom Hole Pressure while flowing Well.
13:21:00	9127.56	
13:22:00	9119.39	
13:23:00	9110.38	
13:24:00	9103.44	
13:25:00	9100.13	
13:26:00	9093.90	
13:27:00	9089.58	
13:28:00	9084.55	
13:29:00	9079.30	
13:30:00	9071.67	
13:31:00	9066.18	
13:32:00	9057.91	
13:33:00	9052.45	
13:34:00	9046.15	
13:35:00	9041.98	
13:36:00	9058.47	
13:37:00	9095.50	
13:38:00	9093.09	
13:39:00	9087.29	
13:40:00	9083.33	
13:41:00	9073.06	
13:42:00	9064.69	
13:43:00	9060.47	
13:44:00	9056.87	
13:45:00	9116.39	
13:46:00	9150.42	
13:47:00	9149.98	
13:48:00	8898.58	
13:49:00	8908.06	
13:50:00	8914.37	
13:51:00	8911.06	
13:52:00	8940.32	
13:53:00	8941.63	
13:54:00	8940.37	
13:55:00	8938.46	
13:56:00	8934.61	
13:57:00	8932.80	
13:58:00	8928.71	
13:59:00	8925.93	
14:00:00	8923.29	
14:10:00	8922.76	
14:20:00	8906.19	
14:30:00	8887.27	
14:40:00	8869.66	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-9-79		
14:50:00	8856.07	Continued to monitor Bottom Hole Pressure while flowing Well.
15:00:00	8837.51	
15:10:00	8824.55	
15:20:00	8928.69	
15:30:00	8878.05	
15:40:00	8869.49	
15:50:00	8861.87	
16:00:00	8853.85	
16:10:00	8844.76	
16:20:00	8838.02	
16:30:00	8832.22	
16:40:00	8826.23	
16:50:00	8818.61	
17:00:00	8812.27	
17:10:00	8807.09	
17:20:00	8801.06	
17:30:00	8796.14	
17:40:00	8786.54	
17:50:00	8780.76	
18:00:00	8774.99	
18:10:00	8769.82	
18:20:00	8764.09	
18:30:00	8759.25	
18:40:00	8753.42	
18:50:00	8748.87	
19:00:00	8743.01	
19:10:00	8738.19	
19:20:00	8733.37	
19:21:00	8730.67	
19:22:00	8735.52	
19:23:00	8718.95	
19:24:00	8711.78	
19:25:00	8686.71	
19:26:00	8672.44	
19:27:00	8653.85	
19:28:00	8651.49	
19:29:00	8635.70	
19:30:00	8576.43	
19:31:00	8564.81	
19:32:00	8562.63	
19:33:00	8562.39	
19:34:00	8563.92	
19:35:00	8562.67	
19:36:00	8564.24	
19:37:00	8562.75	

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Petroleum Engineers

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-9-79		
19:38:00	8561.66	Continued to monitor Bottom Hole Pressure while flowing well.
19:39:00	8560.44	
19:40:00	8559.23	
19:41:00	8557.82	
19:42:00	8556.94	
19:43:00	8556.09	
19:44:00	8555.30	
19:45:00	8554.20	
19:46:00	8553.83	
19:47:00	8553.22	
19:48:00	8602.67	
19:49:00	8605.33	
19:50:00	8605.30	
19:51:00	8604.86	
19:52:00	8603.09	
19:53:00	8566.83	
19:54:00	8558.21	
19:55:00	8557.03	Changed to 10 minute computer readings.
19:56:00	8554.95	
19:57:00	8554.13	
19:58:00	8553.46	
19:59:00	8554.07	
20:00:00	8551.71	
20:10:00	8546.51	
20:20:00	8539.01	
20:30:00	8506.72	
20:40:00	8501.10	
20:50:00	8509.24	
21:00:00	8513.61	
21:10:00	8507.56	
21:20:00	8502.57	
21:30:00	8495.43	
21:40:00	8504.31	
21:50:00	8487.86	
22:00:00	8484.22	
22:10:00	8491.91	
22:20:00	8476.94	
22:30:00	8471.57	
22:40:00	8465.68	
22:50:00	8469.80	
23:00:00	8461.44	
23:10:00	8474.28	
23:20:00	8460.22	
23:30:00	8458.08	
23:40:00	8454.81	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-9-79 23:50:00	8451.58	Continued to monitor Bottom Hole Pressure while flowing Well.
6-10-79 00:10:00	8450.79	
00:30:00	8452.62	
01:00:00	8459.44	
01:30:00	8464.81	
02:00:00	8437.31	
02:30:00	8435.86	
03:00:00	8440.31	
03:30:00	8446.87	
04:00:00	8443.26	
04:30:00	8441.26	
05:00:00	8441.93	
05:30:00	8441.40	
06:00:00	8437.22	
06:30:00	8431.57	
07:00:00	8430.63	
07:30:00	8434.92	
08:00:00	8432.38	
08:30:00	8423.91	
09:00:00	8420.07	
09:30:00	8433.32	
10:00:00	8414.06	
10:30:00	8412.93	
11:00:00	8420.42	
11:30:00	8410.46	
12:00:00	8402.43	
12:30:00	8406.74	
13:00:00	8411.06	
13:30:00	8407.87	
14:00:00	8401.56	
14:30:00	8398.61	
15:00:00	8395.89	
15:30:00		Temporary loss of data due to electrical interference with computer.
16:00:00	8390.57	
16:30:00	8393.58	
17:00:00	8387.37	
17:30:00	8386.77	
18:00:00	8368.94	
18:30:00	8379.08	
19:00:00	8364.90	
19:30:00	8370.54	
20:00:00	8366.82	
20:30:00	8359.48	
21:00:00	8359.49	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-10-79		
21:30:00	8352.68	Continued to monitor Bottom Hole Pressure while flowing Well.
22:00:00	8336.07	
22:30:00	8361.04	
23:00:00	8361.96	
23:30:00	8358.52	
6-11-79		
00:00:00	8354.22	
00:30:00	8350.80	
01:00:00	8350.15	
01:30:00	8347.80	
02:00:00	8343.34	
02:30:00	8345.69	
03:00:00	8335.29	
03:30:00	8329.17	
04:00:00	8325.93	
04:30:00	8323.04	
05:00:00	8316.80	
05:30:00	8313.05	
06:00:00	8311.01	
06:30:00	8308.77	
07:00:00	8306.62	
07:30:00	8310.22	
08:00:00	8305.49	
08:30:00	8304.28	
09:00:00	8301.55	
09:30:00	8295.67	
10:00:00	8294.46	
10:30:00	8294.05	
11:00:00	8292.40	
11:30:00	8288.50	
12:00:00	8287.56	
12:30:00	8286.95	
13:00:00	8286.35	
13:30:00	8282.84	
14:00:00	8280.07	
14:30:00	8283.04	
15:00:00	8278.72	
15:30:00	8272.24	
16:00:00	8270.23	
16:30:00	8266.70	
17:00:00	8264.70	
17:30:00	8262.89	
18:00:00	8257.94	
18:30:00	8255.07	
19:00:00	8253.10	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-11-79		
19:30:00	8249.87	Continued to monitor Bottom Hole Pressure while flowing Well.
20:00:00	8246.92	
20:30:00	8243.28	
21:00:00	8241.19	
21:30:00	8238.80	
22:00:00	8237.79	
22:30:00	8234.15	
23:00:00	8230.32	
23:30:00	8231.18	
6-12-79		
00:00:00	8227.36	
00:30:00	8225.64	
01:00:00	8221.98	
01:30:00	8218.05	
02:00:00	8215.49	
02:30:00	8216.18	
03:00:00	8214.54	
03:30:00	8211.71	
04:00:00	8210.60	
04:30:00	8208.05	
05:00:00	8204.32	
05:30:00	8202.51	
06:00:00	8199.19	
06:30:00	8196.76	
07:00:00	8192.95	
07:30:00	8190.84	
08:00:00	8190.88	
08:30:00	8187.71	
09:00:00	8184.39	
09:30:00	8182.07	
10:00:00	8179.02	
10:30:00	8179.39	
11:00:00	8179.56	
11:30:00	8177.43	
12:00:00		Found that universal counter was unable to perform correctly so started using stand-by electronics.
12:30:00	8167.98	
13:00:00	8166.23	
13:30:00	8164.34	
14:00:00	8161.70	
14:30:00	8160.33	
15:00:00	8160.09	
15:30:00	8159.15	
16:00:00	8156.20	
16:30:00	8151.39	
17:00:00	8149.88	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-12-79		
17:30:00	8147.94	Continued to monitor Bottom Hole Pressure while flowing Well.
18:00:00	8146.48	
18:30:00	8142.71	
19:00:00	8140.75	
19:30:00	8139.19	
20:00:00	8138.01	
20:30:00	8135.99	
21:00:00	8143.71	
21:30:00	8140.05	
22:00:00	8137.51	
22:30:00	8134.95	
23:00:00	8132.94	
23:30:00	8-32.36	
6-13-79		
00:00:00	8130.30	
00:30:00	8128.24	
01:00:00	8126.41	
01:30:00	8125.42	
02:00:00	8123.25	
02:30:00	8122.87	
03:00:00	8121.20	
03:30:00	8119.91	
04:00:00	8117.50	
04:30:00	8117.75	
05:00:00	8115.31	
05:30:00	8113.08	
06:00:00	8110.35	
06:30:00	8110.69	
07:00:00	8109.04	Pressure was sampled at 07:01:40.
07:30:00	8107.15	
08:00:00	8105.62	
08:30:00	8105.27	
09:00:00	8102.31	
09:30:00	8102.00	
10:00:00	8100.48	
10:30:00	8101.12	
11:00:00	8100.14	
11:30:00	8097.87	
12:00:00	8096.65	
12:30:00	8097.31	
13:00:00	8098.83	
13:30:00	8095.58	
14:00:00	8092.78	
14:30:00	8092.07	
15:00:00	8091.41	

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Petroleum Engineers

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-13-79		
15:30:00	8089.93	Continued to monitor Bottom Hole Pressure while flowing Well.
16:00:00	8087.80	
16:30:00	8087.00	
17:00:00	8085.15	
17:30:00	8084.46	
18:00:00	8083.52	
18:30:00	8080.35	
19:00:00	8079.16	
19:30:00	8078.04	
20:00:00	8076.68	
20:30:00	8074.17	
21:00:00	8073.60	
21:30:00	8073.63	
22:00:00	8069.78	
22:30:00	8070.42	
23:00:00	8068.96	
23:30:00	8068.26	
6-14-79		
00:00:00	8066.46	
00:30:00	8064.53	
01:00:00	8063.64	
01:30:00	8061.54	
02:00:00	8063.08	
02:30:00	8059.12	
03:00:00	8056.60	
03:30:00	8054.76	
04:00:00	8054.62	
04:30:00	8052.17	
05:00:00	8053.04	
05:30:00	8053.11	
06:00:00	8052.47	
06:30:00	8050.87	
07:00:00	8049.32	
07:30:00	8059.60	
08:00:00	8056.42	
08:30:00	8053.55	
09:00:00	8051.37	
09:30:00	8048.79	
10:00:00	8046.29	
10:30:00	8043.82	
11:00:00	8042.73	
11:30:00	8048.96	
12:00:00	8047.47	
12:30:00	8045.42	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-14-79		
13:00:00	8043.83	Continued to monitor Bottom Hole Pressure while flowing Well.
13:30:00	8043.52	
14:00:00	8042.32	
14:30:00	8049.57	
15:00:00	8046.93	
15:30:00	8045.38	
16:00:00	8044.60	
16:30:00	8048.69	
17:00:00	8046.84	
17:30:00	8045.52	
18:00:00	8046.33	
18:30:00	8044.87	
19:00:00	8043.21	
19:30:00	8041.81	
20:00:00	8040.17	
20:30:00	8038.82	
21:00:00	8037.49	
21:30:00	8037.80	
22:00:00	8036.81	
22:30:00	8034.15	
23:00:00	8034.08	
23:30:00	8032.90	
6-15-79		
00:00:00	8031.79	
00:30:00	8029.67	
01:00:00	8030.57	
01:30:00	8029.41	
02:00:00	8028.20	
02:30:00	8030.27	
03:00:00	8028.21	
03:30:00	8026.43	
04:00:00	8025.11	
04:30:00	8025.03	
05:00:00	8024.74	
05:30:00	8023.80	
06:00:00	8021.39	
06:30:00	8020.29	
07:00:00	8019.92	
07:30:00	8018.05	
08:00:00	8016.97	
08:30:00	8015.54	
09:00:00	8013.80	
09:30:00	8013.20	
10:00:00	8012.59	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-15-79		
10:30:00	8011.67	Continued to monitor Bottom Hole Pressure while flowing well.
11:00:00	8021.58	
11:30:00	8019.54	
12:00:00	8018.03	
12:30:00	8016.03	
13:00:00	8015.96	
13:30:00	8014.54	
14:00:00	8013.36	
14:30:00	8012.51	
15:00:00	8012.94	
15:30:00	8011.14	
16:00:00	8009.19	
16:30:00	8008.26	
17:00:00	8006.54	
17:30:00	8005.77	
18:00:00	8003.45	
18:30:00	8002.26	
19:00:00	8002.06	
19:30:00	8001.31	
20:00:00	8000.69	
20:30:00	7999.50	
21:00:00	7998.64	
21:30:00	7998.01	
22:00:00	7996.67	
22:30:00	7996.50	
23:00:00	7995.54	
23:30:00	7995.07	
6-16-79		
00:00:00	7993.98	
00:30:00	7992.95	
01:00:00	7992.16	
01:30:00	7991.36	
02:00:00	7989.70	
02:30:00	7990.04	
03:00:00	7989.06	
03:30:00	7988.30	
04:00:00	7989.38	
04:30:00	7987.78	
05:00:00	7985.02	
05:30:00	7984.81	
06:00:00	7984.42	
06:30:00	7982.98	
07:00:00	7982.42	
07:30:00	7981.19	
08:00:00	7980.38	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-16-79		
08:30:00	7979.66	Continued to monitor Bottom Hole Pressure while flowing Well.
09:00:00	7978.79	
09:30:00	7978.17	
10:00:00	7978.04	
10:30:00	7977.27	
11:00:00	7978.59	
11:30:00	7973.17	
12:00:00	7975.53	
12:30:00	7974.78	
13:00:00	7974.82	
13:30:00	7972.46	
14:00:00	7971.39	
14:30:00	7970.91	
15:00:00	7969.49	
15:30:00	7969.15	
16:00:00	7969.77	
16:30:00	7968.96	
17:00:00	7967.62	
17:30:00	7966.01	
18:00:00	7965.92	
18:30:00	7965.17	
19:00:00	7964.15	
19:30:00	7963.39	
20:00:00	7964.24	
20:30:00	7963.66	
21:00:00	7962.20	
21:30:00	7961.89	
22:00:00	7961.05	
22:30:00	7959.96	
23:00:00	7960.22	
23:30:00	7959.53	
6-17-79		
00:00:00	7958.96	
00:30:00	7958.12	
01:00:00	7957.57	
01:30:00	7956.53	
02:00:00	7956.11	
02:30:00	7955.95	
03:00:00	7955.54	
03:30:00	7954.38	
04:00:00	7952.33	
04:30:00	7953.41	
05:00:00	7953.40	
05:30:00	7953.44	
06:00:00	7952.34	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-17-79		
06:30:00	7951.48	Continued to monitor Bottom Hole Pressure while flowing Well.
07:00:00	7951.42	
07:30:00	7950.69	
08:00:00	7949.85	
08:30:00	7948.79	
09:00:00	7950.48	
09:30:00	7947.97	
10:00:00	7949.18	
10:30:00	7948.70	
11:00:00	7947.33	
11:30:00	7946.94	
12:00:00	7946.21	
12:30:00	7945.51	
13:00:00	7944.32	
13:30:00	7944.98	
14:00:00	7943.57	
14:30:00	7942.74	
15:00:00	7942.70	
15:30:00	7942.77	
16:00:00	7941.95	
16:30:00	7940.97	
17:00:00	7940.65	
17:30:00	7940.96	
18:00:00	7939.97	
18:30:00	7938.66	
19:00:00	7938.92	
19:30:00	7938.15	
20:00:00	7937.31	
20:30:00	7936.98	
21:00:00	7936.17	
21:30:00	7935.76	
22:00:00	7935.06	
22:30:00	7934.88	
23:00:00	7933.91	
23:30:00	7933.29	
6-18-79		
00:00:00	7932.53	
00:30:00	7931.90	
01:00:00	7930.87	
01:30:00	7930.97	
02:00:00	7929.85	
02:30:00	7930.04	
03:00:00	7928.64	
03:30:00	7929.07	
04:00:00	7928.51

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-18-79		
04:30:00	7929.39	Continued to monitor Bottom Hole Pressure while flowing well.
05:00:00	7928.60	
05:30:00	7927.35	
06:00:00	7927.37	
06:30:00	7926.24	
07:00:00	7925.93	
07:30:00	7925.30	
08:00:00	7924.56	
08:30:00	7923.76	
09:00:00	7922.58	
09:30:00	7921.58	
10:00:00	7920.85	
10:30:00	7919.91	
11:00:00	7919.22	
11:30:00	7918.65	
12:00:00	7917.42	
12:30:00	7916.20	
13:00:00	7916.53	
13:30:00	7916.02	
14:00:00	7915.43	
14:30:00	7914.87	
15:00:00	7915.64	
15:30:00	7913.58	
16:00:00	7912.37	
16:30:00	7912.33	
17:00:00	7912.03	
17:30:00	7910.77	
18:00:00	7909.79	
18:30:00	7909.11	
19:00:00	7907.09	
19:30:00	7905.51	
20:00:00	7905.50	
20:30:00	7905.47	
21:00:00	7905.10	
21:30:00	7903.22	
22:00:00	7903.55	
22:30:00	7902.95	
23:00:00	7903.44	
23:30:00	7901.59	
6-19-79		
00:00:00	7901.14	
00:30:00	7900.92	
01:00:00	7899.29	
01:30:00	7900.32	
02:00:00	7899.12	

DATE & TIME	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-19-79		
02:30:00	7898.69	Continued to monitor Bottom Hole Pressure while flowing well.
03:00:00	7898.19	
03:30:00	7897.89	
04:00:00	7898.00	
04:30:00	7897.05	
05:00:00	7896.26	
05:30:00	7895.71	
06:00:00	7894.48	
06:30:00	7894.24	
07:00:00	7893.66	
07:30:00	7892.45	
08:00:00	7892.53	
08:30:00	7891.94	
09:00:00	7891.12	
09:30:00	7890.84	
10:00:00	7889.76	
10:30:00	7889.26	
11:00:00	7888.34	
11:30:00	7887.52	
12:00:00	7887.30	
12:30:00	7893.51	
13:00:00	7891.48	
13:30:00	7891.82	
14:00:00	7891.13	
14:30:00	7889.96	
15:00:00	7889.01	
15:30:00	7888.39	
16:00:00	7887.88	
16:30:00	7886.66	
17:00:00	7885.62	
17:30:00	7885.14	
18:00:00	7885.73	
18:30:00	7884.36	
19:00:00	7883.46	
19:30:00	7888.00	
20:00:00	7887.37	
20:30:00	7886.34	
21:00:00	7885.01	
21:30:00	7884.50	
22:00:00	7883.84	
22:30:00	7883.46	
23:00:00	7883.01	
23:30:00	7882.06	
6-20-79		
00:00:00	7880.73	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-20-79			
00:30:00		7880.49	Continued to monitor Bottom Hole Pressure while flowing well.
01:00:00		7880.21	
01:30:00		7879.63	
02:00:00		7878.50	
02:30:00		7878.00	
03:00:00		7877.51	
03:30:00		7877.31	
04:00:00		7876.75	
04:30:00		7876.33	
05:00:00		7875.43	
05:30:00		7874.20	
06:00:00		7873.99	
06:30:00		7873.25	
07:00:00		7872.19	
07:30:00		7871.34	
08:00:00		7870.58	
08:30:00		7870.15	
09:00:00		7869.81	Shut Well in. 6 pound difference in Dead Weight.
09:30:00		7868.07	
10:00:00		7867.75	
10:30:00		7867.20	
10:59:00	934	7864.45	
11:01:30	3065	9337.29	
11:04:00	3090	9393.92	
11:06:30	3100	9414.14	
11:09:00	3129	9429.99	
11:14:00	3150	9454.63	
11:19:00	3155	9473.51	
11:24:00	3165	9491.45	
11:29:00	3180	9510.52	
11:44:00	3204	9552.23	
11:59:00	3225	9585.66	
12:14:00	3243	9613.74	Started taking one-half hour readings.
12:29:00	3260	9638.08	
12:44:00	3275	9659.88	
12:59:00	3287	9679.51	
13:30:00	3310	9714.95	
14:00:00	3329	9744.18	
14:30:00	3345	9769.58	
15:00:00	3362	9792.11	
15:30:00	3375	9812.03	
16:00:00	3389	9835.87	
16:30:00	3400	9846.81	
17:00:00	3411	9861.86	
17:30:00	3422	9875.94	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-20-79			
18:00:00	3431	9888.75	Continued to monitor Bottom Hole Pressure while Well is shut-in.
18:30:00	3440	9900.71	
19:00:00	3448	9911.88	
19:30:00	3455	9922.49	
20:00:00	3462	9932.33	
20:30:00	3469	9941.61	
21:00:00	3476	9950.36	
21:30:00	3481	9958.72	
22:00:00	3487	9966.72	
22:30:00	3492	9974.30	
23:00:00	3498	9981.59	
23:30:00	3504	9988.58	
6-21-79			
00:00:00	3508	9995.25	
00:30:00	3513	10,001.68	
01:00:00	3517	10,007.80	
01:30:00	3522	10,013.84	
02:00:00	3527	10,019.60	
02:30:00	3533	10,025.17	
03:00:00	3536	10,030.60	
03:30:00	3540	10,035.83	
04:00:00	3546	10,040.87	
04:30:00	3549	10,045.83	
05:00:00	3551	10,050.70	
05:30:00	3554	10,055.39	
06:00:00	3557	10,059.90	
06:30:00	3562	10,064.42	
07:00:00	3564	10,068.76	
07:30:00	3568	10,073.13	
08:00:00	3571	10,077.32	
08:30:00	3576	10,081.27	
09:00:00	3580	10,085.31	
09:30:00	3582	10,089.22	
10:00:00	3584	10,093.09	
10:30:00	3587	10,096.70	
11:00:00	3591	10,100.47	
11:30:00	3594	10,104.13	
12:00:00	3595	10,107.72	
12:30:00	3598	10,111.23	
13:00:00	3602	10,114.72	
13:30:00	3603	10,118.05	
14:00:00	3606	10,121.42	
14:30:00	3610	10,124.77	
15:00:00	3612	10,128.00	
15:30:00	3614	10,131.23	

Reservoir Data Inc.

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DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-21-79			
16:00:00	3617	10,134.35	Continued to monitor Bottom Hole Pressure while Well is shut-in.
16:30:00	3619	10,137.48	
17:00:00	3623	10,140.57	
17:30:00	3625	10,143.58	
18:00:00	3626	10,146.56	
18:30:00	3628	10,149.47	
19:00:00	3630	10,152.37	
19:30:00	3633	10,155.29	
20:00:00	3635	10,158.11	
20:30:00	3637	10,160.97	
21:00:00	3639	10,163.70	
21:30:00	3641	10,166.44	
22:00:00	3643	10,169.18	
22:30:00	3645	10,171.89	
23:00:00	3647	10,174.53	
23:30:00	3650	10,177.21	
6-22-79			
00:00:00	3652	10,179.77	
00:30:00	3654	10,182.38	
01:00:00	3656	10,184.94	
01:30:00	3658	10,197.49	
02:00:00	3661	10,189.96	
02:30:00	3663	10,192.44	
03:00:00	3665	10,194.91	
03:30:00	3667	10,197.33	
04:00:00	3668	10,199.75	
04:30:00	3670	10,202.16	
05:00:00	3671	10,201.92	
05:30:00	3674	10,206.79	
06:00:00	3676	10,209.13	
06:30:00	3679	10,211.45	
07:00:00	3680	10,213.74	
07:30:00	3682	10,215.97	
08:00:00	3685	10,218.18	
08:30:00	3687	10,220.36	
09:00:00	3690	10,222.58	
09:30:00		10,224.78	
10:00:00	3694	10,226.97	
10:30:00		10,229.10	
11:00:00	3698	10,231.23	
11:30:00		10,233.36	
12:00:00	3702	10,235.51	
12:30:00	3704	10,237.56	
13:00:00	3705	10,239.62	
13:30:00		10,241.69	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PCIA)	REMARKS
6-22-79			
14:00:00	3708	10,243.74	Continued to monitor Bottom Hole Pressure while Well is shut-in.
14:30:00		10,245.77	
15:00:00	3712	10,247.74	
15:30:00		10,249.77	
16:00:00	3716	10,251.77	
16:30:00		10,253.71	
17:00:00	3719	10,255.66	
17:30:00		10,257.61	
18:00:00	3721	10,259.48	
18:30:00		10,261.48	
19:00:00	3725	10,263.33	
19:30:00		10,265.27	
20:00:00	3725	10,267.09	
20:30:00		10,268.96	
21:00:00	3728	10,270.77	
21:30:00		10,272.61	
22:00:00	3731	10,274.48	
22:30:00		10,276.26	
23:00:00	3734	10,278.06	
23:30:00		10,279.86	
6-23-79			
00:00:00	3736	10,281.62	
00:30:00		10,283.40	
01:00:00	3740	10,285.15	
01:30:00		10,286.94	
02:00:00	3742	10,288.63	
02:30:00		10,290.38	
03:00:00	3747	10,292.11	
03:30:00		10,293.80	
04:00:00	3751	10,295.49	
04:30:00		10,297.17	
05:00:00	3752	10,298.87	
05:30:00		10,299.88	
06:00:00	3755	10,302.17	
06:30:00		10,303.78	
07:00:00	3759	10,305.40	
07:30:00		10,306.99	
08:00:00	3762	10,308.50	
08:30:00		10,310.07	
09:00:00	3764	10,311.74	
09:30:00		10,313.39	
10:00:00	3768	10,314.99	
10:30:00		10,316.61	
11:00:00	3772	10,318.12	
11:30:00		10,319.69	

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DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-23-79			
12:00:00	3774	10,321.27	Continued to monitor Bottom Hole Pressure while Well is shut-in.
12:30:00		10,322.60	
13:00:00	3776	10,324.51	
13:30:00		10,325.92	
14:00:00	3779	10,327.40	
14:30:00		10,328.85	
15:00:00	3782	10,330.39	
15:30:00		10,331.86	
16:00:00	3789	10,333.41	
16:30:00		10,334.87	
17:00:00	3787	10,336.32	
17:30:00		10,337.79	
18:00:00	3789	10,339.30	
18:30:00		10,340.67	
19:00:00	3790	10,342.18	
19:30:00		10,343.62	
20:00:00	3793	10,345.03	
20:30:00		10,346.43	
21:00:00	3796	10,347.85	
21:30:00		10,349.25	
22:00:00	3798	10,350.65	
22:30:00		10,352.04	
23:00:00	3800	10,353.43	
23:30:00		10,354.81	
6-24-79			
00:00:00	3803	10,356.17	
00:30:00		10,357.78	
01:00:00	3805	10,358.95	
01:30:00		10,360.33	
02:00:00	3808	10,361.64	
02:30:00		10,363.00	
03:00:00	3810	10,364.33	
03:30:00		10,365.69	
04:00:00	3812	10,367.94	
04:30:00		10,368.37	
05:00:00	3816	10,369.66	
05:30:00		10,370.99	
06:00:00	3819	10,372.27	
06:30:00		10,373.60	
07:00:00	3821	10,374.90	
07:30:00		10,376.14	
08:00:00	3823	10,377.44	
08:30:00		10,378.68	
09:00:00	3825	10,379.96	
09:30:00		10,381.13	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-24-79			
10:00:00	3829	10,382.53	Continued to monitor Bottom Hole Pressure while flowing Well.
10:30:00		10,383.74	
11:00:00	3831	10,385.01	
11:30:00		10,386.25	
12:00:00	3833	10,387.48	
12:30:00		10,388.73	
13:00:00	3836	10,389.95	
13:30:00		10,391.18	
14:00:00	3838	10,392.39	
14:30:00		10,393.64	
15:00:00	3841	10,394.85	
15:30:00		10,396.05	
16:00:00	3843	10,397.25	
16:30:00		10,398.48	
17:00:00	3845	10,399.64	
17:30:00		10,400.88	
18:00:00	3847	10,402.08	
18:30:00		10,403.23	
19:00:00	3849	10,404.40	
19:30:00		10,405.55	
20:00:00	3850	10,406.78	
20:30:00		10,407.90	
21:00:00	3853	10,409.06	
21:30:00		10,410.20	
22:00:00	3856	10,411.38	
22:30:00		10,412.50	
23:00:00	3858	10,413.65	
23:30:00		10,414.75	
6-25-79			
00:00:00	3859	10,415.90	
00:30:00		10,417.02	
01:00:00	3860	10,418.13	
01:30:00		10,419.36	
02:00:00	3861	10,420.37	
02:30:00		10,421.46	
03:00:00	3862	10,422.59	
03:30:00		10,423.68	
04:00:00	3865	10,424.83	
04:30:00		10,425.95	
05:00:00	3869	10,427.05	
05:30:00		10,428.20	
06:00:00	3873	10,429.20	
06:30:00		10,430.32	
07:00:00	3874	10,431.34	
07:30:00		10,432.48	

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DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-25-79			
08:00:00	3876	10,433.47	Continued to monitor Bottom Hole Pressure while Well is shut-in.
08:30:00		10,434.56	
09:00:00	3878	10,435.62	
09:30:00		10,436.68	
10:00:00	3881	10,437.74	
10:30:00		10,438.77	
11:00:00	3884	10,439.83	
11:30:00		10,440.88	
12:00:00	3884	10,441.91	
12:30:00		10,442.95	
13:00:00	3886	10,443.97	
13:30:00		10,445.03	
14:00:00	3888	10,446.01	
14:30:00		10,447.06	
15:00:00	3889	10,448.08	
15:30:00		10,449.11	
16:00:00	3891	10,450.13	
16:30:00		10,451.17	
17:00:00	3894	10,452.14	
17:30:00		10,453.16	
18:00:00	3895	10,454.14	
18:30:00		10,455.23	
19:00:00	3897	10,456.18	
19:30:00		10,457.15	
20:00:00	3898	10,458.19	
20:30:00		10,459.18	
21:00:00	3899	10,460.16	
21:30:00		10,461.13	
22:00:00	3902	10,462.12	
22:30:00		10,463.09	
23:00:00	3904	10,464.04	
23:30:00		10,465.02	
6-26-79			
00:00:00	3906	10,465.97	
00:30:00		10,466.96	
01:00:00	3907	10,467.91	
01:30:00		10,468.86	
02:00:00	3908	10,469.83	
02:30:00		10,470.78	
03:00:00	909	10,471.72	
03:30:00		10,472.65	
04:00:00	3911	10,473.61	
04:30:00		10,474.55	
05:00:00	3913	10,475.50	
05:30:00		10,476.44	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-26-79			
06:00:00	3915	10,477.40	Continued to monitor Bottom Hole Pressure while Well is shut-in.
06:30:00		10,478.30	
07:00:00	3917	10,479.23	
07:30:00		10,480.20	
08:00:00	3918	10,481.12	
08:30:00		10,482.00	
09:00:00	3920	10,482.92	
09:30:00		10,483.80	
10:00:00	3923	10,484.77	
10:30:00		10,485.64	
11:00:00	3925	10,486.56	
11:30:00		10,487.46	
12:00:00	3926	10,488.36	
12:30:00		10,489.24	
13:00:00	3929	10,490.14	
13:30:00		10,491.02	
14:00:00	3932	10,491.92	
14:30:00		10,492.83	
15:00:00	3932	10,493.71	
15:30:00		10,494.60	
16:00:00	3933	10,495.52	
16:30:00		10,496.38	
17:00:00	3935	10,497.26	
17:30:00		10,498.13	
18:00:00	3937	10,499.03	
18:30:00		10,499.88	
19:00:00	3938	10,500.79	
19:30:00		10,501.64	
20:00:00	3939	10,502.54	
20:30:00		10,503.38	
21:00:00	3940	10,504.25	
21:30:00		10,505.11	
22:00:00	3941	10,505.95	
22:30:00		10,506.78	
23:00:00	3944	10,507.38	
23:30:00		10,508.47	
6-27-79			
00:00:00	3945	10,509.31	
00:30:00		10,510.14	
01:00:00	3946	10,511.02	
01:30:00		10,511.85	
02:00:00	3947	10,512.67	
02:30:00		10,513.53	
03:00:00	3949	10,514.36	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-27-79			
03:30:00		10,515.19	Continued to monitor Bottom Hole Pressure while Well is shut-in.
04:00:00	3950	10,516.01	
04:30:00		10,516.84	
05:00:00	3951	10,517.70	
05:30:00		10,518.22	
06:00:00	3952	10,519.35	
06:30:00		10,520.13	
07:00:00	3954	10,521.00	
07:30:00		10,521.78	
08:00:00	3956	10,522.62	
08:30:00		10,523.45	
09:00:00	3958	10,524.24	
09:30:00		10,525.01	
10:00:00	3960	10,525.86	
10:30:00		10,526.65	
11:00:00	3962	10,527.44	
11:30:00		10,528.23	
12:00:00	3963	10,529.09	
12:30:00		10,529.81	
13:00:00	3966	10,530.63	
13:30:00		10,531.37	
14:00:00	3967	10,532.20	
14:30:00		10,533.02	
15:00:00	3967	10,533.79	
15:30:00		10,534.60	
16:00:00	3969	10,535.34	
16:30:00		10,536.13	
17:00:00	3972	10,536.89	
17:30:00		10,537.67	
18:00:00	3973	10,538.51	
18:30:00		10,539.24	
19:00:00	3973	10,540.01	
19:30:00		10,540.78	
20:00:00	3975	10,541.58	
20:30:00		10,542.37	
21:00:00	3976	10,543.13	
21:30:00		10,543.90	
22:00:00	3977	10,544.64	
22:30:00		10,545.43	
23:00:00	3980	10,546.16	
23:30:00		10,546.93	
6-28-79			
00:00:00	3980	10,547.67	
00:30:00		10,548.42	

Reservoir Data Inc.

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DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-28-79			
01:00:00	3981	10,549.14	Continued to monitor Bottom Hole Pressure while well is shut-in.
01:30:00		10,549.93	
02:00:00	3983	10,550.65	
02:30:00		10,551.40	
03:00:00	3984	10,552.15	
03:30:00		10,552.92	
04:00:00	3985	10,553.63	
04:30:00		10,554.39	
05:00:00	3986	10,555.09	
05:30:00		10,555.85	
06:00:00	3988	10,556.58	
06:30:00		10,557.33	
07:00:00	3989	10,558.07	
07:30:00		10,558.79	
08:00:00	3991	10,559.59	
08:30:00		10,560.26	
09:00:00	3993	10,561.04	
09:30:00		10,561.72	
10:00:00	3995	10,562.46	
10:30:00		10,563.18	
11:00:00	3996	10,563.85	
11:30:00		10,564.61	
12:00:00	3998	10,565.33	
12:30:00		10,566.03	
13:00:00	4000	10,566.72	
13:30:00		10,567.43	
14:00:00	4001	10,568.16	
14:30:00		10,568.85	
15:00:00	4003	10,569.56	
15:30:00		10,570.26	
16:00:00	4005	10,570.96	
16:30:00		10,571.66	
17:00:00	4005	10,572.34	
17:30:00		10,573.09	
18:00:00	4007	10,573.79	
18:30:00		10,574.51	
19:00:00	4009	10,575.18	
19:30:00		10,575.90	
20:00:00	4010	10,576.54	
20:30:00		10,577.25	
21:00:00	4010	10,577.98	
21:30:00		10,578.68	
22:00:00	4011	10,579.37	
22:30:00		10,580.06	
23:00:00	4011	10,580.72

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-28-79			
23:30:00		10,581.42	Continued to monitor Bottom Hole Pressure while Well is shut-in.
6-29-79			
00:00:00	4014	10,582.13	
00:30:00		10,582.79	
01:00:00	4015	10,583.45	
01:30:00		10,584.14	
02:00:00	4016	10,584.81	
02:30:00		10,585.48	
03:00:00	4017	10,586.16	
03:30:00		10,586.82	
04:00:00	4018	10,587.51	
04:30:00		10,588.20	
05:00:00	4018	10,588.84	
05:30:00		10,589.52	
06:00:00	4020	10,590.18	
06:30:00		10,590.85	
07:00:00	4021	10,591.53	
07:30:00		10,592.17	
08:00:00	4023	10,592.85	
08:30:00		10,593.48	
09:00:00	4025	10,594.16	
09:30:00		10,594.85	
10:00:00	4026	10,595.50	
10:30:00		10,596.15	
11:00:00	4027	10,596.81	
11:30:00		10,597.46	
12:00:00	4029	10,598.12	
12:30:00		10,598.76	
13:00:00	4031	10,599.43	
13:30:00		10,600.07	
14:00:00	4034	10,600.69	
14:30:00		10,601.31	
15:00:00	4034	10,601.99	
15:30:00		10,602.61	
16:00:00	035	10,603.25	
16:30:00		10,603.88	
17:00:00	4036	10,604.54	
17:30:00		10,605.17	
18:00:00	4036	10,607.78	
18:30:00			
19:00:00	4039	10,607.13	
19:30:00		10,607.73	
20:00:00	4041	10,608.34	
20:30:00		10,609.00	
21:00:00	4041	10,609.66	

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DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-29-79			
21:30:00		10,610.27	Continued to monitor Bottom Hole Pressure while Well is shut-in.
22:00:00	4041	10,610.93	
22:30:00		10,611.55	
23:00:00	4043	10,612.19	
23:30:00		10,612.78	
6-30-79			
00:00:00	4043	10,613.38	
00:30:00		10,614.05	
01:00:00	4044	10,614.66	
01:30:00		10,615.25	
02:00:00	4045	10,615.89	
02:30:00		10,616.48	
03:00:00	4046	10,617.12	
03:30:00		10,617.77	
04:00:00	4048	10,618.36	
04:30:00		10,618.96	
05:00:00	4049	10,619.61	
05:30:00		10,620.16	
06:00:00	4049	10,620.80	
06:30:00		10,621.42	
07:00:00	4051	10,622.02	
07:30:00		10,622.64	
08:00:00	4053	10,623.25	
08:30:00		10,623.89	
09:00:00	4054	10,624.47	
09:30:00		10,625.07	
10:00:00	4054	10,625.67	
10:30:00		10,626.26	
11:00:00	4055	10,626.89	
11:30:00		10,627.49	
12:00:00	4057	10,627.57	
12:30:00		10,628.27	
13:00:00	4059	10,628.93	
13:30:00		10,629.49	
14:00:00	4060	10,630.12	
14:30:00		10,630.72	
15:00:00	4061	10,631.50	
15:30:00		10,631.88	
16:00:00	4062	10,632.30	
16:30:00		10,633.11	
17:00:00	4063	10,633.67	
17:30:00		10,634.24	
18:00:00	4064	10,634.86	
18:30:00		106,35.46	
19:00:00	4065	10,636.02	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
6-30-79			
19:30:00		10,636.61	Continued to monitor Bottom Hole Pressure with Well Shut-in.
20:00:00	4066	10,637.19	
20:30:00		10,637.80	
21:00:00	4068	10,638.39	
21:30:00		10,638.92	
22:00:00	4069	10,639.57	
22:30:00		10,640.10	
23:00:00	4070	10,640.68	
23:30:00		10,641.26	
7-1-79			
00:00:00	4070	10,641.86	
00:30:00		10,642.41	
01:00:00	4070	10,643.01	
01:30:00		10,643.58	
02:00:00	4073	10,644.15	
02:30:00		10,644.71	
03:00:00	4073	10,645.28	
03:30:00		10,645.86	
04:00:00	4074	10,646.42	
04:30:00		10,646.97	
05:00:00	4075	10,647.53	
05:30:00		10,648.10	
06:00:00	4076	10,648.67	
06:30:00		10,649.21	
07:00:00	4077	10,649.80	
07:30:00		10,650.32	
08:00:00	4079	10,650.94	
08:30:00		10,651.49	
09:00:00	4080	10,652.04	
09:30:00		10,652.61	
10:00:00	4081	10,653.15	
10:30:00		10,653.73	
11:00:00	4082	10,654.30	
11:30:00		10,654.83	
12:00:00	4083	10,655.42	
12:30:00		10,655.95	
13:00:00	4086	10,656.48	
13:30:00		10,657.06	
14:00:00	4086	10,657.59	
14:30:00		10,658.12	
15:00:00	4089	10,658.69	
15:30:00		10,659.22	
16:00:00	4090	10,659.81	
16:30:00		10,660.29	
17:00:00	4091	10,660.87	

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DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-1-79			
17:30:00		10,661.41	Continued to monitor Bottom Hole Pressure with Well shut- in.
18:00:00	4091	10,661.96	
18:30:00		10,662.48	
19:00:00	4091	10,663.04	
19:30:00		10,663.62	
20:00:00	4092	10,664.13	
20:30:00		10,664.69	
21:00:00	4093	10,665.20	
21:30:00		10,665.75	
22:00:00	4094	10,666.32	
22:30:00		10,666.85	
23:00:00	4095	10,667.38	
23:30:00		10,667.92	
7-2-79			
00:00:00	4095	10,668.42	
00:30:00		10,668.98	
01:00:00	4096	10,669.51	
01:30:00		10,670.05	
02:00:00	4097	10,670.55	
02:30:00		10,671.10	
03:00:00	4098	10,671.64	
03:30:00		10,672.18	
04:00:00	4099	10,672.70	
04:30:00		10,673.18	
05:00:00	4100	10,673.73	
05:30:00		10,674.27	
06:00:00	4101	10,674.81	
06:30:00		10,675.29	
07:00:00	4101	10,675.83	
07:30:00		10,676.40	
08:00:00	4103	10,676.87	
08:30:00		10,677.36	
09:00:00	4105	10,677.89	
09:30:00		10,678.43	
10:00:00	4106	10,678.95	
10:30:00		10,679.46	
11:00:00	4107	10,680.02	
11:30:00		10,680.55	
12:00:00	4108	10,681.04	
12:30:00		10,681.52	
13:00:00	4109	10,682.07	
13:30:00		10,682.56	
14:00:00	4110	10,683.06	
14:30:00		10,683.57	
15:00:00	4112	10,684.10	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-2-79			
15:30:00		10,684.63	Continued to monitor Bottom Hole Pressure while Well is shut-in.
16:00:00	4113	10,685.11	
16:30:00		10,685.63	
17:00:00	4114	10,686.10	
17:30:00		10,686.62	
18:00:00	4115	10,687.15	
18:30:00		10,687.64	
19:00:00	4115	10,688.12	
19:30:00		10,688.64	
20:00:00	4116	10,689.16	
20:30:00		10,689.67	
21:00:00	4116	10,690.16	
21:30:00		10,690.68	
22:00:00	4117	10,691.00	
22:30:00		10,691.53	
23:00:00	4118	10,692.21	
23:30:00		10,692.69	
7-3-79			
00:00:00	4120	10,693.20	
00:30:00		10,693.69	
01:00:00	4120	10,694.19	
01:30:00		10,694.69	
02:00:00	4121	10,695.18	
02:30:00		10,695.65	
03:00:00	4121	10,696.16	
03:30:00		10,696.64	
04:00:00	4122	10,697.13	
04:30:00		10,697.63	
05:00:00	4122	10,698.11	
05:30:00		10,698.60	
06:00:00	4123	10,699.09	
06:30:00		10,699.54	
07:00:00	4124	10,700.05	
07:30:00		10,700.57	
08:00:00	4125	10,701.03	
08:30:00		10,701.51	
09:00:00	4127	10,702.01	
09:30:00		10,702.50	
10:00:00	4128	10,702.98	
10:30:00		10,703.46	
11:00:00	4129	10,703.95	
11:30:00		10,704.40	
12:00:00	4131	10,704.92	
12:30:00		10,705.41	
13:00:00	4131	10,705.89	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-3-79			
13:30:00		10,706.36	Continued to monitor Bottom Hole Pressure while Well is Shut-in.
14:00:00	4131	10,706.84	
14:30:00		10,707.33	
15:00:00	4132	10,707.81	
15:30:00		10,708.28	
16:00:00	4132	10,708.72	
16:30:00		10,709.20	
17:00:00	4134	10,709.69	
17:30:00		10,710.14	
18:00:00	4136	10,710.62	
18:30:00		10,711.13	
19:00:00	4136	10,711.55	
19:30:00		10,712.05	
20:00:00	4137	10,712.50	
20:30:00		10,712.99	
21:00:00	4137	10,713.47	
21:30:00		10,713.92	
22:00:00	4138	10,714.40	
22:30:00		10,714.88	
23:00:00	4138	10,715.33	
23:30:00		10,715.81	
7-4-79			
00:00:00	4139	10,716.29	
00:30:00		10,716.71	
01:00:00	4140	10,717.18	
01:30:00		10,717.65	
02:00:00	4142	10,718.15	
02:30:00		10,718.60	
03:00:00	4143	10,719.04	
03:30:00		10,719.51	
04:00:00	4144	10,719.96	
04:30:00		10,720.46	
05:00:00	4144	10,720.87	
05:30:00		10,721.33	
06:00:00	4145	10,721.78	
06:30:00		10,722.23	
07:00:00	4146	10,722.72	
07:30:00		10,723.18	
08:00:00	4147	10,723.58	
08:30:00		10,724.04	
09:00:00	4148	10,724.50	
09:30:00		10,724.96	
10:00:00	4150	10,725.43	
10:30:00		10,725.84	
11:00:00	4151	10,726.31	

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-4-79			
11:30:00		10,726.79	Continued to monitor Bottom Hole Pressure while Well is shut-in.
12:00:00	4152	10,727.25	
12:30:00		10,727.72	
13:00:00	4153	10,728.17	
13:30:00		10,728.60	
14:00:00	4154	10,729.03	
14:30:00		10,729.54	
15:00:00	4155	10,729.80	
15:30:00		10,730.39	
16:00:00	4156	10,730.84	
16:30:00		10,731.29	
17:00:00	4157	10,731.74	
17:30:00		10,732.16	
18:00:00	4157	10,732.61	
18:30:00		10,733.06	
19:00:00	4158	10,733.49	
19:30:00		10,733.92	
20:00:00	4158	10,734.39	
20:30:00		10,734.84	
21:00:00	4159	10,735.24	
21:30:00		10,735.71	
22:00:00	4159	10,736.16	
22:30:00		10,736.59	
23:00:00	4160	10,737.03	
23:30:00		10,737.47	
7-5-79			
00:00:00	4161	10,737.90	Hewlett Packard Gauge mal- functioned.
00:30:00		10,738.37	
01:00:00	4162	10,738.79	
01:30:00		10,739.22	
02:00:00	4162	10,739.67	
02:30:00		10,740.12	
03:00:00	4163	10,740.53	
03:30:00		10,740.95	
04:00:00	4164	10,741.40	
04:30:00		10,741.81	
05:00:00	4165	10,742.23	
05:30:00		10,742.70	
06:00:00	4165	10,743.10	
06:30:00		10,743.54	
07:00:00	4166	10,743.96	
08:00:00	4168		
09:00:00	4169		
10:00:00	4170		
11:00:00	4172		

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-5-79			
12:00:00	4173		
14:00:00	4174		
16:00:00	4173		
17:00:00	4173		
18:00:00	4174		
19:00:00	4174		
20:00:00	4175		
21:00:00	4175		
22:00:00	4176		
23:00:00	4177		
7-6-79			
00:00:00	4178		
01:00:00	4179		
02:00:00	4179		
03:00:00	4180		
04:00:00	4180		
05:00:00	4181		
06:00:00	4182		
07:00:00	4183		
08:00:00	4184		
09:00:00	4186		
10:00:00	4187		
11:00:00	4188		
12:00:00	4188		
13:00:00	4189		
14:00:00	4190		
15:00:00	4191		
16:00:00	4191		
17:00:00	4192		
18:00:00	4193		
19:00:00	4194		
20:00:00	4194		
21:00:00	4195		
22:00:00	4196		
23:00:00	4196		
7-7-79			
00:00:00	4196		
01:00:00	4197		
02:00:00	4197		
03:00:00	4198		
04:00:00	4199		
05:00:00	4199		
06:00:00	4200		
07:00:00	4201		

Reservoir Data Inc.

2314 McAllister • Houston, Texas 77092 • (713) 683-9259

AFFILIATE OF MILTON M. COOK COMPANY
Petroleum Engineers

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-6-79			
08:00:00	4202		
09:00:00	4203		
10:00:00	4204		
11:00:00	4204		
12:00:00	4205		
13:00:00	4206		
14:00:00	4206		
15:00:00	4207		
16:00:00	4208		
17:00:00	4209		
18:00:00	4209		
19:00:00	4210		
20:00:00	4210		
21:00:00	4211		
22:00:00	4212		
23:00:00	4212		
7-8-79			
00:00:00	4213		
01:00:00	4213		
02:00:00	4214		
03:00:00	4215		
04:00:00	4215		
05:00:00	4216		
06:00:00	4217		
07:00:00	4218		
08:00:00	4219		
09:00:00	4220		
10:00:00	4221		
11:00:00	4222		
12:00:00	4222		
13:00:00	4223		
14:00:00	4223		
15:00:00	4224		
16:00:00	4224		
17:00:00	4225		
18:00:00	4225		
19:00:00	4226		
20:00:00	4227		
21:00:00	4227		
22:00:00	4228		
23:00:00	4228		
7-9-79			
00:00:00	4229		
01:00:00	4229		

Reservoir Data Inc.

2314 McAllister • Houston, Texas 77092 • (713) 683-9259

AFFILIATE OF MILTON M. COOK COMPANY
Petroleum Engineers

DATE & TIME	SURFACE PRESSURE (PSIG)	BOTTOM HOLE PRESSURE (PSIA)	REMARKS
7-9-79			
02:00:00	4230		
03:00:00	4231		
04:00:00	4232		
05:00:00	4232		
06:00:00	4233		
07:00:00	4233		
08:00:00	4234		
09:00:00	4234		
10:00:00	4234		
11:00:00	4235		
12:00:00	4235		
13:00:00	4236		
14:00:00	4236		
15:00:00	4237		
16:00:00	4237		
17:00:00	4238		
18:00:00	4238		
19:00:00	4239		
20:00:00	4240		
21:00:00	4242		
22:00:00	4242		
23:00:00	4243		
7-10-79			
00:00:00	4243		
01:00:00	4244		
02:00:00	4244		
03:00:00	4243		
04:00:00	4244		
05:00:00	4245		
06:00:00	4245		
07:00:00	4245		
08:00:00	4247		Haliburton started to rig-up to kill the well.
15:00:00			Started out of Well.
22:00:00			Rig Down. END OF TEST.

Shreveport, Louisiana
Phone (318) 222-7040
Houston, Texas
Phone (713) 433-3003

Lafayette, Louisiana
Phone (318) 232-4604

PRESSURE SURVEY

COMPANY GRUY FEDERAL, INC. DATE MAY 25, 1979
LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 SAND MA - 6
FIELD EAST FRANKLIN COUNTY OR PARISH ST. MARY STATE LOUISIANA

DEPTH	PRESSURE PSIG	PRESSURE DIFFERENCE	GRADIENT # /Sq. In. / Ft.
0	4656		
2,000	5626	970	.485
3,000	6113	487	.487
5,000	7078	965	.483
7,000	8035	957	.479
9,000	8996	861	.481
11,000	9948	952	.476
13,000	10,897	949	.475
15,000	11,819	922	.461
15,490	12,031	212	.433
CORRECTED TO MID. PERFORATIONS			ASSUME
15,855	12,204	173	(AVG) .473

Top Connection 3 1/16 BX 10,000
Zeroed @ _____
RKB _____ Above _____
Stops corrected to R.K.B.
Perf. 15,780 - 930 (SELECTIVE)
C.P. 15,855
Subsea C.P. _____
Pressure this survey _____
Pressure last Survey _____
Pressure Change _____
Date of last survey _____
REMARKS:
Amerada Gauge Size 1 1/4
Range 0 - 17,000
Csg. Pressure _____

Test Depth 15,490 Elevation of Well - Elevation of Test - Element 44211
B.H. Temperature OF 274 Pressure at Test Depth 12,031 Oil Level - Water Level TOP
Datum - Tubing Pressure 4643 DWT _____ Tree Gauge Shut In 48 HR. @ TOP STOP
Test Run By MORALES

Shreveport, Louisiana
Phone (318) 222-7040
Houston, Texas
Phone (713) 433-3003

Lafayette, Louisiana
Phone (318) 232-4604

Home Office
Victoria, Texas

P. O. Box 3645
Phone (512) 573-4303

PRESSURE SURVEY

COMPANY GRUY FEDERAL, INC. DATE MAY 25, 1979
LEASE FAIRFAX FOSTER BUTTER WELL NO. 2 SAND MA - 6
FIELD EAST FRANKLIN COUNTY OR PARISH ST. MARY STATE LOUISIANA

DEPTH	PRESSURE PSIG	PRESSURE DIFFERENCE	GRADIENT # /Sq. In. / Ft.
0	4652		
2,000	5616	964	.482
3,000	6100	484	.484
5,000	7061	961	.481
7,000	8026	965	.483
9,000	8974	948	.474
11,000	9930	956	.478
13,000	10,866	936	.468
15,000	11,801	935	.468
15,490	12,021	220	.449
CORRECTED TO MID PERFORATIONS			ASSUME
15,855	12,194	173	(AVG) .474

Top Connection 3 1/16 BX 10,000
Zeroed @ _____
RKB _____ Above _____
Stops corrected to R.K.B.
Perf. 15,780 - 930 (SELECTIVE)
C.P. 15,855
Subsea C.P. _____
Pressure this survey _____
Pressure last Survey _____
Pressure Change _____
Date of last survey _____
REMARKS:
Amerada Gauge Size 1 1/4
Range 0 - 17,000
Csg. Pressure -

Test Depth 15,490 Elevation of Well - Elevation of Test - Element 44210
B.H. Temperature OF 274 Pressure at Test Depth 12,021 Oil Level - Water Level TOP
Datum - Tubing Pressure 4643 DWT _____ Tree Gauge Shut In 48 HR. @ TOP STOP
Test Run By MORALES

GEOTHERMAL FIELD TEST DATA

PAGE 1
DATE 5/19/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER# _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA			FLUID DATA							
DATE	TIME	CHOKE SIZE	TUBING PRESS	CASING PRESS.	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/19	7 PM		4680	0				OPENED WELL ON 18/64			ON POSITIVE SIDE OF TREE - FLOWING TO PIT.										
5/19	7:15	18POS.	3240	0				FLOW LINE TEMPERATURE = 96°F - ATTEMPTING TO UNLOAD ANY LOAD FLUID STILL IN WELL.													
5/19	7:30	18POS.	3257	300		110															
5/19	7:45	18POS.	3260	850		125		bled down casing to 250#.													
5/19	8 PM	18POS.	3269	410		130															
5/19	8:15	18POS.	3247	800		145															
5/19	8:30	18POS.	3259	1075		155															
5/19	8:45	18POS.	3283	1300		170		bled down casing to 250#.													
5/19	9 PM	18POS.	3272	340		170															
5/19	9:15	18POS. 6ADJ.	3270	450		175		OPENED ADJ. ON ADJ. SIDE OF TREE TO 6/64 SIZE CHOKE TO INCREASE RATE.													
5/19	9:25	18POS. 9ADJ.	3040					CHANGED ADJ. ON ADJ. SIDE OF TREE TO 9/64 SIZE CHOKE.													
5/19	9:30	18POS. 9ADJ.	2805	575		175															
5/19	9:45	18POS. 9ADJ.	2792	800		175															
5/19	10: PM	18POS. 15ADJ.	2803	925		180		OPENED ADJ. TO 15/64 SIZE CHOKE.													
5/19	10:15	18POS. 15ADJ.	2230	1080		185

GEOTHERMAL FIELD TEST DATA

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DATE 5/19-21/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH OKE SIZE	TUBING PRESS.	CASING PRESS.	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/19	10:30	18POS. 15ADJ.	2216	1250		185		bled down casing to 250#.													
5/19	10:40	18POS. 15ADJ.	2396	300		185		SHUT WELL IN TO RIG UP OTIS.													
5/21	10 AM	S.I.	4685	0				OPENER WELL ON 18/64 POS. CHOKE, ON 15/64 ADJ. CHOKE TO PIT.													
5/21	10:15	18POS. 15ADJ.	2350	50		105															
5/21	10:30	18POS. 15ADJ.	2437	100		140		FLOWING TO PIT. ATTEMPTING TO UNLOAD ANY LOAD MATERIAL STILL IN WELL.													
5/21	10:45	18POS. 15ADJ.	2444	100		170															
5/21	11 AM	18POS. 15ADJ.	2419	100		195															
5/21	11:15	18POS. 15ADJ.	2390	100		205															
5/21	11:30	18POS. 15ADJ.	2370	175		210															
5/21	11:45	18POS. 15ADJ.	2360	200		215															
5/21	12NOON	18POS. 15ADJ.	2380	375		215															
5/21	12:15	18POS. 15ADJ.	2370	500		220															
5/21	12:30	18POS. 15ADJ.	2349	570		220															
5/21	12:45	18POS. 15ADJ.	2511	650		220															
5/21	1 PM	18POS. 15ADJ.	2497	710		220

GEOHERMAL FIELD TEST DATA

PAGE 3

DATE 5/21/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH. IRE SIZE	TUBING PRESS.	CASING PRESS.	W. H. TEMP.	MANIF. TEMP.	MANIF. PRESS.	READING	CALC SAND	CORS COUP.	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF.	PRESS.	TEMP.								
5/21	1:15	18POS. 15ADJ.	2487	750		220		CAUGHT FLUID SAMPLE.						VERY LITTLE TRACE OF MUD.							
5/21	1:30	18POS. 15ADJ.	2485	800		220															
5/21	1:45	18POS. 15ADJ.	2470	840		220															
5/21	2 PM	18POS. 15ADJ.	2463	860		220		CAUGHT FLUID SAMPLE.													
5/21	2:15	18POS. 15ADJ.	2460	900		200															
5/21	2:30	18POS. 15ADJ.	2498	950		220															
5/21	2:45	18POS. 15ADJ.	2490	1010		220															
5/21	3 PM	18POS. 15ADJ.	2483	1050		220															
5/21	3:15	18POS. 15ADJ.	2474	1100		220		LET WELL THROUGH SEPARATOR.													
5/21	3:30	18POS. 15ADJ.	2471	1125		225		STARTED TEST. ZEROED METERS.													
5/21	3:45	18POS. 15ADJ.	2466	1125		225					23	230	170	104,000	54.3						
5/21	4 PM	18POS. 15ADJ.	2454	1160		230					23	230	175	104,000	-						
5/21	4:15	18POS. 15ADJ.	2450	1175		230					23	230	175	104,000	159.4						
5/21	4:30	18POS. 15ADJ.	2449	1180		230					23	230	175	104,000	211.6			5078.4		20.4	
5/21		18POS. 15ADJ.						BY PASSED SEPARATOR TO PIT. BLED DOWN CASING TO 300#.													

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. _____ ORIFICE METER (1st _____ X _____

GEOTHERMAL FIELD TEST DATA

PAGE 5

DATE 5/23/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SANDMA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH OKE SIZE	TUBING PRESS.	CASING PRESS.	W H TEMP.	MANF TEMP.	MANF PRESS.	READING	CALC SAND	CORS COUP.	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/21	8:30	S.I.	4524					BUILD-UP.													
5/21	8:45	S.I.	4526																		
5/21	9 PM	S.I.	4530																		
5/21	9:15	S.I.	4538																		
5/21	9:30	S.I.	4543																		
5/21	9:45	S.I.	4546					FINAL BUILD-UP.													
5/23	10:40	18 POS. 15 ADJ.	4643					OPENED WELL ON 18/64 POS.													
5/23	10:45	18 POS. 15 ADJ.	2403	0		120															
5/23	11 AM	18 POS. 15 ADJ.	2435	0		145		FLOWING WELL TO PIT.													
5/23	11:15	18 POS. 15 ADJ.	2825	0		175		ATTEMPTING TO BRING UP LOAD MUD IN TUBING.													
5/23	11:30	18 POS. 15 ADJ.	2777	0		195															
5/23	11:45	18 POS. 15 ADJ.	2749	0		205															
5/23	12 NOON	18 POS. 15 ADJ.	2800	0		208															
5/23	12:15	18 POS. 15 ADJ.	2775	0		212															
5/23	12:30	18 POS. 15 ADJ.	2760	0		216

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DATE 5/23-25/79

[illegible]

GEOTHERMAL FIELD TEST DATA

PAGE 7
DATE 5/25/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET @ _____ PACKER# _____ CASING SIZE _____ SET @ _____ T.D. _____ ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHUCK SIZE	TUBING PRESS.	CASING PRESS.	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/25	8:53	16ADJ.									S.I.P. 4643# - OPEN WELL ON 16/64 ADJ. (INITIAL TEST THROUGH SURFACE EQUIPMENT).										
5/25	9 PM	16ADJ.	3825	0		104	15	0	-												
5/25	9:05	24ADJ.	3825	0		130	18	0	-												
5/25	9:10	24ADJ.	2227	0		130	18	0	-												
5/25	9:20	24ADJ.	2349	0		152	24	0	-		ADJUSTING EQUIPMENT.										
5/25	9:30	24ADJ.	2192	0		180	30	0	-												
5/25	9:40	24ADJ.	2132	0		192	30	0	-												
5/25	9:41	28ADJ.																			
5/25	9:50	28ADJ.	1600	0		208	40	0	-		ADJUSTING EQUIPMENT.										
5/25	10 PM	28ADJ.	1591	0		220	40	0	-												
5/25	10	28ADJ.	1587	0		220	178	0	-												
5/25	10:15	28ADJ.	1610	0		220	200	0	-					58.6		12.6					
5/25	10:27	28ADJ.		-							PNEUMATIC VALVE CLOSED. (PRESSURE BUILD-UP AT COOLER).										
5/25	10:30	S.I.	4524								PERSONNEL CORRECTING SITUATION			96.1		28.3

GEOTHERMAL FIELD TEST DATA

PAGE 8

DATE 5/25-26/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHK/KE SIZE	TUBING PRESS	CASING PRESS.	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER.	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/25	10:35	8.I.	4543								SHUT IN CONTINUED.										
5/25	10:48	28ADJ.									OPEN WELL.										
5/25	10:50	8.I.									SHUT WELL IN (PNEUMATIC SAFETY VALVE).										
5/25	11 PM	8.I.	2573																		
5/25	11:05	28ADJ.									OPEN WELL.										
5/25	11:15	28ADJ.	2167	0		198	100	0	-												
5/25	11:30	28ADJ.	2144	0		216	225	0	-												
5/25	11:40	28ADJ.									WELL PUT ON BY-PASS TO PIT.										
5/25	11:46	8.I.									SHUT WELL IN TO REPAIR SEPARATOR FROM NOW UNTIL 8:00 AM.										
5/26	12 MN	8.I.	4528								SHUT IN. PRESSURE BUILD-UP TEST. 4 HOURS.										
5/26	12:15	8.I.	4546																		
5/26	12:30	8.I.	4556																		
5/26	12:45	8.I.	4565																		
5/26	1:15	8.I.	4576																		
5/25	1:45	8.I.	4585																		

COMPANY GRU FEDERAL, INC. LEASE FAIRPAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. _____ ORIFICE METER (1st _____ X _____

GEOHERMAL FIELD TEST DATA

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DATE 5/27/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA							FLANGE TAPS	
DATE	TIME	CH (KE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLS PER DAY	CHLORIDES PPM OR SP G	GAS WATER RATIO		
											DIFF	PRESS	TEMP										
5/27	10 AM	16ADJ									OPEN WELL ON 16/64	CHOKER TO CHECK EQUIPMENT &	DISPOSAL WELL.										
5/27	10:15	16ADJ	3604	50	150	180	220	0			11	204	115	72,465	39	39	0	0	3744				
5/27	10:30	16ADJ	3695	50	160	190	220	0			11	208	125	72,629	77.1	38.1	0	0	3657.6				
5/27	10:45	16ADJ	3597	50	165	195	222	0			11	208	132	72,198	115.9	38.8	0	0	3724.8				
5/27	11 AM	16ADJ	3580	50	170	200	220	0			11	205	140	*73,739	154.0	38.1	0	0	*3564		*20.69		
5/27	11:03	32ADJ									CHANGED CHOKER TO 32/64	ADJ.											
5/27	11:30	32ADJ	1635	50	188	230	230	0			62	210	180	165,595	32.4	32.4	50.0	50	7910.4				
5/27	11:45	32ADJ	1750	50	190	233	232	0			45	210	186	140,389	60.9	28.5	96.0	46	7152	SAFETY VALVE SHUT-IN. REOPEN			
5/27	12NOON	32ADJ	1698	50	190	235	233	0			48	210	193	144,249	89.1	28.2	150	54	7891.2				
5/27	12:15	32ADJ	1633	50	190	233	237	0			48	210	195	144,023	117.9	28.8	187.5	37.5	6364.8				
5/27	12:30	32ADJ	1618	50	190	238	235	0			48	210	198	143,683	147.0	29.1	233.3	45.8	7190.4				
5/27	12:45	32ADJ	1620	50	190	238	237	0			49	210	200	*137,331	175.7	28.7	279.3	46.0	*6852		*20.04		
5/27	1 PM	32ADJ	1606	50	190	240	237	0			47	213	203	142,592	ZEROED FLUID METERS FOR CALIBRATION CHECK.								
5/27	1:15	32ADJ	1617	50	190	240	237	0			47	213	205	142,366	METERS = 90.5 BBLS @ 110°F								
5/27	1:30	32ADJ	1604	50	190	240	237	0			44	213	205	137,748	TANK = 90.0 BBLS @ 110°F

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHK/KE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLS PER DAY	CHLORIDES PPM OR SP G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/27	1:30	S.I.									SHUT	WELL	IN FOR	STATIC	BUILD-UP						
5/27	1:35	S.I.	4344																		
5/27	1:40	S.I.	4370																		
5/27	1:45	S.I.	4387																		
5/27	1:50	S.I.	4399																		
5/27	1:55	S.I.	4412																		
5/27	2 PM	S.I.	4420																		
5/27	2:15	S.I.	4442																		
5/27	2:30	S.I.	4458																		
5/27	2:45	S.I.	4470																		
5/27	3 PM	S.I.	4482																		
5/27	3:30	S.I.	4495																		
5/27	4 PM	S.I.	4517																		
5/27	4:30	S.I.	4526																		
5/27	5 PM	S.I.	4540

GEOTHERMAL FIELD TEST DATA

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DATE 5/27/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	
		PRESS	TEMP	PRESS	TEMP						
5/27	10:15	120	175	120	85	0	0		7	80	
5/27	10:30	120	185	120	85	0	0		11	80	
5/27	10:45	120	190	120	85	0	0		11	83	* DENOTES CORRECTED VOLUMES & CALCULATIONS
5/27	11 AM	120	190	120	85	0	0		11	85	10:15AM - 11:00AM (CU.FT./DAY) AVG. GAS READING OF 11",206PSIG, 128°F, CORRECTED GAS VOL. = 73,739
5/27	11:03		CHANGE TO 32/64 ADJ.								3564 B/D = AVG. FLUID READING OF 3680 B/D @ 191°F, CORRECTED FLUID @ 60°F
5/27	11:30	120	224	120	131	0	0		3	113	
5/27	11:45	120	227	120	117	0	0		6	114	
5/27	12NOON	130	230	120	123	0	0		6	115	
5/27	12:15	130	231	120	118	0	0		7	115	
5/27	12:30	130	232	120	118	0	0		7	115	
5/27	12:45	130	234	120	118	0	0		8	115	* 11:45AM - 12:45PM - AVG GAS READING OF 47.6", 210 PSIG, 194°F, CORRECTED GAS VOL. = 137,331 CU.FT./DAY
5/27	1 PM	130	235	120	118	0	0		8	115	CORRECTED FLUID @ 60°F = AVG. FLUID READING OF 7154B/D @ 235°F, 6852 B/D.
5/27	1:15	130	235	120	118	0	0		0	100	
5/27	1:30	130	235	120	118	0	0		4	115	

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

[illegible]

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DATE 5/28/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

[illegible]

GEOTHERMAL FIELD TEST DATA

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DATE 5/30-31/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH CKE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/30	9 PM										SEE REMARKS.										
5/30	9:47	S.I.	4630								SEE REMARKS.										
5/30	10:30	S.I.									SEE REMARKS.										
5/30	11:15	S.I.	4632								SEE REMARKS.										
5/30	11:20	24POS.	2783								5 MINUTE READINGS.										
5/30	11:25	24POS.	2655								5 MINUTE READINGS.										
5/30	11:30	24POS.	2663								5 MINUTE READINGS. RANGE 1000.			24.8		18.8					
5/30	11:45	24POS.	2652	50	130	160	227	0			20	182	85	95,367	59.6	34.8	39.9	21.1	5366.4		
5/31	12 MN	24POS.	2683	50	148	195	232	0			25	182	100	105,182	94.6	35.0	60.8	20.0	5366.4		
5/31	12:15	24POS.	2658	100	165	207	232	0			25	220	120	112,889	134.8	40.2	85.0	24.2	6182.4		
5/31	12:30	24POS.	2646	115	175	214	220	0			26	220	155	111,793	170.6	35.8	106.6	21.6	5510.4		
5/31	1 AM	24POS.	2625	120	185	219	230	0			28	225	155	117,241	240.4	69.8	152.7	46.1	5563.2		
5/31	1:30	24POS.	2651	125	191	222	228	0			34	180	165	115,515	29715	57.1	206.2	53.5	5308.8		
5/31	2 AM	24POS.	2582	150	195	224	227	0			28	225	173	116,277	351.8	54.3	270.3	64.1	5683.2		
5/31	2:30	24POS.	2562	220	200	226	230	0			28	225	168	116,016	406.5	54.7	333.8	63.5	5673.6

GEOTHERMAL FIELD TEST DATA

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DATE 5/30-31/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	
		PRESS	TEMP	PRESS	TEMP						
5/30	9 PM										STARTED CLOCKS IN PRESSURE INSTRUMENT. RUNNING PRESSURE INSTRUMENT TO
5/30	9:47										13,900' DEPTH.
5/30	10:30										PRESSURE INSTRUMENT AT 13,900' DEPTH
5/30	11:15										OPEN WELL ON 24/64 POS. CHOKE.
5/30	11:20										
5/30	11:25			SEE REMARKS							TAKING 5 MINUTE READINGS. (WELL HEAD PRESSURE).
5/30	11:30										
5/30	11:45	50	160	45	86				29	79	
5/30	12 MN	60	180	50	90				36	83	
5/30	12:15	90	200	85	90				65	90	TAKING 15 MINUTE READINGS.
5/30	12:30	110	206	100	87				65	87	
5/30	1 AM	108	213	100	96				65	90	
5/30	1:30	105	218	100	95				35	95	TAKING 30 MINUTE READINGS.
5/30	2 AM	105	223	100	95				55	95	
5/30	2:30	105	223	100	95				55	95

GEOHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st 2.900 X .500
COEFF. = 1555.40 FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA							
DATE	TIME	CHKE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO	
											DIFF	PRESS	TEMP									
5/31	3:30	24POS	2531	300	206	232	232	0			28	225	164	116,386	517.1	110.6	459.5	125.7	5671.2			
5/31	4:15									SEE REMARKS.												
5/31	4:30	24POS	2505	425	206	228	232	0			28	225	193	113,785	628.8	111.7	582.7	123.2	5637.6			
5/31	5:30	24POS	2483	500	209	228	232	0			29	225	200	115,176	741.5	112.7	705.0	122.3	5640.0			
5/31	5:45									SEE REMARKS.												
5/31	6:30	24POS	2470	250	213	234	232	0			28	225	200	113,173	853.9	112.4	833.3	128.3	5776.8			
5/31	7 AM	24POS	2453	280	215	234	233	0			28	225	200	113,173	906.4	52.5	893.5	60.2	5409.6			
5/31	8 AM	24POS	2435	450	214	234	233	0			28	225	200	113,173	1015.2	108.8	1020.5	127.0	5659.2			
5/31	9 AM	24POS	2419	500	214	236	233	0			28	225	200	113,173	1125.8	110.6	1146.8	126.3	5685.6			
5/31	9:15									SEE REMARKS.	CORRECTED GAS & FLUID 6:30-9:00AM.										*5390	*20.11
5/31	10 AM	24POS	2402	350	206	230	232	0			28	225	200	113,173	1240.7	114.9	1267.5	120.7	5654.4			
5/31	11 AM	24POS	2395	380	202	230	230	0			28	225	200	113,173	1365.2	124.5	1381.3	113.8	5719.2			
5/31	12NOON	24POS	2375	300	205	240	235	0			28	225	202	113,008	1495.5	130.8	1452	70.9	4826.8			
5/31	1 PM	24POS	2364	250	210	238	233	0			28	225	204	112,829	1628.2		1467.7	REPAIRING TURBINE METER.				
5/31	2 PM	24POS	2352	225	210	230	229	0			28	225	200	113,173	1758.4	130.2	1567.0	99.3	5508

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.		REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	IN	OUT	
5/31	3:30	105	228	100	95				53	88			START 1 HOUR READINGS.
5/31	4:15	SEE REMARKS.											THRESHOLD READJUSTED 30 - 65 (SAND DETECTOR).
5/31	4:30	105	230	100	93				53	90			
5/31	5:30	102	223	98	93				52	90			
5/31	5:45	SEE REMARKS.											CASING PRESSURE=#500. BLED DOWN TO #150. FLUID (MUD).
5/31	6:30	102	232	98	95				52	90			
5/31	7 AM	102	233	98	95				53	90	70	69	START ON THE HOUR READINGS.
5/31	8 AM	102	233	98	93				56	93	70	69	
5/31	9 AM	102	230	98	98				60	95	75	70	CASING PRESSURE=#500. BLED DOWN TO #150. FLUID (MUD).
5/31	9:15	SEE REMARKS.											CASING PRESSURE=#500. BLED DOWN TO #150. FLUID (MUD).
5/31	10 AM	102	233	98	106				63	103	63	60	
5/31	11 AM	102	237	98	110				65	105	80	70	
5/31	12NOON	102	235	98	110				82	105	80	72	
5/31	1 PM	102	235	98	109				49	102	60	50	SCALE BUILD UP IN TURBINES & DUMP VALVES.
5/31	2 PM	102	235	98	110				34	105	48	40

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER BUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
5/31	3 PM	24POS.	2340	200	210	230	230	0			28	225	205	112,740	1883.7	125.8	1673.3	106.3	5558.4		
5/31	3:25	24POS.	2335							SEE REMARKS.											
5/31	3:55	24POS.	2330							SEE REMARKS.											
5/31	4: PM	24POS.	2330	440	215	236	233	0			28	225	220	113,173	2004.3	120.6	1752.9	79.6	SEE REMARKS.		
5/31	4:15	24POS.	2322							SEE REMARKS.											
5/31	4:30	24POS.	2318							SEE REMARKS.											
5/31	5 PM	24POS.	2317	200	223	236	233	0			28	225	215	111,911	2118.4	114.1	1771.0	18.1	SEE REMARKS.		
5/31	6 PM	24POS.	2307	240	224	238	233	0			29	225	210	114,307	2220.6	102.2	1897.3	126.3	5484.0		
5/31	7 PM	24POS.	2300	250	224	238	233	0			25	225	210	106,131	2316.5	95.9	2014.9	117.6	5124.0		
5/31	8 PM	24POS.	2290	260	224	240	230	0			28	220	210	111,142	2396.0	79.5	2152.8	137.9	5216.6		
5/31	9 PM	24POS.	2282	300	225	240	232	0			28	225	210	112,319	2477.1	81.1	228.3	130.5	5078.4		
5/31	9:15	24POS.	SEE REMARKS.		CORRECTED GAS & FLUID VOLS.				6:00 - 9:00 PM					*106,501				*4917		*21.65	
5/31	10 PM	24POS.								SEE REMARKS.											
5/31	11 PM	24POS.	2260	225	225	240	232	0			25	225	210	106,131	2720.6		2431.5	SEE REMARKS.			
5/31	12 MN	24POS.	2250	300		240	235	0			27	225	210	110,295	2965.0	244.4	2431.5	0	5865.5

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	PRESS.		
		PRESS	TEMP	PRESS	TEMP						IN	OUT	
5/31	3 PM	102	236	98	105	0			52	100	60	52	
5/31	3:25	SEE REMARKS.											SPL TAKING GAS & FLUID SAMPLES.
5/31	3:55	SEE REMARKS.											SPL TAKING GAS SAMPLE.
5/31	4 PM	102	236	100	103	0			43	100	55	50	
5/31	4:15	SEE REMARKS.											SPL TAKING GAS SAMPLE. CASING = #450. BLED DOWN TO #150. FLUID (MUD).
5/31	4:30	SEE REMARKS.											SPL TAKING FLUID SAMPLE.
5/31	5 PM	105	236	100	103	0			38	100	50	45	
5/31	6 PM	105	235	95	102	0			30	98	52	50	
5/31	7 PM	104	236	98	103	0			44	98	50	46	
5/31	8 PM	105	237	100	100	0			56	98	70	65	SCALE BUILDING UP IN METERS & DUMP VALVES.
5/31	9 PM	105	237	100	100	0			37	95	50	50	
5/31	9:15	SEE REMARKS FOR 8:00 PM.											
5/31	10 PM	SEE REMARKS.											GRUY CO. REP. COLLECTED SAMPLE FOR LABORATORY SAMPLE.
5/31	11 PM	100	237	95	100	0			65	100	80	80	# 2 TURBINE METER TURNED OFF. READING (PBL./DAY) START AT 12 MN REPAIR.
5/31	12 MN	100	240	98	98	0			65	95	80	75

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX POSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH IRE SIZE	TUBING PRESS.	CASING PRESS.	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	RBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/1	1 AM	24POS.	224	225	225	240	235	0			26	225	210	108,233	3228.7	263.7			6328.8		17.10
6/1	2 AM	24POS.	2234	200	227	240	238	0			27	224	210	110,065	3478.0	249.8			5983.8		18.40
6/1	3 AM	24POS.	2229	200	225	238	238	0			27	225	210	110,295	3707.5	229.5			5508.0		20.02
6/1	4 AM	24POS.	2225	200	225	238	237	0			27	225	210	110,295	3960.0	252.5			6060.0		18.20
6/1	5 AM	24POS.	2220	220	225	235	235	0			27	225	210	110,295	4211.3	251.3			6031.2		18.29
6/1	6 AM	24POS.	2215	250	226	238	235	0			27	225	210	110,295	4465.0	253.7			6088.8		18.11
6/1	6:25	SEE REMARKS.		CORRECTED GAS & FLUID VOLS.					1:00	- 6:00 AM.				105,529					5670		18.58
6/1	7 AM	24POS.	2210	230	225	235	235	0			27	225	210	110,295	4721.3	256.3			6161.2		17.93
6/1	8 AM	24POS.	2203	325	225	237	235	0			27	225	210	110,295	4976.0	254.7			6112.8		18.04
6/1	9 AM	24POS.	2198	430	225	237	235	0			27	230	210	110,295	5231.8	256.9			6163.2		17.90
6/1	10 AM	24POS.	2194	450	225	238	235	0			28	230	210	113,483	5487.7	255.9			6141.6		18.48
6/1	11 AM	24POS.	2184	450	225	240	235	0			27	230	210	110,295	5742.5	254.8			6115.2		18.04
6/1	12NOON	24POS.	2184	450	225	240	235	0			28	230	210	113,483	5997.0	254.5			6108.0		18.60
6/1	1 PM	24POS.	2180	475	225	238	235	0			26	225	210	110,295	6254.5	257.5			6180.0		17.85
6/1	2 PM	24POS.	2175	480	225	238	235	0			26	225	210	108,233	6509.9	255.4			6129.6		17.66

GEOHERMAL FIELD TEST DATA

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DATE 6/1/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. _____ ORIFICE METER (1st _____ X _____)

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.		REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	IN	OUT	
6/1	1 AM	95	240	90	95	0			65	95	80	80	
6/1	2 AM	95	240	90	95	0			65	92	75	75	
6/1	3 AM	95	238	92	96	0			66	94	80	78	
6/1	4 AM	95	237	92	98	0			63	94	80	78	
6/1	5 AM	95	237	92	98	0			60	95	80	80	SCALE BUILD UP IN TURBINE METERS APPEARS TO BE
6/1	6 AM	95	238	90	98	0			60	95	80	80	MAKING METERS READ SLIGHTLY HIGH.
6/1	6:25	SEE REMARKS											SCALE INHIBITOR RIGGED UP AND PUMPING 5 GAL/DAY.
6/1	7 AM	95	240	90	100	0			60	94	80	80	
6/1	8 AM	95	240	90	100	0			60	100	80	85	
6/1	9 AM	95	240	90	102	0			70	100	80	85	SPL TAKING SAMPLES.
6/1	10 AM	95	240	90	105	0			72	102	85	88	METER CHECK RESULTS: METER READING 90.2B @ 240 TANK READING 71.8B @ 110° FACTOR = .8215
6/1	11 AM	95	240	90	106	0			72	102	85	88	
6/1	12NOON	95	240	90	110	0			76	105	85	85	SPL TAKING SAMPLES.
6/1	1 PM	98	240	92	110	0			80	105	85	90	SPL TAKING SAMPLES.
6/1	2 PM	95	240	90	110	0			75	105	85	85

GEOTHERMAL FIELD TEST DATA

PAGE 18
DATE 6/1/79

COMPANY GRUY FRDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (KE SIZE	TUBING PRESS.	CASING PRESS.	W H TEMP	MANF TEMP	MANF PRESS.	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/1	3 PM	24POS	2170	500	225	236	234	0			26	225	207	108,479	6759.7	249.8	0		5995.2		18.09
6/1	4 PM	24POS	2165	500	220	238	235	0			26	225	210	108,479	7018.7	259	0		6216		17.45
6/1	5 PM	24POS	2162	500	223	238	235	0			25	225	205	106,131	7266.9	248.2	0		5956.8		17.82
6/1	6 PM	24POS	2156	500	225	240	235	0			26	225	210	108,479	7522.6	255.7	0		6136.8		17.86
6/1	7 PM	24POS	2152	510	225	238	235	0			25	225	207	106,131	7767.4	244.8	0		5875.2		18.06
6/1	8 PM	24POS	2147	515	226	239	232	0			25	225	210	106,131	8023.5	256.1	0		6146.4		17.27
6/1	9 PM	24POS	2141	515	230	239	233	0			25	225	210	106,131	8277.8	254.3	0		6103.2		17.39
6/1	10 PM	24POS	2138	515	228	234	233	0			25	225	210	106,131	8527.9	250.1	0		6002.4		17.68
6/1	11 PM	24POS	2135	200	225	232	232	0			25	225	206	106,456	8779.4	251.5	0		6036.0		17.64
6/2	12 MN	24 POS	2135	210	228	236	233	0			26	225	210	108,479	9030.4	251.0	0		6024.0		18.01
6/2	1 AM	24 POS	2131	210	228	234	234	0			26	225	210	108,479	9281.6	251.2	0		6028.8		17.99
6/2	2 AM	24 POS	2127	210	227	230	233	0			26	225	210	108,479	9535.1	253.5	0		6084.0		17.83
6/2	3 AM	24 POS	2122	215	227	228	233	0			26	225	210	108,479	9783.7	248.6	0		5966.4		18.18
6/2	3:30	24POS	SEE REMARKS - CORRECTED					GAS & FLUID VOLUMES - 3:00 PM - 3:00 AM -					*102,637					*5791		*17.72

GEOTHERMAL FIELD TEST DATA

PAGE 18 CONT
DATE 6/1/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	PRESS.		
		PRESS	TEMP	PRESS	TEMP						IN	OUT	
6/1	3 PM	98	215	90	110	0			58	107	85	86	
6/1	4 PM	98	240	92	105	0			70	105	90	90	
6/1	5 PM	98	240	92	105	0			70	101	82	87	SPL TAKING SAMPLES (FLUID & GAS).
6/1	6 PM	100	240	92	106	0			70	101	81	84	
6/1	7 PM	108	240	92	105	0			72	100	85	85	
6/1	8 PM	98	240	90	101	0			68	98	81	83	
6/1	9 PM	98	241	90	99	0			65	97	81	82	
6/1	10 PM	95	240	90	100	0			65	98	82	82	CASING BLED TO #150.
6/1	11 PM	95	240	90	98	0			68	95	85	89	
6/1	12 MN	95	240	90	98	0			68	95	80	85	
6/2	1 AM	95	240	90	98	0			70	92	82	85	
6/2	2 AM	95	240	90	98	0			67	92	80	85	
6/2	3 AM	95	240	90	96	0			65	95	80	85	SCALE INHIBITOR INJECTION RATE CHECKED - 14 QTS./DAY
6/2	3:30	SEE REMARKS											RECALIBRATED TO 20 QTS. /DAY. (5 GALS./DAY).

GEOTHERMAL FIELD TEST DATA

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DATE 6/2/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/2	4 AM	24 POS	2119	225	220	230	233	0			25	225	209	106,215	10,034.6	250.3			6007.2		17.68
6/2	5 AM	24 POS	2115	225	223	232	233	0			25	225	210	106,131	10,284.4	250.4			6009.6		17.66
6/2	6 AM	24 POS	2112	225	230	240	233	0			25	225	205	106,131	10,532.7	248.3			5527.2		19.20
6/2	7 AM	24 POS	2108	225	230	233	233	0			25	225	210	106,131	10,763.0	230.3			5527.2		19.20
6/2	8 AM	24 POS	2105	250	226	226	230	0			25	225	210	106,131	11,031.7	268.7			6448.8		16.46
6/2	9 AM	24 POS	2103	250	225	240	233	0			25	225	210	106,131	11,280.8	249.1			5978.4		17.75
6/2	10 AM	24 POS	2103	250	225	240	233	0			25.5	225	210	107,187	11,530.0	249.2			5980.8		17.92
6/2	11 AM	24 POS	2099	250	224	240	233	0			25	225	210	106,131	11,779.0	249			5976		17.76
6/2	12 NOON	24 POS	2095	260	224	240	233	0			25	225	210	106,131	12,027.6	248.6			5966.4		17.79
6/2	1 PM	24 POS	2091	260	222	240	231	0			25	225	210	106,131	12,276.2	251.6			6038.4		17.58
6/2	2 PM	24 POS	2089	275	222	239	232	0			25	225	210	106,131	12,524.4	248.2			5956.8		17.82
6/2	3 PM	24 POS	2085	275	222	240	235	0			25	225	210	106,131	12,775.5	251.1			6026.4		17.61
6/2	4 PM	24 POS	2083	275	222	240	235	0			25	225	210	106,131	13,021.5	246.0			5904		17.98
6/2	5 PM	24 POS	2079	280	220	239	235	0			24	225	210	103,987	13,268.8	247.3			5935.2		17.52
6/2	6 PM	24 POS	2077	290	220	237	235	0			24	225	207	104,223	13,516.3	247.5			5940.0		17.55

GEOTHERMAL FIELD TEST DATA

PAGE 19 CONT
DATE 6/2/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	PRESS.		
		PRESS	TEMP	PRESS	TEMP						IN	OUT	
6/2	4 AM	95	240	90	97	0			65	95	82	85	
6/2	5 AM	90	240	90	98	0			65	92	80	85	SWITCHED GENERATORS.
6/2	6 AM	92	240	95	98	0			62	90	80	81	SWITCHED FILTERS AND NOTED ONE OF THE GAUGES MUST BE OFF PRESENT READING = IN = 80#, OUT = 72#.
6/2	7 AM	95	241	89	95	0			62	92	80	73	
6/2	8 AM	95	240	90	100	0			65	96	85	81	SPL TAKING GAS & LIQUID SAMPLES.
6/2	9 AM	98	240	90	104	0			68	100	87	82	SPL TAKING GAS SAMPLE *ON MANIFOLD TEMP, THE CHART IS READING LOW, THEREFORE INLET ON COOLER IS ACCURATE.
6/2	10 AM	98	240	81	105	0			70	101	92	85	
6/2	11 AM	98	240	82	105	0			70	104	80	75	
6/2	12NOON	98	240	82	106	0			70	105	92	85	
6/2	1 PM	99	240	91	110	0			71	106	91	85	
6/2	2 PM	98	240	92	110	0			72	107	91	89	
6/2	3 PM	98	240	92	110	0			0	100	0	0	TURN WELL TO 100 BBL. TANK TO CHECK METERS.
6/2	4 PM	98	240	92	108	0			0	108	0	0	TURN WELL BACK TO DISPOSAL WELL BUT STILL DIDN'T HAVE PRESSURE READING ON WELL NOR FILTERS.
6/2	5 PM	98	240	92	107	0			2#	105	20	15	METER CHECK RESULTS: METER READING = 80.4 BBL. @ 240°F TANK READING = 63.6 BBL. @ 110 FACTOR = $\frac{63.6}{77.9} = .8164$
6/2	6 PM	95	240	90	105	0			5#	104	22	20

PAGE 20

DATE 6/2/79

FLANGE TAPS

[illegible]

PAGE 20 CONT
DATE 6/2/79

[illegible]

GEOTHERMAL FIELD TEST DATA

PAGE 21
DATE 6/2-3/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,790 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORDS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/2	11 PM	=	SHUT WELL IN -						SEE REMARKS.												
6/2	11:05	S.I.	3825	300		215															
6/2	11:10	S.I.	3854	300		210															
6/2	11:15	S.I.	3872	250		195															
6/2	11:20	S.I.	3887	140		175															
6/2	11:25	S.I.	3899	0		158															
6/2	11:30	S.I.	3910	0		153															
6/2	11:45	S.I.	3932	0		134															
6/2	12 MN	S.I.	3953	0		125															
6/3	12:15	S.I.	3970	0		115															
6/3	12:30	S.I.	3987	0		103															
6/3	12:45	S.I.	4000	0		99															
6/3	1 AM	S.I.	4011	0		95															
6/3	1:30	S.I.	4033	0		88															
6/3	2 AM	S.I.	4052	0		84

GEOTHERMAL FIELD TEST DATA

PAGE 22
DATE 6/2-3/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CHKE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
6/3	2:30	S.I.	4069	0		82					SHUT IN STATIC BUILD UP CONTINUED.										
6/3	3 AM	S.I.	4084	0		79															
6/3	4 AM	S.I.	4110	0		77															
6/3	5 AM	S.I.	4130	0																	
6/3	6 AM	S.I.	4150	0																	
6/3	7 AM	S.I.	4165	0																	
6/3	8 AM	S.I.	4182	0																	
6/3	9 AM	S.I.	4192	0																	
6/3	10 AM	S.I.	4203	0																	
6/3	11 AM	S.I.	4211	0																	
6/3	12 NOON	S.I.	4219	0																	
6/3	1 PM	S.I.	4224	0																	
6/3	2 PM	S.I.	4232	0																	
6/3	3 PM	S.I.	4239	0																	

COMPANY GRUP FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET ^a _____ PACKER ^a _____ CASING SIZE _____ SET ^e _____ T.D. _____ ORIFICE METER (1st _____ X _____

GEOTHERMAL FIELD TEST DATA

PAGE 24

DATE 6/4/79

COMPANY GRU FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/4	7 AM	S.I.	4305	0							SHUT IN - STATIC BUILD UP CONTINUED.										
6/4	8 AM	S.I.	4308	0																	
6/4	9 AM	S.I.	4311	0																	
6/4	10 AM	S.I.	4315	0																	
6/4	11 AM	S.I.	4317	0																	
6/4	12NOON	S.I.	4320	0																	
6/4	1 PM	S.I.	4323	0																	
6/4	2 PM	S.I.	4325	0																	
6/4	3 PM	S.I.	4328	0																	
6/4	4 PM	S.I.	4330	0																	
6/4	5 PM	S.I.	4333	0																	
6/4	6 PM	S.I.	4335	0																	
6/4	7 PM	S.I.	4336	0																	
6/4	8 PM	S.I.	4338	0																	
6/4	9 PM	S.I.	4340	0

GEOTHERMAL FIELD TEST DATA

PAGE 27

DATE 6/6/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHECK SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/6	4 AM	S.I.	4390	0							SHUT IN -	STATIC	BUILD UP	CONTINUED.							
6/6	5 AM	S.I.	4392	0																	
6/6	6 AM	S.I.	4393	0																	
6/6	7 AM	S.I.	4395	0																	
6/6	8 AM	S.I.	4396	0																	
6/6	9 AM	S.I.	4398	0																	
6/6	10 AM	S.I.	4400	0																	
6/6	11 AM	S.I.	4401	0																	
6/6	12NOON	S.I.	4403	0																	
6/6	1 PM	S.I.	4404	0																	
6/6	2 PM	S.I.	4405	0																	
6/6	3 PM	S.I.	4407	0							* 3:00 PM =	RAN TO	15,400	W/BHP	INSTRUMENTS.						
6/6	4 PM	S.I.	4408	0																	
6/6	5 PM	S.I.	4410	0							* STARTED	OUT OF	HOLE	W/BHP	INSTRUMENTS.						
6/6	8 PM	S.I.	4404	0							* NO READINGS FROM	5:00 PM	TO 8:00 PM	BECAUSE	RIGGING DOWN	W/RELIN	UNIT &	WAITING ON	ORDERS.

GEOTHERMAL FIELD TEST DATA

PAGE 29
DATE 6/7/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA - 6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (KE SIZE	TUBING PRESS	CASING PRESS	B H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUNT	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLS PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/7	12NOON	S.I.	4421	0							COOK	WIRELINE RIGGING UP. SHUT IN - STATIC BUILD UP CONTINUED.									
6/7	1 PM	S.I.		0							UNABLE TO RECORD	SURFACE PRESSURE WHILE RIGGING UP WIRELINE AND ALSO DURING GAUGE RUN.									
6/7	2 PM	S.I.		0																	
6/7	3 PM	S.I.		0																	
6/7	4 PM	S.I.		0							PRESSURE NOT REPRESENTATIVE	WHILE WIRELINE MOVING IN HOLE.									
6/7	5 PM	S.I.		0																	
6/7	6 PM	S.I.		0																	
6/7	7 PM	S.I.	4425.5	0							CHECKING HEWLETT PACHARD	GAUGE.									
6/7	8 PM	S.I.	4425.5	0																	
6/7	9 PM	S.I.	4427	0																	
6/7	10 PM	S.I.	4425	0																	
6/7	11 PM	S.I.	4428	0																	
6/7	12 MN	S.I.	4429	0																	
6/7	1 AM	S.I.	4430	0																	
6/7	2 AM	S.I.	4431	0

GEOTHERMAL FIELD TEST DATA

PAGE 30DATE 6/8/79COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLINCOUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/8	3 AM	S.I.	4431																		
6/8	4 AM	S.I.	4432																		
6/8	5 AM	S.I.	4433																		
6/8	6 AM	S.I.	4433																		
6/8	7 AM	S.I.	4434																		
6/8	8 AM	S.I.	4435																		
6/8	9 AM	S.I.	4436																		
6/8	10 AM	S.I.	4437																		
6/8	11 AM	S.I.	4438																		
6/8	12NOON	S.I.	4439																		
6/8	1 PM	S.I.	4440																		
6/8	2 PM	S.I.	4441																		
6/8	3 PM	S.I.	4441																		
6/8	4 PM	S.I.	4441																		
6/8	5 PM	S.I.	4442																		

TUBING SIZE _____ SET # _____ PACKER " _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

[illegible]

GEOTHERMAL FIELD TEST DATA

PAGE 32

DATE 6/9/79

COMPANY CRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2,900 X .500
FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/9	9 AM	S.I.	4453																		
6/9	10 AM	S.I.	4454																		
6/9	11 AM	S.I.	4455																		
6/9	12NOON	S.I.	4456																		
6/9	1 PM	S.I.	4457								OPENED WELL ON A 6/64 ADJ. CHOKE.										
6/9	1:10	6/64 12/64	2926								OPENED WELL ON A 12/64 ADJ. CHOKE.										
6/9	1:15	20/64	1874								OPENED WELL ON A 20/64 ADJ. CHOKE.			PUT WELL THROUGH SEPARATOR. TO DISPOSAL WELL.							
6/9	1:20	30/64	1585								OPENED WELL ON A 30/64 ADJ. CHOKE.										
6/9	1:25	30/64	1614																		
6/9	1:30	30/64	1649																		
6/9	1:45	30/64	1705																		
6/9	2 PM	30/64	1522																		
6/9	2:15	30/64	1555																		
6/9	2:30	30/64	1540	100		232	230		NONE		40	280	180	168,959	181.5		120.1				
6/9	2:45	30/64	1521

GEOTHERMAL FIELD TEST DATA

PAGE 33

DATE 6/9/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH OK SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/9	3 PM	30/64	1507	100		236	218		NONE		40	280	190	151,116	270.0	88.5	172.2	52.1	6748.8		22
6/9	3:15	30/64	1505								CHANGED OVER TO 30/64 POSITIVE CHOKE ON POSITIVE SIDE OF TREE.										
6/9	3:30	30/64	1619	100		236	218		NONE		40	280	198	150,188	362.3	92.3	226.0	53.8	7012.8		21
6/9	3:45	30/64	1609																		
6/9	4 PM	30/64	1601	100		240	225		NONE		38	280	204	145,726	449.9	87.5	276.8	50.8	6643.2	95,000	22
6/9	4:30	30/64	1599	125		240	230		NONE		38	280	205	145,611	535.1	85.2	326.2	49.4	6460.8		22
6/9	5 PM	30/64	1580	130	160	240	222		NONE		38	280	205	145,611	622.0	86.9	376.4	50.2	6580.8	95,000	22
6/9	5:30	30/64	1569		4:00 PM - 5:00 PM = *			DENOTES	CORRECTED	VOLUMES				*139,446					*6258.6		*22.28
6/9	6 PM	30/64	1560	150	165	240	225		NONE		34	280	194	138,902	803.4	181.4	482.5	106.1	6900	95,000	20
6/9	6:30	30/64	1548																		
6/9	7 PM	30/64	1543	150	165	240	220		NONE		35	280	202	140,077	986.0	182.5	588.2	105.7	6919.2	95,000	20
6/9	7:20	30 P 2 A	1536								OPENED ADJ. CHOKE TO 2/64 TO INCREASE RATE.										
6/9	7:25	30 P 7 A	1481								OPENED ADJ. CHOKE TO 7/64 & 30/64 POS. CHOKE.										
6/9	7:30	30 P 9 A	1404								OPENED ADJ. CHOKE TO 9/64 & 30/64 POS. CHOKE.

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DATE 6/9/79

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		REMARKS	
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		
		PRESS	TEMP	PRESS	TEMP							
6/9	3 PM	100	204	85	124				48	120	NOT USING DISPOSAL DUMPS.	
6/9	3:30	100	204	85	120				50	118		
6/9	4 PM	98	228	85	120				60	120		
6/9	4:30	100	235	85	120				55	123		
6/9	5 PM	100	236	85	120				55	120	GRAVITY OF WATER = 1.080	
6/9	6 PM	100	236	86	118				57	115		
6/9	7 PM	95	235	85	110				53	108	NO INDICATION OF SAND ON SAND MONITOR.

GEOTHERMAL FIELD TEST DATA

PAGE 34

DATE 6/9-10/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH OKE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP G	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/9	7:35	30POS 12ADJ	1250								OPENED ADJ.	CHOKE	TO 12	64 & 30/64	POS. CHOKE.						
6/9	7:45	30POS 14ADJ	1252								OPENED ADJ.	CHOKE	TO 14	64.							
6/9	7:55	30POS 14ADJ	1250																		
6/9	8 PM	14ADJ 30/64	1192	175	210	250	225		NONE		42	280	210	152,512	1148.6	162.6	682.5	94.3		96,000	
6/9	8:15	14ADJ 30/64		180	210	250	225		NONE		40	280	210	148,836	1196.6	48	712.0	29.5	7440	96,000	20
6/9	8:25	30POS 15ADJ	1189								OPENED ADJ.	CHOKE	TO 15	64 ADJ. & 30/64	POSITIVE.						
6/9	8:30	30POS 15ADJ	1139														1240.0		752.2		
6/9	8:55	30POS 14ADJ	1137								LOST WEIGHT ON TOOLS IN										
6/9	9 PM	14ADJ 30/64	1173	200	210	250	225		NONE		42	280	210	152,512	1331.7	183.1	820.7	138.2		96,000	
		30POS 14ADJ																			
6/9	9:30	30POS 14ADJ	1164																		
6/9	10 PM	14ADJ 30/64	1163	200	207	246	215		NONE		41	280	200	151,831	1515	183.3	960.2	139.5	7747.2	96,000	19.5
6/9	10:30	30POS 14ADJ	1155																		
6/9	11 PM	14ADJ 30/64	1154	200	210	250	220		NONE						1694.8	179.8	1068.9	108.7	6924	96,000

GEOTHERMAL FIELD TEST DATA

PAGE 34 CONT

DATE 6/9-10/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	
		PRESS	TEMP	PRESS	TEMP						
6/9											
6/9	9 PM	110	240	100	110				80	110	STARTED RATE ON 30/64 POS. & 14/64 ADJ. CHOKE.
6/9	10 PM	115	242	105	112				85	110	
6/9	11 PM	110	237	100	115				60	110	11:15 PM - WELL BY PASS SEPARATOR TO CHECK BACK PRESSURE STEM & SERT.

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GEOTHERMAL FIELD TEST DATA

PAGE 35

DATE 6/10/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA							
DATE	TIME	CHK'E SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLS PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO	
											DIFF	PRESS	TEMP									
6/9	12 MN	14ADJ 30/64	1186								BY PASS SEPARATOR.											
6/10	1 AM	30POS 14ADJ	1190								PUT WELL THROUGH SEPARATOR.											
6/10	1:30	30POS 14ADJ	1193	250	220	250	200		NONE						2029.9		1268.6					
6/10	2 AM	30/64 14ADJ	1180	250	220	250	205		NONE		50	260	220	159,479	2118.9	90.8	1321.1	52.5	6878.4	96,000	23	
6/10	2:30	30POS 14ADJ	1170																			
6/10	3 AM	30/64 14ADJ	1177	250	225	250	210		NONE		42	255	220	144,830	2297.1	178.2	1422.7	101.6	6715.2	96,000	21.5	
6/10	3:30	30POS 14ADJ	1203																			
6/10	4 AM	30/64 14ADJ	1200	200	230	250	210		NONE		42	255	220	144,830	2474.0	176.9	1524.6	101.9	6691.2	96,000	21.6	
6/10	4:30	30POS 14ADJ	1207																			
6/10	5 AM	30/64 14ADJ	1223	300	230	250	207		NONE		42	255	220	144,830	2647.5	173.5	1624.3	99.7	6556.8	96,000	22	
6/10	5:30	30POS 14ADJ	1217																			
6/10	6 AM	30/64 14ADJ	1220	300	235	250	247		NONE		42	255	220	144,830	2817.7	170.2	1720.7	96.4	6398.4	96,000	22.6	
6/10	6:30	30POS 14ADJ	1220																			
6/10	7 AM	30/64 14ADJ	1220	325	235	248	205		NONE		42	255	220	144,830	2992.1	174.4	1820	99.3	6568.8	96,000	22	
6/10		30POS 14ADJ		3:00 AM	- 7:00 AM						* DENOTES CORRECTED VOLUMES				*138,709					*6253.7		*22.18

GEOTHERMAL FIELD TEST DATA

PAGE 35 CONTDATE 6/10/79COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLINCOUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X)

TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		REMARKS	
	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		
	PRESS	TEMP	PRESS	TEMP							
6/10											
6/10	2 AM	100	245	85	110				30	110	
6/10	3 AM	100	249	82	110				45	110	
6/10	4 AM	110	245	90	110				45	110	
6/10	5 AM	110	245	90	110				45	110	
6/10	6 AM	90	245	82	110				54	110	
6/10	7 AM	90	249	82	110				50	110

GEOTHERMAL FIELD TEST DATA

PAGE 36

DATE 6/10/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET 6 PACKER 4 CASING SIZE SET 6 T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHK SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/10	7:30	14ADJ 30/64	1236																		
6/10	8 AM	14ADJ 30/64	1236	425	235	248	200		NONE		42	255	220	144,830	3162.9	170.6	1916.6	96.6	6417.6	96,000	22.5
6/10	8:30	30POS 14ADJ	1232																		
6/10	9 AM	14ADJ 30/64	1228	425	235	250	200		NONE		42	255	220	144,830	3334.6	171.7	2012.1	95.5	6412.8	96,000	22.5
6/10	9:30	30POS 14ADJ	1226								BLEED DOWN CASING TO 200#.										
6/10	10 AM	14ADJ 30/64	1236	350	235	249	200		NONE		42	255	220	144,830	3504.2	169.6	2107.8	95.7	6367.2	96,000	22.7
6/10	10:30	30POS 14ADJ	1232																		
6/10	11 AM	14ADJ 30/64	1230	350	249	248	200		NONE		40	260	220	145,212	3674.4	170.2	2204.9	97.1	6415.2	96,000	22.6
6/10	11:30	30POS 14ADJ	1224																		
6/10	12 NOON	14ADJ 30/64	1245	350	249	249	205		NONE		40	260	220	145,212	3842.8	168.4	2299.4	94.5	6309.6	96,000	23.0
6/10	12:30	30POS 14ADJ	1237																		
6/10	1 AM	14ADJ 30/64	1225	375	249	248	205		NONE		40	260	218	145,428	4011.0	168.2	2395.2	95.8	6336.0	96,000	22.0
6/10	1:30	30POS 14ADJ	1254																		
6/10	2 AM	14ADJ 30/64	1245	375	249	252	205		NONE		40	260	220	145,212	4179.6	168.6	2491.8	96.6	6364.8	96,000	22.8
6/10	2:30	30POS 14ADJ	1243					11:00 AM - 2:00 PM	* DENOTES CORRECTED VOL.					*136,612					*6048.2		*22.59

GEOTHERMAL FIELD TEST DATA

PAGE 36 CONT

DATE 6/10/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER 1st X

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.		REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.	IN	OUT	
6/10	8 AM	82	248	90	110				50	110	65	63	
6/10	9 AM	90	248	82	110				51	110	66	64	
6/10	10 AM	99	248	83	110				51	110	69	67	
6/10	11 AM	98	248	88	118				55	118	70	68	
6/10	12 NOON	98	248	88	116				62	116	71	69	
6/10	1 PM	98	246	88	116				65	115	72	70	
6/10	2 PM	98	245	89	118				65	115	75	73

GEOTHERMAL FIELD TEST DATA

PAGE 37
DATE 6/10/79

COMPANY GRUY FEDERAL, INC LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CHCKE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/10	3 PM	14ADJ 30/64	1241	425	235	252	205				40	260	218	145,428	4345.9	166.3	2587.6	95.8	6290.4	96,000	23.0
6/10	3:30	14ADJ 30POS	1238																		
6/10	4 PM	14ADJ 30/64	1237	425	235	246	205				40	260	220	145,212	4511.1	165.2	2683.1	95.5	6256.8	96,000	23.2
6/10	4:30	14ADJ 30POS																			
6/10	5 PM	14ADJ 30/64	1232	450	235	248	205				40	260	220	145,212	4675.4	164.3	2778.4	95.3	6230.4	96,000	23.3
6/10	5:30	14ADJ 30POS	1234																		
6/10	6 PM	14ADJ 30/64	1232	450	235	248	205				38	260	216	141,956	4839.4	164.0	2873.8	95.4	6225.6	96,000	22.8
6/10	6:30	14ADJ 30POS	1234																		
6/10	7 PM	14ADJ 30/64	1226	440	240	255	205				38	260	220	141,535	5004.4	165	2965.9	92.1	6170.4	96,000	22.9
6/10	7:30	14ADJ 30POS	1224																		
6/10	8 PM	14ADJ 30/64	1225	450	240	255	205				38	260	220	141,535	5173.3	168.9	3060.3	94.4	6319.2	96,000	22.3
6/10	8:30	14ADJ 30/64	1228																		
6/10	9 PM	14ADJ 30/64	1219	500	240	252	205				38	260	220	141,535	5337.5	164.2	3151.1	90.8	6120	96,000	23.1
6/10	9:30	14ADJ 30POS	1214		6:00 PM - 10:00 PM						* DENOTES CORRECTED GAS VOLUMES			*133,160					*5897.5		*22.58
6/10	10 PM	14ADJ 30/64	1212	250	240	252	205				38	260	220	141,535	5502.9	165.4	3240.9	89.8	6124.8	96,000	23.1

GEOHERMAL FIELD TEST DATA

PAGE 37 CONT
DATE 6/10/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	IN	OUT	
		PRESS	TEMP	PRESS	TEMP								
6/10	3 PM	98	245	88	118				65	115	76	73	
6/10	4 PM	98	245	90	115				68	115	76	73	
6/10	5 PM	100	245	90	118				70	117	78	74	
6/10	6 PM	100	245	90	117				60	115	79	74	
6/10	7 PM	100	245	90	115				70	115	78	74	
6/10	8 PM	99	245	89	115				65	110	78	74	
6/10	9 PM	98	248	90	110				30	100	45	40	9:00 PM - SWITCHED GENERATORS. HAD TO SHUT DOWN COOLER & BY PASS DISPOSAL WELL. REASON FOR DROP IN DISPOSAL WELL PRESSURE. 9:05 PM = BACK INTO DISPOSAL WELL.
6/10	10 PM	98	248	90	110				30	100	45	40

GEOTHERMAL FIELD TEST DATA

PAGE 38
DATE 6/10-11/79

COMPANY GRUY FEDERAL LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (KE SIZE	TUBING PRESS.	CASING PRESS.	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/10	10:30	14ADJ 30POS	1223																		
6/10	11 PM	14ADJ 30/64	1232	250	235	255	200				37	260	215	140,188	5668.1	165.2	3331.5	90.5	6139.2	96,000	22.8
6/10	11:30	14ADJ 30POS	1229																		
6/11	12 MN	14ADJ 30/64	1227	275	230	255	200				36	260	205	139,304	5844.6	176.5	3430.6	99.1	6614.4	96,000	21.0
6/11	12:30	14ADJ 30POS	1222																		
6/11	1 AM	14ADJ 30/64	1221	275	230	255	200				36	260	205	139,304	5996.1	151.5	3515.4	84.6	5671.2	96,000	24.5
6/11	1:30	14ADJ 30POS	1222																		
6/11	2 AM	14ADJ 30/64	1221	300	230	250	200				37	260	205	141,266	6169.8	173.7	3507.2	91.8	6372.0	96,000	22.1
6/11	2:30	14ADJ 30POS	1218																		
6/11	3 AM	14ADJ 30/64	1208	300	232	246	200				36	260	205	139,304	6325.2	155.4	3700.3	93.1	5964.0	96,000	23.3
6/11	3:30	14ADJ 30POS	1205																		
6/11	4 AM	14ADJ 30/64	1200	275	230	245	200				35	258	203	134,646	6489.1	163.9	3792.9	92.6	6156.0	96,000	21.8
6/11	4:30	14ADJ 30POS	1201																		
6/11	5 AM	14ADJ 30/64	1199	300	233	246	200				35	258	201	136,088	6651.8	162.7	3885.4	92.5	6124.8	96,000	22.2
6/11	5:30	14ADJ 30POS	1198		11:00 PM - 5:00 PM	* DENOTES CORRECTED GAS VOLUMES.							*130,968					*5868.8		* 22.32

GEOTHERMAL FIELD TEST DATA

PAGE 38 CONT

DATE 6/10-11/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	IN	OUT	
		PRESS	TEMP	PRESS	TEMP								
6/10													
6/10	11 PM	98	248	89	115				49	115	58	53	
6/11	12 MN	98	248	89	115				50	115	57	54	
6/11	1 AM	98	245	89	110				45	107	65	59	
6/11	2 AM	97	245	88	108				50	105	67	60	
6/11	3 AM	97	245	88	107				53	105	69	61	
6/11	4 AM	97	245	88	107				56	103	72	64	
6/11	5 AM	97	245	88	105				56	103	73	64

GEOTHERMAL FIELD TEST DATA

PAGE 39

DATE 6/11/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 SAND MA-6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH/KE SIZE	TUBING PRESS.	CASING PRESS.	W H TEMP.	MANF TEMP.	MANF PRESS.	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/11	6 AM	14ADJ 30/64	1192	300	230	245	200				35	260	200	137,884	6816.6	164.8	3976.6	91.2	6144.0	96,000	22.4
6/11	6:30	14ADJ 30POS	1192																		
6/11	7 AM	14ADJ 30/64	1192	225	226	245	200				36	258	202	136,664	6987.8	171.2	4069.2	92.6	6331.2	96,000	21.5
6/11	7:30	14ADJ 30POS	1192																		
6/11	8 AM	14ADJ 30/64	1192	325	225	245	197				36	258	204	136,448	7142.1	154.8	4158.1	88.9	5836.8	96,000	23.3
6/11	8:30	14ADJ 30POS	1192																		
6/11	9 AM	14ADJ 30/64	1194	325	228	245	195				35	255	204	133,904	7305.8	163.7	4251.6	93.5	6172.8	96,000	21.6
6/11	9:30	14ADJ 30POS	1194																		
6/11	10 AM	14ADJ 30/64	1190	340	230	245	198				36	260	204	136,947	7468.7	162.9	4344.0	94.2	6127.2	96,000	22.3
6/11	10:30	14ADJ 30POS	1189																		
6/11	11 AM	14ADJ 30/64	1189	340	225	250	199				36	255	205	135,589	7630.9	162.2	4435.4	91.4	6086.4	96,000	22.2
6/11	11:30	14ADJ 30POS	1186																		
6/11	12NOON	14ADJ 30/64	1185	350	230	245	195				36	255	205	135,589	7793.8	162.9	4527.8	92.4	6127.2	96,000	22.1
6/11	12:30	14ADJ 30POS	1189		6:00	AM - 1:00 PM * DENOTES CORRECTED VOLUMES								*130,224					*5829.0		*22.34
6/11	1 PM	14ADJ 30/64	1189	350	230	248	200				36	260	205	136,839	7956.8	163	4616.3	88.5	6036	96,000	22.6

GEOTHERMAL FIELD TEST DATA

PAGE 39 CONT

DATE 6/11/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET @ PACKER @ CASING SIZE SET @ T.D. ORIFICE METER (1st X)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.		REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	IN	OUT	
		PRESS	TEMP.	PRESS	TEMP								
6/11	6 AM	97	245	86	104				56	100	75	65	
6/11	7 AM	97	245	86	102				56	100	74	64	AVERAGE GAS, AMOUNT OF FLUID AND GAS, WATER RATIO FROM 6:00 AM (6/10) TO 6:00 AM (6/11).
6/11	8 AM	97	245	86	102				57	100	75	65	GAS - 140,400
													WATER PER DAY - 6254.8
6/11	9 AM	98	245	88	103				58	100	71	61	GWR - 22.4
6/11	10 AM	100	245	90	104				60	102	70	60	
6/11	11 AM	98	248	88	102				62	102	80	69	
6/11	12NOON	99	245	90	105				62	101	74	62	
6/11	1 PM	98	248	89	105				50	102	60	47

GEOTHERMAL FIELD TEST DATA

PAGE 40

DATE 6/11/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st 2,900 X .500
FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH CKE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
6/11		14ADJ 30POS																			
6/11	2 PM	14ADJ 30/64	1188	350	230	250	250				35	260	210	134,421	8123.1	166.3	4706.2	89.9	6148.8	96,000	21.8
6/11	2:30	14ADJ 30POS	1193																		
6/11	3 PM	14ADJ 30/64	1191	350	230	250	250				35	260	210	134,421	8286.7	163.6	4793.6	87.4	6024	96,000	22.3
6/11	3:30	14ADJ 30POS	1182																		
6/11	4 PM	14ADJ 30/64	1182	350	230	250	255				35	260	210	134,421	8447.7	161	4879.6	86	5928	96,000	22.6
6/11	4:30	14ADJ 30/64	1179																		
6/11	5 PM	14ADJ 30/64	1178	375	230	248	250				35	260	210	134,421	8611.1	163.4	4968.0	88.4	6043.2	96,000	22.2
6/11		14ADJ 30POS																			
6/11	5:30	14ADJ 30POS	1173																		
6/11	6 PM	14ADJ 30/64	1175	375	230	250	255				35	260	205	134,925	8770.2	159.1	5055.1	87.1	5908.8	96,000	22.8
6/11	6:30	14ADJ 30POS	1172																		
6/11	7 PM	14ADJ 30/64	1170	375	230	250	255				35	260	210	134,421	8931.8	161.6	5144.0	88.9	6012	96,000	22.3
6/11	7:30	14ADJ 30POS	1167	2:00 PM - 8:00 PM			* DENOTES CORRECTED GAS VOLUMES							*128,744					*5698.2		*22.59
6/11	8 PM	14ADJ 30/64	1165	375	230	248	255				35	260	215	131,398	9093.7	161.9	5228.5	84.5	5913.6	96,000	22.2

GEOTHERMAL FIELD TEST DATA

PAGE 40 CONT

DATE 6/11/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET # PACKER SET # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING WATER FILTER PRESS.			REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	PRESS.			
		PRESS	TEMP	PRESS	TEMP						IN	OUT		
6/11														
6/11	2 PM	85	245	95	110				60	110	65	62	51	
6/11	3 PM	95	245	85	110				45	110	65	77	65	
6/11	4 PM	95	245	85	110				55	110	65	77	55	
6/11	5 PM	95	245	85	112				50	110	60	78	67	
6/11	6 PM	95	245	85	100				60	110	75	80	68	
6/11	7 PM	95	245	88	108				45	110	50	55	48	
6/11	8 PM	95	245	88	110				45	105	60	68	57

GEOTHERMAL FIELD TEST DATA

PAGE 41
DATE 6/11-12/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO# 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS.	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF.	PRESS	TEMP								
6/11	8:30	30POS 14ADJ	1160																		
6/11	9 PM	30POS 14ADJ	1161	375	230	250	255				35	260	215	133,933	9255.7	162	5311.0	82.5	5686	96,000	22.8
6/11	9:30	30POS 14ADJ	1159																		
6/11	10 PM	30POS 14ADJ	1157	380	230	250	255				35	260	215	133,933	9417.5	161.8	5393.4	82.4	5860.8	96,000	22.8
6/11	10:30	30POS 14ADJ	1155																		
6/11	11 PM	30POS 14ADJ	1152	380	230	252	255				35	260	215	133,933	9579.1	161.6	5475.9	82.5	5858.4	96,000	22.8
6/11	11:30	30POS 14ADJ	1151																		
6/11	12 MN	30POS 14ADJ	1147	400	230	246	255				34	260	215	132,006	9740.8	161.7	5558.2	82.3	5856	96,000	22.5
6/12	12:30	30POS 14ADJ	1146																		
6/12	1 AM	30POS 14ADJ	1142	400	230	246	255				34	260	215	132,006	9901.1	160.3	5640.2	82.0	5815.2	96,000	22.7
6/12	1:30	30POS 14ADJ	1138																		
6/12	2 AM	30POS 14ADJ	1138	400	230	247	255				34	260	215	132,006	10061.7	160.6	5722.2	82.0	5822.4	96,000	22.6
6/12	2:30	30POS 14ADJ																			
6/12	3 AM	30POS 14ADJ	1140	400	230	246	255				34	260	215	132,006	10211.6	159.9	5804.4	82.2	5810.4	96,000	22.7
		9:00 PM - 3:00 AM	* DENOTES CORRECTED VOLUMES											*127,165					*5572.7		*22.82

GEOTHERMAL FIELD TEST DATA

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DATE 6/11-12/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO SUPPLY	REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		IN	OUT		
		PRESS	TEMP.	PRESS	TEMP.										
6/11	9 PM	96	245	88	102				50	98	71	71	59	142	
6/11	10 PM	97	245	88	97				50	95	62	73	60	139	
6/11	11 PM	97	245	88	96				50	95	65	75	61	138	
6/11	12 MN	97	246	88	97				55	94	65	76	64	136	
6/12	1 AM	97	246	88	97				55	94	67	77	64	136	
6/12	2 AM	97	246	88	95				57	92	70	79	64	136	
6/12	3 AM	97	245	88	93				58	90	70	78	65	135

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DATE 6/12/79

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER : 1st _____ X _____

[illegible]

GEOTHERMAL FIELD TEST DATA

PAGE 43
DATE 6/12/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHCKE SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/12	7:30	30POS 14ADJ	1122																		
6/12	8 AM	30POS 14ADJ	1123	400	230	246	255				34	260	215	132.006	11,015.7	158.2	6215.5	82.9	5786.9	96,000	22.8
6/12	8:30	30POS 14ADJ	1120																		
6/12	9 AM	30POS 14ADJ	1127	400	230	248	255				33	260	210	130,524	11,174.0	158.3	6300.3	84.8	5834.4	96,000	22.3
6/12	9:30	30POS 14ADJ	1115																		
6/12	10 AM	30POS 14ADJ	1114	400	230	250	255				33	260	210	130,524	11,332.4	158.4	6392.1	91.8	6004.8	96,000	21.7
6/12	10:30	30POS 14ADJ	1114																		
6/12	11 AM	30POS 14ADJ	1115	450	230	252	255				33	260	210	130,524	11,489.2	156.8	6495.2	103.1	6237.6	96,000	20.9
6/12	11:30	30POS 14ADJ	1115																		
6/12	12 NOON	30POS 14ADJ	1112	400	230	250	255				32	260	210	128,531	11,647.5	158.3	6594.0	98.8	6170.4	96,000	20.8
			8:00 AM - 12: NOON				*DENOTES CORRECTED VOLUMES.							*124,919					*5785.7		*21.59
6/12	12:30	30POS 14ADJ	1106																		
6/12	1 PM	30POS 14ADJ	1105	500	235	253	260				32	260	210	128,531	11,805.5	158	6676.0	82	5760	96,000	22.3
6/12	1:30	30POS 14ADJ	1104																		
6/12	2 PM	30POS 14ADJ	1102	500	235	253	260				32	260	210	128,531	11,963.5	158	6757.2	81.2	5740.8	96,000	22.3

GEOHERMAL FIELD TEST DATA

PAGE 43 CONT.DATE 6/12/79COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLINCOUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
		PRESS	TEMP.	PRESS	TEMP										
6/12	8 AM	98	246	90	98				61	95	85	70	75	142	
6/12	9 AM	100	245	90	102				65	100	89	73	75	142	
6/12	10 AM	105	245	95	104				65	105	81	75	80	142	BETWEEN 10:30 AM & 11:30 AM - SHUT DOWN CHEMICAL PUMP.
6/12	11 AM	105	245	100	115				70	105	94	79	85	148	SOUTHERN PETROLEUM LABS CAUGHT FLUID SAMPLES.
6/12	12NOON	100	245	90	108				58	107	86	73	75	142	
6/12	1 PM	95	245	90	110				55	110	86	70	60	152	LIQUID SAMPLES CAUGHT BY SOUTHERN PETROLEUM LABS.
6/12	2 PM	100	245	90	110				54	110	84	69	60	152

GEOTHERMAL FIELD TEST DATA

PAGE 44

DATE 6/12/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930(SELECTIVE) SAND MA-6

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/12	2:30	30POS 14ADJ	1103																		
6/12	3 PM	30POS 14ADJ	1105	500	234	252	255				32	260	211	128,444	12,120.3	156.8	6839.5	82.3	5738.4	96,000	22.3
6/12	3:30	30POS 14ADJ	1104																		
6/12	4 PM	30POS 14ADJ	1102	500	235	253	255				32	260	210	128,531	12,277.7	157.4	6421.5	82.0	5745.6	96,000	22.4
6/12	4:30	30POS 14ADJ	1102																		
6/12	5 PM	30POS 14ADJ	1095	500	236	252	255				32	260	210	128,531	12,434.6	156.9	7003.6	82.1	5736.0	96,000	22.4
6/12	5:30	30POS 14ADJ	1095																		
6/12	6 PM	30POS 14ADJ	1094	525	234	250	260				32	260	210	128,531	12,592.4	157.8	7085.3	81.7	5748.0	96,000	22.4
6/12	6:30	30POS 14ADJ	1093	1:00 PM	6:00 PM	*DENOTES CORRECTED VOLUMES							*123,101					*5476.1		*22.48	
6/12	7 PM	30POS 14ADJ	1090	550	233	250	255				30	260	214	124,097	12,748.7	156.3	7166.4	81.1	5697.6	96,000	21.8
6/12	7:30	30POS 14ADJ	1086																		
6/12	8 PM	30POS 14ADJ	1086	550	235	256	255				32	260	215	128,064	12,095.9	157.2	7251.0	84.6	5803.2	96,000	22.0
6/12	8:30	30POS 14ADJ	1086																		
6/12	9 PM	30POS 14ADJ	1090	550	235	250	255				32	260	215	128,064	13,062.0	156.1	7335.8	84.8	5781.6	96,000	22.0
6/12	9:30	30POS 14ADJ	1093

GEOTHERMAL FIELD TEST DATA

PAGE 44 CONT
DATE 6/12/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER				REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.	CASING	PRESS.		NITRO. SUPPLY	
		PRESS	TEMP	PRESS	TEMP							IN	OUT		
6/12	3 PM	100	245	90	112				58	110	60	86	71	152	
6/12	4 PM	100	245	90	111				60	110	55	86	75	152	
6/12	5 PM	100	245	90	110				55	110	55	86	76	155	
6/12	6 PM	100	246	90	110				55	110	65	86	78	158	
6/12	7 PM	100	246	90	108				60	108	78	78	62	158	
6/12	8 PM	105	245	95	104				60	104	80	91	74	158	
6/12	9 PM	102	245	95	100				60	98	70	92	74	BIED DOWN CASING TO 250#. MUD/SURFACE.

GEOTHERMAL FIELD TEST DATA

PAGE 45

DATE 6/12-13/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500 FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHK SIZE	TUBING PRESS	CASING PRESS.	W.H. TEMP	MANF TEMP	MANF PRESS.	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/12	10 PM	30POS 14ADJ	1084	200	234	247	255				32	260	215	128,064	13,216.9	154.9	7440.4	104.6	6228.0	96,000	20.6
6/12	10:30	30POS 14ADJ	1083																		
6/12	11 PM	30POS 14ADJ	1084	210	235	246	255				32	260	215	128,064	13,373.5	156.6	7538.1	97.7	6103.2	96,000	21.0
6/12	11:30	30POS 14ADJ	1083																		
6/12	12 MN	30POS 14ADJ	1085	225	234	246	253				32	260	215	128,064	13,531.5	158.0	7617.8	79.7	5704.8	96,000	22.4
6/12	12:30	30POS 14ADJ	1081																		
6/13	1 AM	30POS 14ADJ	1079	225	237	248	255				32	260	215	128,064	13,685.6	154.1	7696.8	79.0	5594.4	96,000	22.9
6/13	1:30	30POS 14ADJ	1080																		
6/13	2 AM	30POS 14ADJ	1079	225	238	248	253				32	260	215	128,064	13,841.5	155.9	7775.8	79.0	5637.6	96,000	22.8
6/13	2:30	30POS 14ADJ	1079																		
6/13	3 AM	30POS 14ADJ	1078	225	238	248	250				32	260	215	128,064	13,996.9	155.4	7854.7	78.9	5623.2	96,000	22.8
6/13	3:30	30POS 14ADJ	1078																		
6/13	4 AM	30POS 14ADJ	1077	225	237	248	255				31	260	215	126,047	14,152.9	156.0	7933.4	78.8	5632.8	96,000	22.4
6/13	4:30	30POS 14ADJ	1076																		
6/13				10:00 PM - 4:00 AM			*DENOTES CORRECTED VOLUMES.							*122,379					*5458.4		*22.42

GEOHERMAL FIELD TEST DATA

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DATE 6/12-13/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		IN	OUT		
		PRESS	TEMP.	PRESS	TEMP.										
6/12	10 PM	110	245	100	98				70	97	80	96	80	154	
6/12	11 PM	100	245	92	96				60	95	72	65	50	154	
6/12	12 MN	100	245	92	96				60	93	70	80	64	154	
6/13	1 AM	100	245	92	96				65	92	72	80	64	150	
6/13	2 AM	100	245	92	95				60	90	58	89	72	150	
6/13	3 AM	100	245	92	96				60	90	60	89	71	150	
6/13	4 AM	100	245	90	92				60	90	58	75	64	149

GEOTHERMAL FIELD TEST DATA

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DATE 6/13/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLS PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/13	5 AM	30POS 14ADJ	1075	250	236	248	255				31	260	215	126,047	14,307.9	155.0	8011.4	78.0	5592.0	86,000	22.5
6/13	5:30	30POS 14ADJ	1074																		
6/13	6 AM	30POS 14ADJ	1073	260	236	248	255				31	260	215	126,047	14,463.9	156.0	8089.5	78.1	5618.4	96,000	22.4
6/13	6:30	30POS 14ADJ	1070																		
6/13	7 AM	30POS 14ADJ	1068	275	235	248	255				31	260	215	126,047	14,620.0	156.1	8167.7	78.2	5623.2	96,000	22.4
6/13	7:30	30POS 14ADJ	1067																		
6/13	8 AM	30POS 14ADJ	1067	250	235	248	255				31	260	126,047	14,775.8	155.8	8246.8	79.1	5637.6	96,000	22.4	
6/13	8:30	30POS 14ADJ	1066																		
6/13	9 AM	30POS 14ADJ	1065	250	235	248	250				31	260	215	126,047	14,930.9	154.2	8327.1	80.3	5628.0	96,000	22.4
6/13	9:30	30POS 14ADJ	1065		5:00	AM - 9:00 AM	* DENOTES CORRECTED VOLUMES				VOLUMES			*120,719					*5371.9		*22.47
6/13	10 AM	30POS 14ADJ	1065	250	232	248	255				31	260	215	126,047	15,085.2	155.2	8440.0	112.9	6434.4	96,000	19.5
6/13	10:30	30POS 14ADJ	1066																		
6/13	11 AM	30POS 14ADJ	1068	250	230	248	255				31	260	215	126,047	15,240.7	155.5	8588.2	148.2	7288.8	96,000	17.3
6/13	11:30	30POS 14ADJ	1068																		
6/13	12 NOON	30POS 14ADJ	1067	250	230	248	255				31	260	215	126,047	15,396.1	155.4	8816.0	227.8	9166.8	96,000	13.8

GEOHERMAL FIELD TEST DATA

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DATE _____

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLINCOUNTY or PARISH ST. MARY STATE LOUISIANA PERF. _____ SAND _____

TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
		PRESS	TEMP	PRESS	TEMP										
6/13	5 AM	100	245	90	93				60	90	70	75	62	150	
6/13	6 AM	100	246	90	93				58	90	70	70	58	148	
6/13	7 AM	100	246	90	92				58	91	68	80	63	148	
6/13	8 AM	95	245	85	94				55	99	65	74	55	150	
6/13	9 AM	100	245	90	102				65	100	75	90	75	150	
6/13	10 AM	100	245	90	106				65	102	70	85	70	150	METER #2 PICKING UP INTERFERENCE FROM DUMP VALVE VIBRATIONS.
6/13	11 AM	105	245	95	109				70	105	80	90	75	150	METER #2 PICKING UP INTERFERENCE FROM DUMP VALVE VIBRATIONS.
6/13	12NOON	110	245	100	110				70	105	80	90	85	155	METER #2 PICKING UP INTERFERENCE FROM SUMP VALVE VIBRATIONS.

GEOHERMAL FIELD TEST DATA

PAGE 47
DATE 6/13/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CHCKE SIZE	TUBING PRESS	CASING PRESS	W H TEMP.	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	FRESS	TEMP.								
6/13	1 PM	30POS 14ADJ	1067	250	230	248	255				31	260	215	126,047	15,548.9	152.8	8944.1	128.1	6741.6	96,000	18.7
6/13	2 PM	30POS 14ADJ	1066	300	230	250	255				32	260	215	128,064	15,703.3	154.4	9029.5	85.4	5755.2	96,000	22.2
6/13	3 PM	30POS 14ADJ	1062	380	230	254	255				31	260	215	126,047	15,885.0	181.7	9090.0	60.5	5812.8	96,000	21.7
6/13	4 PM	30POS 14ADJ	1062	390	232	254	255				31	260	215	126,047	16,112.8	227.8	REMARKS		5467.2	96,000	23.0
		30POS																			
6/13	5 PM	30POS 14ADJ	1060	400	230	255	255				31	260	215	126,047	16,340.4	227.6			5462.4	96,000	23.0
6/13	6 PM	30POS 14ADJ	1057	400	228	256	255				31	260	215	126,047	16,569.0	228.6			5486.4	96,000	23.0
6/13	7 PM	30POS 14ADJ	1055	400	230	255	255				31	260	215	126,047	16,797.1	228.1			5474.4	96,000	23.0
6/13	8 PM	30POS 14ADJ	1052	400	230	255	255				31	260	215	126,047	17,024.7	227.6			5448.0	96,000	23.1
			5:00 PM - 8:00 PM					*DENOTES CORRECTED VOLUMES						*120,719					*5217.0		*23.14
6/13	9 PM	30POS 14ADJ	1053	400	230	248	255				30	260	215	123,998	17,251.5	226.8			5443.2	96,000	22.8
6/13	10 PM	30POS 14ADJ	1045	400	230	248	255				30	258	218	123,264	17,477.8	226.3			5431.2	96,000	22.7
6/13	11 PM	30POS 14ADJ	1048	400	232	252	255				30	258	218	123,264	17,555.7	SEE	REMARKS		96,000		
6/13	12 MN	30POS 14ADJ	1045	405	230	252	255				30	258	218	123,264	17,782.0	226.3			5431.2	96,999	22.7

GEOHERMAL FIELD TEST DATA

PAGE 47 CONT

DATE 6/13/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND

TUBING SIZE SET @ PACKER SET @ CASING SIZE SET @ T.D. ORIFICE METER (1st) X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		IN	OUT		
		PRESS	TEMP	PRESS	TEMP										
6/13	1 PM			BY PASSED FOR PAINTING										158	S P L TAKING GAS & FLUID SAMPLES
6/13	2 PM														
6/13	3 PM	100	245	90	111				20	110	10	44	27	155	NO.2 METER ISOLATED --NO READING.
6/13	4 PM	110	246	100	98				25	105	25	50	33	155	NO.2 METER ISOLATED --NO READING.
6/13															
6/13	5 PM	110	245	100	110				28	109	40	53	36	155	COOLER BACK PRESSURE SET @ 130#.
6/13	6 PM	130	245	120	110				30	105	40	55	37	155	
6/13	7 PM	130	245	120	110				30	105	40	60	40	158	7:10 - BY PASS SALT WATER DISPOSAL WELL TO CHECK FLOW METER #1.
6/13	8 PM	128	245	120	100				8	99	0	32	12	158	8:05 - RECHECK METER #1. 8:25 - INTO DISPOSAL WELL.
6/13	9 PM	128	245	120	98				32	95	46	58	41	158	
6/13	10 PM	127	245	120	98				40	94	50	65	49	156	
6/13	11 PM	127	245	120	95				45	92	57	70	52	156	METER #2 TO LINE #2. CALIBRATION CHECK ON METER #2.
6/13	12 MI	127	246	120	94				45	90	50	66	48	155

GEOTHERMAL FIELD TEST DATA

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DATE 6/14/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 SAND MA-6
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500)

FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH/KE SIZE	TUBING PRESS.	CASING PRESS.	W.H. TEMP.	MANF TEMP.	MANF PRESS.	READING	CALC SAND	CORS COUP.	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/14	1 AM	30POS 14ADJ	1044	400	235	250	255				30	258	218	123,264	18,008.0	226.0			5424	96,000	22.7
6/14	2 AM	30POS 14ADJ	1046	405	234	250	255				30	258	218	123,264	18,233.8	225.8			5419.2	96,000	22.7
6/14	3 AM	30POS 14ADJ	1037	400	234	250	255				30	260	218	123,715	18,459.1	225.3			5407.2	96,000	22.9
6/14	4 AM	30POS 14ADJ	1037	400	233	250	255				30	260	215	123,998	18,684.4	225.3			5407.2	96,000	22.9
				1:00 AM - 4:00 AM	*DENOTES CORRECTED VOLUMES									*118,487					*5163.4		*22.95
6/14	5 AM	30POS 14ADJ	1034	405	233	250	255				30	260	215	123,998	18,909.4	225.0			5400.0	96,000	23.0
6/14	6 AM	30POS 14ADJ	1035	405	228	250	255				29	258	215	123,546	19,134.2	224.8			5395.2	96,000	22.9
6/14	7 AM	30POS 14ADJ	1032	405	230	248	255				29	258	215	123,546	19,360.5	226.3			5431	96,000	22.7
6/14	8 AM	30POS 14ADJ	1036	405	230	248	255				29	258	215	123,546	19,585.7				5404.8	96,000	22.8
6/14				5:00 AM - 8:00 AM	*DENOTES CORRECTED VOLUMES									*116,836					*5164.0		*22.63
6/14	9 AM	30POS 14ADJ	1031	405	230	255	255				29	258	215	123,546	19,811	225.3			5407.2	96,000	22.8
6/14	10 AM	30POS 14ADJ	1028	400	230	254	255				28	260	210	120,230	20,036	225			5400	96,000	22.2
6/14	11 AM	30POS 14ADJ	1026	400	225	247	253				29	255	210	121,241	20,261.5	225.5			5412	96,000	22.4
6/14	12 NOON	30POS 14ADJ	1028	400	227	248	255				30	258	210	123,996	20,490	228.5			5484	96,000	22.6
				9:00 AM - 12 NOON	*DENOTES CORRECTED VOLUMES.									*116,683					*5182		*22.52

GEOHERMAL FIELD TEST DATA

PAGE 48 CONT
DATE 6/14/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		WATER FILTER PRESS.			NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP	CASING	PRESS.			
		PRESS	TEMP	PRESS	TEMP							IN	OUT		
6/14	1 AM	128	246	120	94				45	90	57	71	54	154	
6/14	2 AM	128	245	120	94				46	90	60	72	54	154	
6/14	3 AM	128	245	120	93				50	90	60	75	57	152	
6/14	4 AM	128	245	120	93				50	90	60	77	59	150	
6/14	5 AM	128	245	120	93				50	90	62	77	59	150	
6/14	6 AM	128	245	120	93				45	90	65	79	61	150	AVERAGE GAS, WATER & GAS WATER RATIO
6/14	7 AM	128	245	120	96				25	95	40	55	37	150	(24 HOURS).
6/14	8 AM	128	245	120	100				35	100	50	65	45	150	124,796 MCF
6/14	9 AM	128	245	120	106				48	104	60	75	57	145	5609.8 BBLs. WATER /DAY
6/14	10 AM	128	245	120	108				52	105	65	80	60	148	22.2 GAS WATER RATIO
6/14	11 AM	128	245	120	110				55	110	70	86	66	160	
6/14	12NOON	128	245	120	102				60	106	70	83	64	158

GEOTHERMAL FIELD TEST DATA

PAGE 49

DATE 6/14/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500 FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/14	1 PM	30POS 14ADJ	1025	400	226	248	255				30	258	210	123,996	20,714.3	224.3			5383.2	96,000	23
6/14	2 PM	30POS 14ADJ	1026	400	227	248	253				30	258	210	123,996	20,939.4	225.1	47.3		5402.4	96,000	22.9
6/14	3 PM	30POS 14ADJ	1027	400	220	245	253				29	258	205	122,369			159.2	223.8	5371.2	96,000	22.7
6/14	4 PM	30POS 14ADJ	1027	400	224	245	253				30	258	208	124,193			383.1	223.9	5373.6	96,000	23.1
6/14			1:00 PM - 4:00 PM		*DENOTES CORRECTED VOLUMES									*118,447					*5140		*23.04
6/14	5 PM	30POS 14ADJ	1027	400	224	248	253				29	258	206	122,286			606.5	223.4	5361.6	96,000	22.8
6/14	6 PM	30POS 14ADJ	1027	400	225	248	255				29	258	206	122,286			831.2	224.7	5392.8	96,000	22.6
6/14	7 PM	30POS 14ADJ	1025	400	225	248	258				29	258	210	121,912			1054.5	223.8	5359.2	96,000	22.7
6/14	8 PM	30POS 14ADJ	1023	400	228	248	255				30	258	215	123,546			1278.1	223.6	5366.4	96,000	23.0
			5:00 PM - 8:00 PM		*DENOTES CORRECTED VOLUMES									*117,355					*5129.4		*22.87
6/14	9 PM	30POS 14ADJ	1021	400	230	248	255				30	258	215	123,546			1501.7	223.6	5366.4	96,000	23.0
6/14	10 PM	30POS 14ADJ	1022	400	232	248	255				29	258	215	121,469			1724.6	222.9	5349.6	96,000	22.7
6/14	11 PM	30POS 14ADJ	1018	400	232	248	255				29	258	215	121,469			1947.4	222.8	5347.2	96,000	22.7
6/14	12 MN	30POS 14ADJ	1016	400	234	248	253				28	258	214	119,452			2170.2	222.8	5347.2	96,000	22.3
6/14			9:00 PM - 12:00 MN		* DENOTES CORRECTED VOLUMES									*116,339					*5105.7		*22.79

GEOTHERMAL FIELD TEST DATA

PAGE 49 CONTDATE 6/14/79COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLINCOUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
		PRESS	TEMP.	PRESS	TEMP.										
6/14	1 PM	128	245	120	104				65	112	80	91	72	160	
6/14	2 PM	128	245	120	105				65	110	80	94	74	160	
6/14	3 PM	128	245	120	100				55	108	70	80	63	160	
6/14	4 PM	130	245	120	100				70	108	80	94	75	160	
6/14	5 PM	130	245	120	100				70	105	80	96	77	160	
6/14	6 PM	130	245	120	100				70	105	80	99	80	160	
6/14	7 PM	130	245	120	106				78	102	90	100	82	160	
6/14	8 PM	130	246	120	103				70	100	85	100	82	156	
6/14	9 PM	128	245	120	102				68	98	85	100	82	155	
6/14	10 PM	128	245	120	102				68	98	85	100	80	154	
6/14	11 PM	128	245	120	102				68	95	85	100	80	154	
6/14	12 MN	128	245	120	97				67	94	85	100	80	150

GEOTHERMAL FIELD TEST DATA

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DATE 6/15/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/15	1 AM	30POS 14ADJ	1019	400	233	248	253				29	258	215	121,469			2,392.5	222.8	5335.2	93,000	22.8
6/15	2 AM	30POS 14ADJ	1018	400	233	248	255				29	258	215	212,469			2,614.5	222.0	5328.0	93,000	22.8
6/15	3 AM	30POS 14ADJ	1020	400	233	248	255				29	258	215	121,469			2,836.1	221.6	5318.4	93,000	22.8
6/15	4 AM	30POS 14ADJ	1014	400	235	250	256				28	258	215	119,357			3057.6	221.6	5316.0	93,000	22.5
			1:00 AM - 4:00 AM			*DENOTES CORRECTED VOLUMES								*115,829					*5078.4		*22.81
6/15	5 AM	30POS 14ADJ	1017	400	235	252	255				28	258	215	119,357			3279.1	221.6	5316.0	93,000	22.5
6/15	6 AM	30POS 14ADJ	1015	400	235	252	256				29	258	215	121,469			3500.1	221.0	5304.0	93,000	22.9
6/15	7 AM	30POS 14ADJ	1013	400	234	252	256				29	258	215	121,469			3720.9	220.8	5299.2	93,000	22.9
6/15	8 AM	30POS 14ADJ	1013	400	230	248	258				28	258	210	119,792			3941.4	220.6	5299.2	93,000	22.6
			5:00 - 8:00 AM			*DENOTES CORRECTED VOLUMES								*115,463					*5054.5		*22.84
6/15	9 AM	30POS 14ADJ	1012	400	230	248	258				28	258	210	119,792			4163.0	221.6	5318.4	93,000	22.5
6/15	10 AM	30POS 14ADJ	1011	400	230	246	258				28	258	210	119,792			4382.3	219.8	5263.2	93,000	22.7
6/15	11 AM	30POS 14ADJ	1011	400	230	246	255				28	258	210	119,792			4601.9	219.6	5270.4	93,000	22.7
6/15	12 NOON	30POS 14ADJ	1014	400	230	248	254				28	258	210	119,792			4823.0	221.1	5306.4	93,000	22.5
6/15			9:00 AM - 12:00 AM			*DENOTES CORRECTED VOLUMES								*114,729					*5042		*22.75

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. SAND
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st X

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
		PRESS	TEMP	PRESS	TEMP										
6/15	1 AM	128	245	120	97				65	95	80	100	80	150	
6/15	2 AM	128	245	120	95				68	92	85	100	80	148	
6/15	3 AM	128	245	120	94				68	90	85	100	80	150	
6/15	4 AM	128	246	120	94				68	90	85	102	81	148	
6/15	5 AM	128	246	120	94				70	92	85	102	82	148	
6/15	6 AM	128	246	120	94				70	91	85	102	82	146	24 HOUR AVERAGE - 6:00 AM
6/15	7 AM	128	245	120	94				70	92	85	102	82	146	
6/15	8 AM	128	245	120	94				75	100	80	110	87	145	
6/15	9 AM	128	245	120	102				79	100	90	110	87	145	
6/15	10 AM	130	245	120	108				70	105	80	100	80	155	
6/15	11 AM	130	245	120	108				80	105	90	110	90	155	
6/15	12NOON	130	245	120	102				85	105	100	120	95	158

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500 FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (RE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANIF TEMP	MANIF. PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/15	1 PM	30POS 14ADJ	1012	400	228	248	255				28	258	210	119,792			5042.8	219.8	5275.2	93,000	22.7
6/15	2 PM	30POS 14ADJ	1010	400	228	247	253				28	260	210	120,230			5262.8	220	5280	93,000	22.7
6/15	3 PM	30POS 14ADJ	1012	400	230	248	253				29	260	210	122,358			5481.9	219.1	5258.4	93,000	23.3
6/15	4 PM	30POS 14ADJ	1008	400	230	245	256				29	258	213	121,650			5707.7	225.8	5419.2	93,000	22.4
1:00 PM - 4:00 PM		* DENOTES CORRECTED VOLUMES												*115,884					*5079.2		*22.82
6/15	5 PM	30POS 14ADJ	1004	400	228	248	256				28	258	205	120,241			5926.7	219	5256.0	93,000	22.9
6/15	6 PM	30POS 14ADJ	1000	400	225	245	256				28	256	210	119,352			6145.2	218.5	5244	93,000	22.7
6/15	7 PM	30POS 14ADJ	999	400	228	245	256				28	256	210	119,352			6362.9	217.7	5224.8	93,000	22.8
6/15	8 PM	30POS 14ADJ	999	400	230	245	256				28	256	213	119,095			6586.0	223.1	5354.4	93,000	22.2
			5:00 PM - 8:00 PM			*DENOTES CORRECTED VOLUMES								*114,309					*5038.9		*22.68
6/15	9 PM	30POS 14ADJ	998	400	230	245	256				28	256	215	118,919			6799.9	213.9	5133.6	93,000	23.1
6/15	10 PM	30POS 14ADJ	998	400	238	248	256				28	256	215	118,919			7019.3	219.4	5265.6	93,000	22.6
6/15	11 PM	30POS 14ADJ	1000	400	238	248	256				28	256	215	118,919			7234.9	215.6	5174.4	93,000	22.9
6/15	12 MN	30POS 14ADJ	998	400	235	248	256				28	256	215	118,919			7452.7	217.8	5227.2	93,000	22.7
6/15	1 AM	30POS 14ADJ	998	400	235	248	256				28	256	215	118,919			7668.2	215.2	5172.0	93,000	23.0

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
		PRESS	TEMP	PRESS	TEMP										
6/15	1 PM	130	245	120	100				88	105	100	120	98	160	
6/15	2 PM	130	246	120	101				87	110	100	120	98	160	
6/15	3 PM	130	245	120	102				100	105	110	120	98	160	
6/15	4 PM	130	245	120	108				89	110	100	120	98	160	PROVED METER
															METER CHECK RESULTS:
6/15	5 PM	130	245	120	108				87	105	100	120	98	160	TANK READING: 100" = 74.0 BBLs. @ 108°
6/15	6 PM	130	245	120	108				85	105	98	120	98	157	METER READING: 73.98 BBLs @ 108°F
6/15	7 PM	130	245	120	105				83	105	98	120	98	154	METER READING: 76.5 BBLs @ 245°F
6/15	8 PM	130	245	120	100				81	98	95	120	98	152	FACTOR = 1.003
6/15	9 PM	130	245	120	98				76	98	90	110	93	150	
6/15	10 PM	130	245	120	98				76	98	90	110	93	150	
6/15	11 PM	130	245	120	98				76	98	90	110	93	150	
6/15	12 MN	130	245	120	93				75	93	90	110	90	150	
6/16	1 AM	130	245	120	96				76	93	91	110	90	144

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CH (KE SIZE	TUBING PRESS.	CASING PRSS.	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/16	2 AM	30POS 14ADJ	998	400	235	249	255				28	256	215	118,919			7883.2	215.0	5160.0	93,000	23.0
6/16	3 AM	30POS 14ADJ	996	400	232	248	253				28	256	215	118,919			8100.6	217.4	5217.6	93,000	22.8
6/16	4 AM	30POS 14ADJ	996	400	230	248	260				28	256	215	118,919			8316.7	216.1	5186.4	100,000	22.3
6/16	5 AM	30POS 14ADJ	996	400	230	250	255				28	256	215	118,919			8533.0	216.3	5191.2	100,000	23.0
6/16	6 AM	30POS 14ADJ	993	400	230	250	260				28	256	218	118,648			8749.8	216.8	5203.2	100,000	23.0
6/16	7 AM	30POS 14ADJ	993	400	230	248	258				28	256	215	118,919			8966.6	216.8	5203.2	100,000	23.0
6/16	8 AM	30POS 14ADJ	993	400	230	248	258				28	256	215	118,919			9184.7	218.1	5234.4	100,000	22.7
6/16	9 AM	30POS 14ADJ	993	400	230	248	258				28	256	215	118,919			9401.6	216.9	5205.6	98,000	22.8
6/16	9:10	SHUT DOWN COOLERS'S BY-PASS TO DISPOSAL WELL. 2:00 AM - 9:00 AM										*DENOTES CORRECTED VOLUMES			*114,309				*4970.0		*22.99
6/16	9:13	5 1/2" CASING	ROSE 1 1/2"	PRESSURE ON DISPOSAL WELL = 100#. TEMPERATURE FROM 88° TO 225°.																	
6/16	9:20	PRESSURE ON DISPOSAL WELL = 115#. TEMPERATURE 240° CASING 120#.																			
6/16	9:30	PRESSURE ON DISPOSAL WELL = 125#. TEMPERATURE 240° CASING 130#. CONDUCTOR & SURFACE PIPE ROSE 1 1/4" - 5 1/2" CASING ROSE TO 3".																			
6/16	9:35	PRESSURE ON DISPOSAL WELL = 120#. TEMPERATURE 240° CASING 135#.																			
6/16	9:36	WATER TO SURFACE BETWEEN CASING & SURFACE PIPE. FLOW DIRECT TO PIT.

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[illegible]

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE SET # PACKER CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH/KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/16	10 AM	30POS 14ADJ	993	400	230	248	255				28	256	215	118,919			9613.1	211.5	5076	98,000	23.4
6/16	11 AM	30POS 14ADJ	993	400	232	250	255				28	256	218	118,648			9840.0	226.9	5445.6	98,000	21.8
6/16	12 NOON	30POS 14ADJ	987	400	230	150	255				27	256	210	117,202			10,042.5	202.5	4860	98,000	24.1
6/16	1 PM	30POS 14ADJ	988	400	230	250	253				27	256	210	117,202			10,257.8	215.3	5167.2	98,000	22.7
6/16	2 PM	30POS 14ADJ	985	400	230	250	255				28	256	213	118,480			10,474.6	216.6	5198.4	98,000	26.1
			10:00 AM - 2:00 PM			*DENOTES CORRECTED VOLUMES								*113,238					*4932.3		*22.96
6/16	3 PM	30POS 14ADJ	989	400	230	248	253				27	258	215	117,206			10,926.2	218.2	5236.8	98,000	22.4
6/16	4 PM	30POS 14ADJ	989	400	230	250	253				28	258	215	135,490			10,926.2	233.4	5601.6	98,000	24.2
6/16	5 PM	30POS 14ADJ	987	400	220	250	255				27	258	210	117,634			11,127.5	201.3	4831.2	98,000	24.3
6/16	6 PM	30POS 14ADJ	985	400	223	250	255				28	258	210	119,792			11,345.0	217.5	5220.0	110,000	22.9
			3:00 PM - 6:00 PM			*DENOTES CORRECTED VOLUMES								*113,447					*4978.7		*22.79
6/16	7 PM	30POS 14ADJ	985	400	220	252	255				27	258	210	117,634			11,578.1	233.1	5594.4	110,000	21.0
6/16	8 PM	30POS 14ADJ	984	400	220	251	255				27	258	210	117,634			11,784.8	206.7	4960.8	110,000	23.7
6/16	9 PM	30POS 14ADJ	982	400	230	240	258				27	258	215	133,538			12,067.8	223.0	5352	110,000	25.0
6/16	10 PM	30POS 14ADJ	982	400	235	248	260				27	258	215	133,538			12,227.3	219.5	5268	110,000	25.3

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER 1st _____ X _____

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		IN	OUT		
		PRESS	TEMP.	PRESS	TEMP.										
6/16	10 AM	130	246	120	105				0	125				160	FLOWING TO PIT AFTER COOLING FILTER & DISPOSAL WELL ON BY-PASS.
6/16	11 AM	128	245	120	90				0	120				160	
6/16	12NOON	128	245	120	108				0	98				160	BY-PASS COOLER TO PIT FOR PICTURE
6/16	1 PM	128	255	120	170				0	95				160	
6/16	2 PM								0	90				160	COOLER ON BY-PASS FLOWING TO PIT BY-PASS FILTER & DISPOSAL WELL.
6/16	3 PM								0	95				163	
6/16	4 PM								0	95				164	
6/16	5 PM								0	90				164	
6/16	6 PM								0	90				164	
6/16	7 PM								0	85				165	
6/16	8 PM								0	80				165	
6/16	9 PM								0	75				158	
6/16	10 PM								0	75				158

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COMPANY GRUJ FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. ORIFICE METER (1st 2.900 X .500

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHK SIZE	TUBING PRESS	CASING PRESS	W.H. TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/16	11 PM	30POS 14ADJ	982	400	230	248	260				27	258	215	117,206			12,448.0	220.7	5296.8	110,000	22.1
6/16	12 MN	30POS 14ADJ	982	400	230	248	260				27	258	215	117,206			12,667.8	219.8	5275.2	110,000	22.2
6/17	1 AM	30POS 14ADJ	982	400	233	250	260				27	258	215	117,206			12,886.9	219.	5258.4	110,000	22.3
6/17	2 AM	30POS 14ADJ	982	400	230	248	260				27	258	215	117,206			13,105.3	218.4	5241.6	110,000	22.4
			11:00 PM - 2:00 AM				* DENOTES CORRECTED VOLUMES							*112,247					*5020.2		*22.34
6/17	3 AM	30POS 14ADJ	982	400	233	248	260				27	258	215	117,206			13,324.5	219.2	5260.8	110,000	22.3
6/17	4 AM	30POS 14ADJ	982	400	230	248	260				27	258	215	117,206			13,544.6	220.	5282.4	110,000	22.2
6/17	5 AM	30POS 14ADJ	982	400	232	248	258				27	258	215	117,206			13,761.9	217.5	5215.2	110,000	22.5
6/17	6 AM	30POS 14ADJ	982	400	234	248	258				27	258	215	117,206			13,980.4	218.5	5244.0	110,000	22.4
			3:00 AM - 6:00 AM				*DENOTES CORRECTED VOLUMES							*112,247					*5009.5		*22.41
6/17	7 AM	30POS 14ADJ	982	400	234	248	258				27	258	215	117,206			14,197.5	217.	5210.4	110,000	22.5
6/17	8 AM	30POS 14ADJ	981	400	234	248	258				27	258	215	117,206			14,415.0	217.5	5220	110,000	22.5
6/17	9 AM	30POS 14ADJ	985	400	235	248	255				27	258	215	117,206			14,638	223	5352	110,000	22.9
6/17	10 AM	30POS 14ADJ	982	400	235	249	255				27	258	215	117,206			14,851.1	213.	5114.4	110,000	22.9
6/17	11 AM	30POS 14ADJ	981	400	235	249	255				27	258	215	117,206			15,064.2	213.1	5114.4	110,000	22.9

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHECK SIZE	TUBING PRESS	CASING PRESS	WELL TEMP	MANIF TEMP	MANIF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/17	12 NOON	30POS 14ADJ	981	400	235	249	255				27	258	215	117,206	15,278.9	214.7			5152.8	110,000	22.7
6/17	1 PM	30POS 14ADJ	981	400	235	249	252				27	258	210	117,634	15,497.5	218.6			5246.4	110,000	22.4
6/17	2 PM	30POS 14ADJ	981	400	225	249	252				27	258	210	117,634	15,718	220.5			5292	110,000	22.2
6/17	3 PM	30POS 14ADJ	981	400	225	249	252				27	258	210	117,634	15,931.3	213.3			5119.2	110,000	23
		12: NOON - 3:00 PM				* DENOTES CORRECTED VOLUMES								*112,579					*4981.5		*22.60
6/17	4 PM	30POS 14ADJ	981	400	225	249	252				27	258	210	117,634	16,155.5	224.3			5380.3	110,000	21.9
6/17	4:30	30POS 14ADJ	TURNED WELL BACK INTO COOLER & FILTERS & FLOWING INTO DISPOSAL WELL FOR OPERATIONAL CHECK.																		
6/17	4:35		5 MINUTE READINGS.									DISPOSAL WELL PRESSURE 10#			TEMPERATURE	105°	DISPOSAL WELL CASING PRES. 10#				
6/17	4:40										DISPOSAL WELL PRESSURE 8#			TEMPERATURE	105°	DISPOSAL WELL CASING PRES. 5#					
6/17	4:45										DISPOSAL WELL PRESSURE 8#			TEMPERATURE	105°	DISPOSAL WELL CASING PRES. 5#					
6/17	4:50										DISPOSAL WELL PRESSURE 10#			TEMPERATURE	110°	DISPOSAL WELL CASING PRES. 5#					
6/17	4:55										DISPOSAL WELL PRESSURE 10#			TEMPERATURE	110°	DISPOSAL WELL CASING PRES. 5#

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st 2.900 X .500

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA							
DATE	TIME	CH/KE SIZE	TUBING PRESS	CASING PRESS	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO	
											DIFF	PRESS	TEMP									
6/17	5 PM	30POS 14ADJ	981	400	227	248	255				26	258	210	115,435			16,368.7	213.2	5116.8	110,000	22.6	
6/17	6 PM	30POS 14ADJ	981	400	225	249	255				26	258	210	115,435			16,577	208.8	4999.2	110,000	23.1	
6/17	7 PM	30POS 14ADJ	981	400	225	249	255				26	258	210	115,435			16,790.6	213.6	5126.4	110,000	22.5	
6/17	8 PM	30POS 14ADJ	981	400	225	249	255				26	258	210	115,435			17,006.0	215.4	5169.6	110,000	22.3	
6/17	9 PM	30POS 14ADJ	977	5:00 PM - 8:00 PM 400	230	248	260	*DENOTES CORRECTED VOLUMES				25	258	212	*110,556 13,038			17,226.3	220.8	*4866.2 5287.2	110,000	*22.72 21.3
6/17	10 PM	30POS 14ADJ	977	400	230	248	260				25	258	210	113,193			17,442.5	216.2	5188.8	110,000	21.8	
6/17	11 PM	30POS 14ADJ	977	400	229	248	260				25	258	215	112,781			17,657.9	215.4	5169.6	110,000	21.8	
6/17	12 MN	30POS 14ADJ	975	400	227	248	260				25	258	215	112,781			17,870.3	212.4	5097.6	110,000	22.1	
6/18	1 AM	30POS 14ADJ	975	400	230	248	260				25	258	210	113,193			18,085.8	214.7	5152.8	110,000	21.9	
6/18	2 AM	30POS 14ADJ	972	400	230	248	255				25	258	210	113,193			18,301.8	216.0	5184.0	110,000	21.8	
6/18	3 AM	30POS 14ADJ	972	400	227	248	258				25	258	210	113,193			18,514.7	212.9	5109.6	110,000	22.1	
6/18	4 AM	30POS 14ADJ	974	400	230	248	260				25	258	212	113,038			18,729.4	214.7	5152.8	110,000	21.9	
6/18	4:15			9:00 PM - 4:00 AM	* DENOTES CORRECTED VOLUMES									*108,256					*4920.0		*22.0	
6/18	5 AM	30POS 14ADJ	977	400	230	248	260				25	258	212	113,038			18,940.8	211.4	5073.6	110,000	22.2	
6/18	6 AM	30POS 14ADJ	975	400	230	248	260				25	258	210	113,193			19,155.9	215.1	5162.4	110,000	21.9

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
		PRESS	TEMP	PRESS	TEMP										
6/17	5 PM	128	245	120	112				17	106	25	30	25	165	5:15 PM - DISPOSAL WELL PRESSURE=17# .TEMPERATURE=105° CASING=30#
6/17	6 PM	128	245	120	110				23	110	30	45	35	175	
6/17	7 PM	128	245	120	108				25	110	35	50	35	175	
6/17	8 PM	128	245	120	106				26	100	40	50	40	175	
6/17	9 PM	126	245	120	101				25	98	40	50	40	175	
6/17	10 PM	125	245	120	99				23	98	30	50	38	175	
6/17	11 PM	125	245	120	96				24	95	35	50	38	170	
6/17	12 MN	125	245	120	96				25	96	35	50	40	170	
6/18	1 AM	125	245	120	94				15	90	30	48	32	175	
6/18	2 AM	126	245	120	93				20	90	30	48	35	175	
6/18	3 AM	126	245	120	92				25	90	30	50	38	175	
6/18	4 AM	125	245	120	94				20	90	35	50	38	178	
6/18	4:15														4:15 AM - MANUMATIC SHUT-IN ON ADJ.
6/18	5 AM	125	245	120	94				25	90	30	50	38	140	SIDE (SAFETY SYSTEM LEAK), 4:30 AM = REPAIRED & FLOWING ON ADJ. SIDE AGAIN.
6/18	6 AM	125	245	120	94				25	90	35	50	38	138

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHCK SIZE	TUBING PRESS	CASING PRESS.	WH TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
6/18	7 AM	30POS 14ADJ	975	400	235	249	260				25	258	210	113,193			19,359.7	203.8	4891.2	110,000	23.1
6/18	8 AM	30POS 14ADJ	975	400	235	249	255				26	258	215	115,015			19,572	212.8	5095.2	110,000	22.6
6/18	9 AM	30POS 14ADJ	980	400	235	249	255				26	258	215	115,015			19,214.8	219.8	5155.2	110,000	22.3
6/18	10 AM	30POS 14ADJ	980	400	225	249	255				26	258	215	115,015			19,994.5	207.5	4984.8	110,000	23.1
		7:00 AM - 10:00 AM				* DENOTES CORRECTED VOLUMES								*109,706					*4846.7		*22.63
6/18	11 AM	30POS 14ADJ	971	400	225	249	255				26	258	215	115,015			20,2046.8	212.8	5095.2	110,000	22.6
6/18	12 NOON	30POS 14ADJ	970	400	225	249	255				26	258	215	115,015			20,452.0	215.2	4924.8	110,000	23.4
6/18	1 PM	30POS 14ADJ	970	400	225	245	255				26	258	215	115,015			20,631.8	179.8	4315.2	110,000	26.7
6/18	2 PM	30POS 14ADJ	968	400	225	245	255				26	258	215	115,015			20,841.5	214.7	5152.8	110,000	22.3
6/18		1:00 PM - 2:00 PM (DISREGARD 1:00 PM FLUID READING)				*DENOTES CORRECTED VOLUMES								*110,155					*4829.7		*22.81
6/18	3 PM	30POS 14ADJ	968	400	225	245	255				25	258	206	113,540			21,058.0	211.8	5076.0	110,000	23.4
6/18	4 PM	30POS 14ADJ	968	400	225	245	255				25	258	206	113,540			21,269.5	211.8	5076.0	110,000	23.4
6/18	5 PM	30POS 14ADJ	968	400	225	245	255				25	258	206	113,540			21,481.1	211.8	5076.0	110,000	23.4
6/18	6 PM	30POS 14ADJ	969	400	225	245	255				25	258	206	113,540			21,696.9	215.8	5179.2	110,000	21.9
		3:00 PM - 6:00 PM				* DENOTES CORRECTED VOLUMES								*108,736					*4883.3		*22.27

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		IN	OUT		
6/18	7 AM	125	248	120	96				25	90	35	55	38	140	
6/18	8 AM	125	248	120	96				30	100	40	55	40	140	
6/18	9 AM	125	249	120	108				35	100	40	60	45	135	
6/18	10 AM	125	245	120	108				40	100	50	60	50	135	
6/18	11 AM	125	245	120	109				43	108	50	69	50	133	
6/18	12NOON	125	245	120	100				43	108	50	69	50	133	
6/18	1 PM	125	245	120	115				40	108	50	69	50	133	
6/18	2 PM	125	245	120	115				43	113	50	65	50	129	
6/18	3 PM	125	245	120	104				45	115	50	65	50	129	
6/18	4 PM	125	245	120	104				45	115	50	65	50	129	
6/18	5 PM	125	245	120	105				45	110	50	65	50	125	
6/18	6 PM	125	245	120	105				45	110	50	65	50	130

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 SAND MA-6
TUBING SIZE SET # PACKER CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500
FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH (KE SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF. TEMP	MANF. PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
6/18	7 PM	30POS 14ADJ	965	400	225	245	255				26	258	200	116,313			21,903.0	206.	4946.4	110,000	23.5
6/18	8 PM	30POS 14ADJ	965	400	225	245	255				26	258	200	16,313			22,117.0	214	5136	110,000	22.6
6/18	9 PM	30POS 14ADJ	961	400	225	245	255				25	258	200	114,054			22,336.6	219.6	5270.4	110,000	21.6
6/18	10 PM	30POS 14ADJ	962	400	225	248	258				24	258	208	111,082			22,548.0	211.4	5073.6	110,000	21.8
		7:00 PM - 10:00 PM				* DENOTES CORRECTED VOLUMES								*109,623					*4928.7		*22.24
6/18	11 PM	30POS 14ADJ	963	400	230	248	258				24	258	210	110,906			22,762.1	214.	5138.4	110,000	22.5
6/19	12 MN	30POS 14ADJ	960	400	230	248	255				24	258	210	110,906			22,970.7	208.6	5006.4	110,000	22.1
6/19	1 AM	30POS 14ADJ	962	400	228	248	255				24	258	210	110,906			23,181.0	210.8	5047.2	110,000	21.9
6/19	2 AM	30POS 14ADJ	963	400	230	248	258				24	255	210	110,295			23,391.0	210.0	5040.0	110,000	21.8
6/19		11:00 PM - 2:00 AM				*DENOTES CORRECTED VOLUMES								*106,213					*4803.2		*22.11
6/19	3 AM	30POS 14ADJ	961	400	230	248	258				24	255	210	110,295			23,601.2	210.	5044.8	110,000	21.8
6/19	4 AM	30POS 14ADJ	962	400	230	248	258				24	255	210	110,295			23,811.6	210.4	5049.6	110,000	21.8
6/19	5 AM	30POS 14ADJ	962	400	230	248	258				24	255	210	110,295			24,022.4	210.8	5059.2	110,000	21.8
6/19	6 AM	30POS 14ADJ	960	400	228	248	255				24	255	212	110,144			24,231.9	209.5	5028.0	110,000	21.9
6/19		3:00 AM - 6:00 AM				* DENOTES CORRECTED VOLUMES								*105,563					*4817		*21.9

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN

COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6

TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER		NITRO. SUPPLY	REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		PRESS.			
		PRESS	TEMP	PRESS	TEMP							IN	OUT		
6/18	7 PM	125	245	120	105				45	110	50	70	55	130	
6/18	8 PM	125	245	120	108				40	110	50	70	50	130	
6/18	9 PM	125	245	120	104				40	100	50	70	55	130	
6/18	10 PM	125	245	120	102				38	100	50	60	55	130	
6/18	11 PM	125	245	120	100				38	98	50	70	58	130	
6/18	12 MN	125	245	120	98				37	100	50	60	50	130	
6/19	1 AM	125	245	120	100				37	100	50	60	50	128	
6/19	2 AM	125	245	120	100				40	98	50	70	55	128	
6/19	3 AM	125	245	120	100				35	98	50	65	50	128	
6/19	4 AM	125	245	120	100				40	99	50	65	50	128	
6/19	5 AM	125	245	120	100				40	95	50	60	55	128	
6/19	6 AM	125	245	120	98				38	95	50	65	35	130

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE SET # PACKER # CASING SIZE SET # T.D. ORIFICE METER (1st 2.900 X .500

FLANGE TAPS

		WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
DATE	TIME	CHECK SIZE	TUBING PRESS	CASING PRESS	W H TEMP	MANF TEMP	MANF PRESS	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBL'S PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/19	7 AM	30POS 14ADJ	960	0	235	248	255				24	258	212	110,755			24,424.0	192.1	4610.4	110,000	24.0
6/19	8 AM	30POS 14ADJ	960	200	235	245	255				24	258	212	110,755			24,633.7	209.7	5032.8	110,000	22.0
6/19	9 AM	30POS 14ADJ	960	200	230	249	255				24	258	215	110,503			24,843.7	210	5040.0	110,000	21.9
6/19	10 AM	30POS 14ADJ	960	200	225	249	255				25	258	215	112,782			25,052.5	208.8	5011.2	110,000	22.5
		7:00 AM - 10:00 AM	*DENOTES CORRECTED VOLUMES											*106,461					*4854.2		*21.93
6/19	11 AM	30POS 14ADJ	960	200	230	249	255				25	258	210	113,193			25,262.2	209.7	5032.8	110,000	22.5
6/19	12 NOON	30POS 14ADJ	960	200	225	249	255				27	258	210	117,634			25,469.0	206.8	4963.2	110,000	23.7
6/19	1 PM	30POS 14ADJ	960	200	225	249	255				25	258	210	113,193			25,680.5	211.5	5076.0	110,000	22.3
6/19	1:45	BY-PASS COOLER TO DISPOSAL WELL																			
		11:00 AM - 1:00 PM	* DENOTES CORRECTED VOLUMES											*109,848					*4790.4		*22.93
6/19	2 PM	30POS 14ADJ	960	200	225	249	255				24	258	200	111,750			25,894.3	213.8	5131.2	110,000	21.8
6/19	3 PM	30POS 14ADJ	960	200	225	249	255				24	258	200	111,750			26,095.1	211.7	5080.8	110,000	22.0
6/19	4 PM	30POS 14ADJ	960	200	225	249	255				24	258	200	111,750			26,306.1	211.7	5080.8	110,000	22.0
6/19	5 PM	30POS 14ADJ	955	225	220	249	255				24	258	200	111,750			26,514.7	207.9	4989.6	110,000	22.4
6/19		2:00 PM - 5:00 PM	* DENOTES CORRECTED VOLUMES											*107,020					*4737		22.59

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER		NITRO. SUPPLY	REMARKS	DISPOSAL WELL TEMPERATURES & PRESSURES W/COOLER BY-PASSED
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP		PRESS.				
		PRESS	TEMP	PRESS	TEMP							IN	OUT			
6/19	7 AM	125	245	120	100				38	95	50	65	55	130	1:50 PM = 60#	
6/19	8 AM	125	245	120	100				40	95	50	65	55	128	1:55 PM = 70#	
															2:00 PM = 80#	
6/19	9 AM	125	245	120	106				50	105	55	72	58	128	2:05 PM = 80#	
															2:10 PM = 85#	
6/19	10 AM	125	245	120	110				50	102	60	72	60	128	2:15 PM = 90#	
															2:20 PM = 95#	
															2:25 PM = 90#	
															2:30 PM = 93# 238°	
															2:35 PM = 93# 238°	
6/19	11 AM	125	245	120	110				50	110	60	73	60	127	2:40 PM = 93# 240°	
															2:45 PM = 93# 240°	
6/19	12NOON	125	245	120	100				55	110	65	78	60	127	2:50 PM = 93# 240°	
															2:55 PM = 93# 240°	
6/19	1 PM	125	245	120	112				55	112	62	80	65	126	3:00 PM = 93# 240°	
															3:05 PM = 93# 240°	
6/19	BY PASSED COOLER TO DISPOSAL WELL.														3:10 PM = 93# 240°	
															3:15 PM = 93# 240°	
6/19	2 PM								80					124	3:20 PM = 92# 240°	
															3:25 PM = 93# 240°	
6/19	3 PM								93	240		120	105	122	3:30 PM = 93# 240°	
															3:45 PM = 92# 240°	
6/19	4 PM								93	240		120	105	122	4:00 PM = 93# 240°	
															4:30 PM = 93# 240°	
6/19	5 PM								98	238		120	107	124	5:00 PM = 98# 238°

GEOTHERMAL FIELD TEST DATA

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COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. ORIFICE METER (1st 2.900 X .500 FLANGE TAPS

DATE	TIME	WELLHEAD DATA				MANIFOLD DATA					GAS MEASURING DATA				FLUID DATA						
		CH (RE SIZE	TUBING PRESS	CASING PRESS	WH TEMP.	MANF. TEMP	MANF. PRESS.	READING	CALC SAND	CORS COUP	ORIFICE READING			VOLUME	FLUID METER	+	FLUID METER	+	BBLs PER DAY	CHLORIDES PPM OR SP. G.	GAS WATER RATIO
											DIFF	PRESS	TEMP								
6/19	6 PM	30POS 14ADJ	955	225	223	249	255				24	258	200	111,750			26,732.9	218.2	5236.8	110,000	21.3
6/19	7 PM	30POS 14ADJ	952	225	225	249	255				25	258	200	111,750			26,949.3	216.4	5193.6	110,000	21.5
6/19	8 PM	30POS 14ADJ	952	200	225	249	255				24	258	205	111,322			27,159.0	209.7	5032.8	110,000	22.1
6/19	9 PM	30POS 14ADJ	952	225	225	248	255				24	258	205	111,322			27,367.8	208.8	5011.2	110,000	22.2
6/19		6:00 PM - 9:00 PM				* DENOTES CORRECTED VOLUMES								*106,779					*4847.8		*22.02
6/19	10 PM	30POS 14ADJ	950	225	230	248	260				24	258	210	110,906			27,574.6	206.8	4963.2	110,000	22.3
6/19	11 PM	30POS 14ADJ	947	225	230	248	258				24	258	212	110,755			27,782.5	207.9	4989.6	110,000	22.1
6/19	12 MN	30POS 14ADJ	945	235	230	248	258				24	258	212	110,755			27,994.3	211.8	5083.2	110,000	21.7
6/20	1 AM	30POS 14ADJ	944	225	230	245	260				24	258	215	110,503			28,196.5	202.2	4852.8	110,000	22.7
		10:00 PM - 1:00 AM				* DENOTES CORRECTED VOLUMES								*106,068					*4751.0		*22.32
6/20	2 AM	30POS 14ADJ	942	225	230	248	258				24	258	215	110,503			28,404.5	208.0	4992.0	110,000	22.1
6/20	3 AM	30POS 14ADJ	940	225	230	248	258				24	258	215	110,503			28,611.8	207.8	4975.2	110,000	22.2
6/20	4 AM	30POS 14ADJ	940	225	230	248	258				24	258	215	110,503			28,823.6	211.8	5083.2	110,000	21.7
6/20	5 AM	30POS 14ADJ	940	225	228	248	258				24	258	210	110,906			29,026.9	203.3	4879.2	110,000	22.7
6/20		2:00 AM - 5:00 AM				* DENOTES CORRECTED VOLUMES								*105,911					*4753.6		*22.28

GEOTHERMAL FIELD TEST DATA

PAGE 60 CONT
DATE 6/19-20/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET @ _____ PACKER @ _____ CASING SIZE _____ SET @ _____ T.D. _____ ORIFICE METER (1st _____ X _____)

		COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER			REMARKS
DATE	TIME	INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		PRESS.		NITRO.	
		PRESS	TEMP.	PRESS	TEMP.							IN	OUT	SUPPLY	
6/19	6 PM								98	238		120	107	124	
6/19	7 PM								100	238		120	107	124	
6/19	8 PM								100	238		120	107	124	
6/19	9 PM								100	240		145	120	125	
6/19	10 PM								110	240		150	125	125	
6/19	11 PM								108	238		150	130	125	
6/19	12 MN								108	240		155	135	125	
6/20	1 AM								110	240		155	138	125	
6/20	2 AM								108	240		160	140	125	
6/20	3 AM								110	240		160	140	122	
6/19	4 AM								110	240		160	140	122	
6/19	5 AM								110	240		160	140	122

GEOTHERMAL FIELD TEST DATA

PAGE 61 CONT
DATE 6/20/79

COMPANY GRUY FEDERAL, INC. LEASE FAIRFAX FOSTER SUTTER WELL NO. 2 FIELD EAST FRANKLIN
COUNTY or PARISH ST. MARY STATE LOUISIANA PERF. 15,780 - 930 (SELECTIVE) SAND MA-6
TUBING SIZE _____ SET # _____ PACKER # _____ CASING SIZE _____ SET # _____ T.D. _____ ORIFICE METER (1st _____ X _____

DATE	TIME	COOLER DATA				PUMP DATA			DISPOSAL WELL		CASING	WATER FILTER PRESS.		NITRO. SUPPLY	REMARKS
		INLET		OUTLET		SUCTION PRESS	DISC PRESS	RPM	PRESS	TEMP.		IN	OUT		
6/20	6 AM								110	240		160	145	122	
6/20	7 AM								112	240		160	145	120	
6/20	8 AM								115	240		160	145	122	
6/20	9 AM								120	240		160	149	120	
6/20	10 AM								120	240		160	149	120	
6/20	11 AM								120	240		160	149	120	
6/20	11:01	SHUT WELL IN.													CORROSION COUPONS REMOVED:
	5 1/2"		TEMP.	SURF. CSG.		5 1/2"	TEMP.	SURF. CSG.	5 1/2"	TEMP.	SURF. CSG.				MANIFOLD COUPON-WEIGHT IN = 8.9803 Gm
6/20	11:05		195	215		11:35	150	180	12:05	135	160				WEIGHT OUT = 8.7658 Gm
															WEIGHT LOSS = .2145 Gm
6/20	11:10		185	205		11:40	150	180	12:10	135	155				CALCULATED: 28 MILS/YR LOSS
6/20	11:15		175	190		11:45	150	180	12:15	130	150				DISPOSAL
															WELL COUPON-WEIGHT IN = 8.8487 Gm
6/20	11:20		165	190		11:50	145	175	12:20	130	130				WEIGHT OUT = 8.7851 Gm
															WEIGHT LOSS = .0636 Gm
6/20	11:25		160	185		11:55	145	165	12:25	130	130				CALCULATED: 8 MILS/YR LOSS
6/20	11:30		155	180		12NOON	140	160	12:30	130	130				

SOUTHERN PETROLEUM LABORATORIES, INC.

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(713) 668-4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

GEOTHERMAL TESTING
FAIRFAX FOSTER SUTTER #2
FRANKLIN FIELD

May and June, 1979

Prepared for:

GRUY FEDERAL, INC.
2500 Tanglewilde, Suite 150
Houston, Texas 77063

By:

SOUTHERN PETROLEUM LABORATORIES, INC.
110 South Petro Lane, P.O. Box 20807
Houston, Texas 77025

SOUTHERN PETROLEUM LABORATORIES, INC.

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RESULTS

SOUTHERN PETROLEUM LABORATORIES, INC.

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: May 25, 1979 Time: 9:30 PM Temp:

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

ppm

Copper	Dissolved Solids	
Zinc	Total Suspended Solids	
Boron	Calcium	
Arsenic	Magnesium	
Chromium	Carbonate	
Mercury	Bicarbonate	
Lead	Chlorides	91,681
Cadmium	Total Iron	
SUS	Sulfate	<1
Viscosity	Dissolved Silicate	
Sodium	Density	
Potassium	Conductivity	
	pH	

All results in milligrams per liter unless otherwise noted

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo
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(713) 668 4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70504
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: May 25, 1979 Time: 10:00 PM Temp:

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

ppm

Copper	Dissolved Solids	
Zinc	Total Suspended Solids	
Boron	Calcium	
Arsenic	Magnesium	
Chromium	Carbonate	
Mercury	Bicarbonate	
Lead	Chlorides	92,631
Cadmium	Total Iron	
SUS	Sulfate	< 1
Viscosity	Dissolved Silicate	
Sodium	Density	
Potassium	Conductivity	
	pH	

All results in milligrams per liter unless otherwise noted

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P.O. BOX 5276R
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: May 25, 1979 Time: 11:00 PM Temp:

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

ppm

Copper	Dissolved Solids	
Zinc	Total Suspended Solids	
Boron	Calcium	
Arsenic	Magnesium	
Chromium	Carbonate	
Mercury	Bicarbonate	
Lead	Chlorides	99,756
Cadmium	Total Iron	
SUS	Sulfate	
Viscosity	Dissolved Silicate	
Sodium	Density	
Potassium	Conductivity	
	pH	

All results in milligrams per liter unless otherwise noted

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: May 31, 1979 Time: 11:20 AM Temp: 95°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.28	Dissolved Solids	203,400
Zinc	0.93	Total Suspended Solids	230,400
Boron	74	Calcium	17,000
Arsenic	<.02	Magnesium	2720
Chromium	0.16	Carbonate	0
Mercury	<.005	Bicarbonate	190
Lead	2.5	Chlorides	96,906
Cadmium	0.6	Total Iron	73
SUS		Sulfate	9
*Viscosity	31.8	Dissolved Silicate	99
Sodium	43,386	*Density	1.0735
Potassium	922	Conductivity	
		*pH	5.9

All results in milligrams per liter unless otherwise noted *

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: May 31, 1979 Time: 12:30 PM Temp: 95°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.27	Dissolved Solids	204,000
Zinc	0.93	Total Suspended Solids	220,000
Boron	74	Calcium	17,000
Arsenic	<.02	Magnesium	2190
Chromium	.15	Carbonate	0
Mercury	<.005	Bicarbonate	195
Lead	2.0	Chlorides	83,662
Cadmium	0.7	Total Iron	64
*SUS		Sulfate	5
Viscosity	31.8	Dissolved Silicate	76
Sodium	45,176	*Density	1.0735
Potassium	910	Conductivity	
		*pH	6.4

All results in milligrams per liter unless otherwise noted*

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: May 31, 1979 Time: 1:30 PM Temp: 95°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.21	Dissolved Solids	203,900
Zinc	0.86	Total Suspended Solids	231,700
Boron	74	Calcium	20,050
Arsenic	<.02	Magnesium	2227
Chromium	0.14	Carbonate	0
Mercury	<.005	Bicarbonate	195
Lead	2.4	Chlorides	91,206
Cadmium	0.7	Total Iron	67
SUS		Sulfate	4
*Viscosity	31.8	Dissolved Silicate	75
Sodium	50,621	* Density	1.0735
Potassium	925	Conductivity	
		* pH	5.8

All results in milligrams per liter unless otherwise noted*

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 1, 1979 Time: 8:30 AM Temp: 95°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.20	Dissolved Solids	198,400
Zinc	0.86	Total Suspended Solids	219,700
Boron	75	Calcium	20,050
Arsenic	<.02	Magnesium	2227
Chromium	0.15	Carbonate	0
Mercury	<.005	Bicarbonate	201
Lead	2.6	Chlorides	88,831
Cadmium	1.4	Total Iron	66
* SUS		Sulfate	1
Viscosity	31.9	Dissolved Silicate	71
Sodium	49,644	* Density	1.0735
Potassium	926	Conductivity	
		* pH	6.2

All results in milligrams per liter unless otherwise noted *

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 1, 1979 Time: 12:00 PM Temp: 91°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			ppm
Copper	0.24	Dissolved Solids	200,900
Zinc	0.85	Total Suspended Solids	226,400
Boron	80	Calcium	20,050
Arsenic	<.02	Magnesium	2227
Chromium	0.15	Carbonate	0
Mercury	<.005	Bicarbonate	234
Lead	3.0	Chlorides	91,206
Cadmium	1.0	Total Iron	89
*SUS		Sulfate	3
Viscosity	31.9	Dissolved Silicate	71
Sodium	49.949	* Density	1.0735
Potassium	922	Conductivity	
		* pH	5.9

All results in milligrams per liter unless otherwise noted*

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 2, 1979 Time: 8:00 AM Temp: 91°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.21	Dissolved Solids	199,400
Zinc	0.85	Total Suspended Solids	239,300
Boron	79	Calcium	19,550
Arsenic	<.02	Magnesium	2290
Chromium	0.14	Carbonate	0
Mercury	<.005	Bicarbonate	229
Lead	2.5	Chlorides	90,731
Cadmium	0.7	Total Iron	33
* SUS		Sulfate	1
* Viscosity	31.8	Dissolved Silicate	73
Sodium	48.650	* Density	1.0773
Potassium	916	Conductivity	
		* pH	5.9

All results in milligrams per liter unless otherwise noted*

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 2, 1979 Time: 8:00 PM Temp: 88°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.41	Dissolved Solids	183,400
Zinc	0.83	Total Suspended Solids	186,550
Boron	76	Calcium	18,023
Arsenic	<.02	Magnesium	2365
Chromium	0.14	Carbonate	0
Mercury	<.005	Bicarbonate	162
Lead	2.7	Chlorides	85,505
Cadmium	0.77	Total Iron	63
SUS		Sulfate	<1
• Viscosity	31.2	Dissolved Silicate	70
Sodium	45,554	* Density	1.102
Potassium	1000	Conductivity	
		* pH	6.4

All results in milligrams per liter unless otherwise noted *

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 10, 1979 Time: 7:00 PM Temp:

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.35	Dissolved Solids	181,600
Zinc	4.5	Total Suspended Solids	182,700
Boron	66	Calcium	17,879
Arsenic	<.02	Magnesium	2358
Chromium	0.21	Carbonate	0
Mercury	<.005	Bicarbonate	147
Lead	3.0	Chlorides	91,205
Cadmium	0.82	Total Iron	35
* SUS		Sulfate	<1
Viscosity	31.0	Dissolved Silicate	74
Sodium	48,590	* Density	1.097 24°C
Potassium	1200	Conductivity μ mohs	261,000
		* pH	6.2

All results in milligrams per liter unless otherwise noted *

SOUTHERN PETROLEUM LABORATORIES, INC.

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 11, 1979 Time: 4:45 PM Temp:

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.37	Dissolved Solids	176,900
Zinc	4.7	Total Suspended Solids	185,800
Boron	67	Calcium	17,854
Arsenic	<.02	Magnesium	2376
Chromium	0.20	Carbonate	0
Mercury	<.005	Bicarbonate	176
Lead	2.5	Chlorides	88,783
Cadmium	0.60	Total Iron	50
*SUS		Sulfate	<1
Viscosity	31.2	Dissolved Silicate	45
Sodium	47,300	*Density	1.098
Potassium	1160		24°C
		Conductivity μ moHs	259,000
		*pH	6.5

All results in milligrams per liter unless otherwise noted*

SOUTHERN PETROLEUM LABORATORIES, INC.

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 12, 1979 Time: 10:30 AM Temp: 93°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.36	Dissolved Solids	172,300
Zinc	3.5	Total Suspended Solids	180,000
Boron	59	Calcium	17,978
Arsenic	<.02	Magnesium	2330
Chromium	0.20	Carbonate	0
Mercury	<.005	Bicarbonate	146
Lead	3.0	Chlorides	90,255
Cadmium	0.46	Total Iron	145
* SUS		Sulfate	<1
Viscosity	31.0	Dissolved Silicate	45
Sodium	48,085	* Density	1.097
Potassium	1200		24°C
		Conductivity umohs	259,000
		* pH	6.6

All results in milligrams per liter unless otherwise noted *

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 12, 1979 Time: 11:00 AM Temp: 93°C

For: Gruy Federal
2500 Tanglewilde, Suite 150
Houston, Texas

Invoice No. 84411

METALS

			ppm
Copper	0.34	Dissolved Solids	174,300
Zinc	5.0	Total Suspended Solids	180,500
Boron	55	Calcium	17,916
Arsenic	<.02	Magnesium	2389
Chromium	0.22	Carbonate	0
Mercury	<.005	Bicarbonate	161
Lead	2.7	Chlorides	91,253
Cadmium	1.12	Total Iron	54
* SUS		Sulfate	<1
* Viscosity	31.0	Dissolved Silicate	43
Sodium	48,616	* Density	1.109
Potassium	1040		30°C
		Conductivity μ mohs	258,000
		* pH	6.0

All results in milligrams per liter unless otherwise noted *

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 13, 1979 Time: 2:30 PM Temp: 93°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.38	Dissolved Solids	188,750
Zinc	4.0	Total Suspended Solids	196,150
Boron	64	Calcium	18,278
Arsenic	<.02	Magnesium	2774
Chromium	0.15	Carbonate	9
Mercury	<.005	Bicarbonate	278
Lead	2.4	Chlorides	91,206
Cadmium	0.71	Total Iron	58
* SUS		Sulfate	<1
Viscosity	31.9	Dissolved Silicate	40
Sodium	48,591	* Density	1.107
Potassium	960	Conductivity μ mohs	262,000
		* pH	5.6

All results in milligrams per liter unless otherwise noted*

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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 13, 1979 Time: 2:30 PM Temp: 93°C

For: Gruy Federal
2500 Tanglewilde, Suite 150
Houston, Texas

Invoice No. 84411

METALS

			<u>ppm</u>
Copper	0.36	Dissolved Solids	191,300
Zinc	2.0	Total Suspended Solids	194,950
Boron	62	Calcium	18,478
Arsenic	<.02	Magnesium	2358
Chromium	0.17	Carbonate	0
Mercury	<.005	Bicarbonate	337
Lead	2.7	Chlorides	92,156
Cadmium	0.76	Total Iron	43
* SUS		Sulfate	3
Viscosity	31.0	Dissolved Silicate	30
Sodium	49,092	* Density	1.106
Potassium	960	Conductivity μ mohs	260,000
		* pH	6.2

All results in milligrams per liter unless otherwise noted*

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo
Sammy Russo

SOUTHERN PETROLEUM LABORATORIES, INC.

P.O. BOX 20807
HOUSTON, TEXAS 77025
(713) 668 4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 14, 1979 Time: 3:00 PM Temp: 93°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.40	Dissolved Solids	187,350
Zinc	1.3	Total Suspended Solids	191,800
Boron	62	Calcium	18,478
Arsenic	<.02	Magnesium	2081
Chromium	0.18	Carbonate	0
Mercury	<.005	Bicarbonate	211
Lead	2.0	Chlorides	92,393
Cadmium	0.77	Total Iron	51
*SUS		Sulfate	<1
Viscosity	31.2	Dissolved Silicate	65
Sodium	49,224	* Density	1.108
Potassium	1000	Conductivity μ moHs	232,000
		* pH	6.2

All results in milligrams per liter unless otherwise noted*

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HOUSTON, TEXAS 77025
(713) 668-4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 15, 1979 Time: 2:00 PM Temp: 93°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.38	Dissolved Solids	193,350
Zinc	1.8	Total Suspended Solids	198,700
Boron	65	Calcium	17,579
Arsenic	<.02	Magnesium	2220
Chromium	0.13	Carbonate	0
Mercury	<.005	Bicarbonate	215
Lead	2.5	Chlorides	95,006
Cadmium	0.69	Total Iron	50
* SUS		Sulfate	<1
Viscosity	30.0	Dissolved Silicate	60
Sodium	50,616	* Density	1.108
Potassium	900	Conductivity μ mohs	249,000
		* pH	6.6

All results in milligrams per liter unless otherwise noted *

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HOUSTON, TEXAS 77025
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P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 16, 1979 Time: 3:00 PM Temp: 93°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.39	Dissolved Solids	192,870
Zinc	1.5	Total Suspended Solids	196,742
Boron	63	Calcium	16,900
Arsenic	<.02	Magnesium	2081
Chromium	0.13	Carbonate	0
Mercury	<.005	Bicarbonate	200
Lead	2.0	Chlorides	92,156
Cadmium	0.65	Total Iron	47
* SUS		Sulfate	< 1
Viscosity	30.6	Dissolved Silicate	46
Sodium	49,097	* Density	1.105
Potassium	896	Conductivity μ mohs	248,000
		* pH	6.3

All results in milligrams per liter unless otherwise noted *

SOUTHERN PETROLEUM LABORATORIES, INC.

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(713) 668 4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 17, 1979 Time: 9:30 AM Temp: 93°C

For: Gruy Federal
2500 Tanglewilde, Suite 150
Houston, Texas

Invoice No. 84411

METALS

			<u>ppm</u>
Copper	0.38	Dissolved Solids	193,640
Zinc	1.4	Total Suspended Solids	197,690
Boron	70	Calcium	18,300
Arsenic	<.02	Magnesium	2220
Chromium	0.17	Carbonate	0
Mercury	<.005	Bicarbonate	251
Lead	2.0	Chlorides	91,206
Cadmium	0.68	Total Iron	46
*SUS		Sulfate	<1
Viscosity	31.0	Dissolved Silicate	45
Sodium	48,591	* Density	1.106
Potassium	956	Conductivity μ mohs	249,000
		* pH	6.4

All results in milligrams per liter unless otherwise noted*

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo
Sammy Russo

SOUTHERN PETROLEUM LABORATORIES, INC.

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HOUSTON, TEXAS 77025
(713) 668 4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984 2374

Company: Gruy Federal
Location: Fairfax Foster Sutter # 2
Field: Franklin
Sampled by: SPL, Inc.
Sample Date: June 19, 1979 Time: 2:00 PM Temp: 95°C

For: Gruy Federal Invoice No. 84411
2500 Tanglewilde, Suite 150
Houston, Texas

METALS

			<u>ppm</u>
Copper	0.36	Dissolved Solids	191,740
Zinc	1.2	Total Suspended Solids	195,340
Boron	78	Calcium	17,400
Arsenic	<.02	Magnesium	2200
Chromium	0.17	Carbonate	0
Mercury	<.005	Bicarbonate	221
Lead	2.0	Chlorides	93,106
Cadmium	0.72	Total Iron	16
* SUS		Sulfate	2
Viscosity	31.0	Dissolved Silicate	60
Sodium	49,603	* Density	1.106
Potassium	940	Conductivity μ mohs	238,000
		* pH	6.5

All results in milligrams per liter unless otherwise noted *

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo
Sammy Russo

SOUTHERN PETROLEUM LABORATORIES, INC.

P.O. BOX 20807
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(713) 668-4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

August 22, 1979

Gruy Federal, Inc.
2500 Tanglewilde, Suite 150
Houston, Texas 77063

Attention: Mr. Jim Hartsock

Re: Reservoir Fluid Study
Fairfax Foster Sutter # 2
East Franklin, Louisiana

Dear Mr. Hartsock:

Enclosed are the results of the physical characteristics of a recombined reservoir water from the subject well.

The first time the reservoir water was recombined in a visual cell had a 2 cc port in the top where no visual observations could be made. The bubble points were estimated by the change in compressibility of the P V Relations. This procedure cannot be used for water mixtures. The bubble point has to be observed when the last bubble of gas disappears.

The second recombination was made in a cell where top of the cell could be observed. Equilibrium was obtained after long periods of rocking, 20 - 30 minutes per point, the pressure was stable and would not change even after more rocking.

The bubble point pressure was 11,750 psia at 270° F. This was an observed bubble point and depends on visually seeing a small bubble of gas. Most likely the water is saturated at reservoir conditions.

Please ignore the data that was submitted on the first recombination. We have enjoyed this opportunity to be of service to you.

Sincerely,

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo
Sammy Russo

SR/jmb

SOUTHERN PETROLEUM LABORATORIES, INC.

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HOUSTON, TEXAS 77025
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(318) 984-2374

Pressure Volume Relations of Well
Stream* at 270° F.
(Constant Composition Expansion)

<u>Pressure (PSIA)</u>	<u>Relative Volume (v/vsat)</u>	<u>Density (gm/cc)</u>
12220 RP	0.9989	1.0750
11750 B P	1.0000	1.0746
11000	1.0020	1.0725
10000	1.0049	1.0694
9000	1.0077	1.0694
8000	1.0109	1.0630
7000	1.0141	1.0598
6000	1.0175	1.0562
5000	1.0214	1.0521
4000	1.0264	1.0470
3000	1.0337	1.0396
2000	1.0475	1.0259
1000	1.0897	0.9862

*Separator Gas-Water Ratio = 22.3 SCF/BBL

SOUTHERN PETROLEUM LABORATORIES, INC.

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(318) 984-2374

TABLE

Properties of a 22,3 GWR Mixture at 270° F.
(Basis: GOR Mixture at °F.
API Stock Tank Oil)

<u>Pressure</u> <u>(PSIA)</u>	<u>Bt</u>	<u>Bo</u>	<u>Bg(Ri-Rs)</u>	<u>Rs</u>	<u>(Ri-Rs)</u>	<u>Bg</u>
12220 RP	1.0337					
11750 BP	1.0348	1.0348	0	22.8	0	
11000	1.0369					
10000	1.0399	1.0385	0.0014	18.3	4.5	0.000311
9000	1.0428					
8000	1.0461	1.0422	0.0039	14.1	8.7	0.000448
7000	1.0494					
6000	1.0529	1.0460	0.0069	10.4	12.4	0.000556
5000	1.0569					
4000	1.0621	1.0500	0.0121	7.0	15.8	0.000766
3000	1.0697					
2000	1.0840	1.0537	0.0303	3.6	19.2	0.001578
1000	1.1276					
15				0	22.8

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Nomenclature of P-V-T Symbols

- B_g = Gas formation volume factor, Bbls. in reservoir per standard cubic foot.
- R_s = Gas in solution, standard cubic feet per Bbl.
- R_i = Original value of gas in solution, standard cubic feet per Bbl.
- B_o = formation volume factor.
- B_t = Two-phase formation volume factor.
- $$B_t = B_o + (R_i - R_s) B_g$$
- $B_t = B_o$ at bubble point pressure and higher pressures.
- B_i = Value of B_t at original pressure.
- R = Instantaneous producing ratio, standard cubic feet per stock tank Bbl.
- μ_o = Reservoir oil viscosity, centipoise.
- P_b = Bubble point pressure (psia).
- P = Pressure (psia).
- B_b = formation volume factor at bubble point.

Standard Conditions = 14.696 psia and 60° F.

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SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 52768
ZIP 70505
PHONE: 318 984-2374

CERTIFICATE OF ANALYSIS NO. L- 32658

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: SEPARATOR
SAMPLED BY: SPL, INC.
SUBMITTED BY: SPL, INC.
SAMPLE DATE: 5-31-79 @ 11:20 AM

FOR: GRUY FEDERAL
2500 TANGLEWILDE , SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-7-79

ANALYSIS:	MOL %	GPM @ 14.695 PSIA
NITROGEN	2.50	
CARBON DIOXIDE	7.70	
METHANE	89.74	
ETHANE	1.79	
PROPANE	0.20	0.055
ISO-BUTANE	0.06	0.020
N-BUTANE	0.01	0.003
ISO-PENTANE	NIL	NIL
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.078

SPECIFIC GRAVITY @ DEG.F. (AIR=1) 0.6430

CALCULATED B.T.U./CU. FT. 14.695 PSIA AND 50 DEG.F.:
DRY BASIS..... 947
WET BASIS..... 930

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo

HOUSTON
P.O. BOX 20807
ZIP 77025
PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 52768
ZIP 70505
PHONE: 318 984-2374

CERTIFICATE OF ANALYSIS NO. L- 32659

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: SEPARATOR
SAMPLED BY: SPL, INC.
SUBMITTED BY: SPL, INC.
SAMPLE DATE: 5-31-79 @ 1:30 PM

FOR: GRUY FEDERAL
2500 TANGLEWILDE, SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-7-79

ANALYSIS:	MOL %	GPM @ 14.696 PSIA
NITROGEN	0.54	
CARBON DIOXIDE	7.69	
METHANE	89.72	
ETHANE	1.79	
PROPANE	0.20	0.055
ISO-BUTANE	0.06	0.020
N-BUTANE	0.01	0.003
ISO-PENTANE	NIL	NIL
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.078

SPECIFIC GRAVITY @ 60 DEG.F. (AIR=1) 0.6430

CALCULATED B.T.U./CU. FT. @ 14.696 PSIA AND 60 DEG.F.:
DRY BASIS..... 946
WET BASIS..... 930

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo

HOUSTON
P.O. BOX 20807
ZIP 77025
PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 52768
ZIP 70505
PHONE: 318 984-2374

CERTIFICATE OF ANALYSIS NO. L- 92657

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: SEPARATOR
SAMPLED BY: SPL, INC.
SUBMITTED BY: SPL, INC.
SAMPLE DATE: 5-31-79 @ 4 PM

FOR: GRUY FEDERAL
2500 TANGLEWILDE , SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-7-79

ANALYSIS:	MOL %	GPM @ 14.696 PSIA
NITROGEN	0.51	
CARBON DIOXIDE	7.83	
METHANE	89.60	
ETHANE	1.79	
PROPANE	0.20	0.255
ISO-BUTANE	0.06	0.020
N-BUTANE	0.21	0.003
ISO-PENTANE	NIL	NIL
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.078

SPECIFIC GRAVITY @ 60 DEG.F. (AIR=1) 0.6443

CALCULATED B.T.U./CU. FT. @ 14.696 PSIA AND 60 DEG.F.:
DRY BASIS..... 945
WFT BASIS..... 929

SOUTHERN PETROLEUM LABORATORIES, INC.

Larry Russo

HOUSTON
P.O. BOX 20807
ZIP 77025
PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 52768
ZIP 70505
PHONE: 318 284-2374

CERTIFICATE OF ANALYSIS NO. L- 82660

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: SEPARATOR
SAMPLED BY: SPL, INC.
SUBMITTED BY: SPL, INC.
SAMPLE DATE: 6-1-79 @ 8:30 AM

FOR: GRUY FEDERAL
2500 TANGLEWILDE , SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-7-79

ANALYSIS:	MOL %	GPM @ 14.696 PSIA
NITROGEN	0.54	
CARBON DIOXIDE	7.76	
METHANE	89.63	
ETHANE	1.79	
PROPANE	0.20	0.055
ISO-BUTANE	0.06	0.020
N-BUTANE	0.02	0.006
ISO-PENTANE	NIL	NIL
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.081

SPECIFIC GRAVITY @ 60 DEG.F. (AIR=1) 0.6439

CALCULATED B.T.U./CU. FT. @ 14.696 PSIA AND 60 DEG.F.:
DRY BASIS..... 945
WET BASIS..... 929

SOUTHERN PETROLEUM LABORATORIES, INC.

Larry Russo

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PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 57768
ZIP 70505
PHONE: 318 484-2374

CERTIFICATE OF ANALYSIS NO. L- 82661

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: SEPARATOR
SAMPLED BY: SPL, INC.
SUBMITTED BY: SPL, INC.
SAMPLE DATE: 6-1-79 @ 12 PM

FOR: GRUY FEDERAL
2500 TANGLEWILDE, SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-7-79

ANALYSIS:	MOL %	GPM @ 14.696 PSIA
NITROGEN	0.52	
CARBON DIOXIDE	7.81	
METHANE	89.58	
ETHANE	1.80	
PROPANE	0.20	0.055
ISO-BUTANE	0.07	0.023
N-BUTANE	0.02	0.006
ISO-PENTANE	NIL	NIL
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.084

SPECIFIC GRAVITY 60 DEG.F. (AIR=1) 0.6445

CALCULATED B.T.U./CU. FT. 14.696 PSIA AND 60 DEG.F.:
DRY BASIS..... 946
WET BASIS..... 929

SOUTHERN PETROLEUM LABORATORIES, INC.

A handwritten signature in cursive script, reading "Sammy Passer", is written over a horizontal dashed line.

HOUSTON
P.O. BOX 20807
ZIP 77025
PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 57768
ZIP 70505
PHONE 318 284-2374

CERTIFICATE OF ANALYSIS NO. L- 92662

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: SEPARATOR
SAMPLED BY: SPL, INC.
SUBMITTED BY: SPL, INC.
SAMPLE DATE: 6-2-79 @ 8 AM

FOR: GRUY FEDERAL
2500 TANGLEWILDE, SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-7-79

ANALYSIS: MOL % GPM @ 14.696 PSIA

NITROGEN	0.50	
CARBON DIOXIDE	7.87	
METHANE	89.56	
ETHANE	1.79	
PROPANE	0.21	0.050
ISO-BUTANE	0.06	0.020
N-PUTANE	0.01	0.003
ISO-PENTANE	NIL	NIL
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.081

SPECIFIC GRAVITY @ 60 DEG.F. (AIR=1) 0.6448

CALCULATED B.T.U./CU. FT. @ 14.696 PSIA AND 60 DEG.F.:
DRY BASIS..... 945
WET BASIS..... 929

SOUTHERN PETROLEUM LABORATORIES, INC.

HOUSTON
P.O. BOX 20807
ZIP 77025
PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 52768
ZIP 70505
PHONE: 504 484-0174

CERTIFICATE OF ANALYSIS NO. L- 82791

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER #2
FIELD: EAST FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: TEST SEPARATOR
CONDITIONS: 250 PSIG 220 DEG. F.
SAMPLED BY: PAT MACDANIEL (SPL)
SUBMITTED BY: PAT MACDANIEL (SPL)
SAMPLE DATE: 6-12-79 @ 1:45 PM

FOR: GRUY FEDERAL
2522 TANGLEWILDE, SUITE 150
HOUSTON, TEXAS 77063

INVOICE NO.
6-13-79

ANALYSIS: MOL % GPM @ 15.025 PSIA

NITROGEN	0.50	
CARBON DIOXIDE	9.38	
METHANE	89.09	
ETHANE	1.74	0.474
PROPANE	0.20	0.056
ISO-BUTANE	0.06	0.020
N-BUTANE	0.02	0.006
ISO-PENTANE	0.01	0.004
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	100.00	0.560

SPECIFIC GRAVITY 60 DEG.F. (AIR=1) 2.5497

CALCULATED B.T.U./CU. FT. 15.025 PSIA AND 60 DEG.F.:
DRY BASIS..... 961
WLT BASIS..... 944

SOUTHERN PETROLEUM LABORATORIES, INC.

HOUSTON
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ZIP 77025
PHONE: 713 668-4448

SOUTHERN PETROLEUM LABORATORIES, INC.

LAFAYETTE
P.O. BOX 57768
ZIP 70505
PHONE: 518 981-0374

CERTIFICATE OF ANALYSIS NO. L- 32927

COMPANY: GRUY FEDERAL
LOCATION: FAIRFAX FOSTER SUTTER .2
FIELD: EAST FRANKLIN
SAMPLE OF: GAS
SAMPLE POINT: TEST SEPARATOR
CONDITIONS: 220 PSIG 210 DEG. F.
SAMPLED BY: PAT MACDANIEL (SPL)
SUBMITTED BY: PAT MACDANIEL (SPL)
SAMPLE DATE: 6-17-79 3 2:30 PM

FOR: GRUY FEDERAL
2500 TANGLEWILLOW, SUITE 157
HOUSTON, TEXAS 77063

INVOICE NO.
6-13-79

ANALYSIS: MOL % GPM @ 15.225 PSIA

NITROGEN	3.52	
CARBON DIOXIDE	3.33	
METHANE	89.14	
ETHANE	1.72	0.469
PROPANE	2.20	2.056
ISO-BUTANE	0.06	0.023
N-BUTANE	0.22	0.226
ISO-PENTANE	2.21	2.204
N-PENTANE	NIL	NIL
HEXANES	NIL	NIL
HEPTANES	NIL	NIL
	-----	-----
	122.00	2.555

SPECIFIC GRAVITY 60 DEG.F. (AIR=1) 0.6492

CALCULATED B.T.U./CU. FT. @ 15.225 PSIA AND 60 DEG.F.:
DRY BASIS..... 961
WET BASIS..... 944

SOUTHERN PETROLEUM LABORATORIES, INC.

Sammy Russo

SOUTHERN PETROLEUM LABORATORIES, INC.

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HOUSTON, TEXAS 77025
(713) 668-4448

P. O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

GRUY FEDERAL, INC.
FAIRFAX FOSTER SUTTER #2
Franklin Field
Scale on Disposal Well

Calcium Carbonate	88.0%
Iron Carbonate	7.8%
Magnesium Carbonate	2.1%
	<hr/>
Total	97.9%

Balance: Salts, insolubles.

Southern Petroleum Laboratories, Inc.

By Wayne Boling
Wayne Boling

SOUTHERN PETROLEUM LABORATORIES, INC.

P. O. BOX 20807
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(713) 668 4448

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(318) 984 2374

Gruy Federal
2500 Tanglewilde, Suite 150
Houston, Texas 77063

Attention: Mr. Mike Willits

June 11, 1979

Location: Fairfax, Foster, Suttler #2

Filter Deposit:

24.6%	Oil
5.7%	Iron Carbonate
2.0%	Calcium Carbonate
14.2%	Sodium Chloride
67.5%	Clay, Drilling Fluid

Wireline Deposit:

33.5%	Hydrocarbon
66.5%	Iron Carbonate

Southern Petroleum Laboratories, Inc.

By Wayne Boling
Wayne Boling

SOUTHERN PETROLEUM LABORATORIES, INC.

P.O. BOX 20807
HOUSTON, TEXAS 77025
(713) 668-4448

P.O. BOX 52768
LAFAYETTE, LOUISIANA 70501
(318) 984-2374

GRUY FEDERAL, INC.
FAIRFAX FOSTER SUTTER # 2
Franklin Field
H₂S in Separator Gas

<u>Date</u>	<u>Time</u>	<u>H₂S</u>
5-31-79	10:30 am	4 ppm
	11:30 am	4 ppm
	12:30 pm	4 ppm
	2:30 pm	5 ppm
	3:30 pm	5 ppm
	4:30 pm	6 ppm
6-1-79	8:30 am	6 ppm
	9:30 am	6 ppm
	10:30 am	7 ppm
	11:30 am	6 ppm
	12:00 pm	6 ppm
	1:00 pm	6 ppm
6-2-79	8:00 am	6 ppm
	8:00 pm	6 ppm
6-12-79	11:00 am	7 ppm
6-15-79	2:00 pm	7 ppm
6-17-79	11:00 am	7 ppm
6-19-79	2:00 pm	7 ppm

SOUTHERN PETROLEUM LABORATORIES, INC.

Wayne Doling
Wayne Doling

PRESSURE BUILD-UP MODEL ANALYSIS
BY
H.J. GRUY AND ASSOCIATES, INC.

FAIRFAX FOSTER SUTTER NO.2 WELL , EAST FRANKLIN AREA
ST. MARY PARISH , LOUISIANA
ANALYSIS OF SECOND BUILD-UP
WEDGE SHAPED MODEL

0 0. 0. 0. 0. 0. 0.
0. 0. 0. 0. 0. 0. 0.
INPUT DATA TO PROGRAM

BASE PRESSURE = 14.65PSI
RESERVOIR TEMPERATURE = 730. (R)
POROSITY FRACTION = .190
RESERVOIR THICKNESS = 58. FEET
TOTAL COMPRESSIBILITY = .00000400 VOL/VOL/PSI
AVERAGE VISCOSITY = .4100 CP
INITIAL VISCOSITY = .4100 CP
DEPARTURE TIME FROM FIRST STRAIGHT LINE = 51.0167 HOURS
STARTING TIME OF SECOND STRAIGHT LINE = 0.0000 HOURS

FLOW RATES (RBBL / DAY) DURING TEST

PERIOD	RATE	CUM. TIME	INC. S.I. TIME
1	5277.25	71.8	158.0
2	6542.93	268.8	0.0
3	5770.77	330.8	0.0
4	5326.34	403.8	0.0
5	5126.17	491.8	0.0

Y VALUES ARE PWS
.8212607E-01 10603.57 4.731242

RESERVOIR DEFINED BY BOUNDARIES

BOTH BOUNDARIES ARE IMPERVIOUS
X VALUES ARE SUMMATION OF SUPERIMPOSED RATE AND TIME DATA
$$X = \sum (QB \log ((T-T(I)+DT)/(T-T(I-1)-DT(I-1)+DT)))$$

INTERMEDIATE RESULTS CALCULATED BY PROGRAM

INSTRUMENT PRECISION = 4.500PSI
DIMENSIONLESS PRESSURE FUNCTION OF INSTRUMENT PRECISION = 128.60410
RESERVOIR FLUID MOBILITY = 34.679632 MD/CP
NEAREST BOUNDARY DISTANCE SQUARED DIVIDED BY DIFFUSIVITY = 16.119293 HOURS
MAXIMUM RADIUS OF INVESTIGATION = 4873. FEET
DISTANCE FROM WELL TO NEAREST BOUNDARY = 882. FEET
SLOPE OF FIRST STRAIGHT LINE = .80570000E-01 PSI/LOG CYCLE INTERCEPT = 10599.000
SECOND STRAIGHT LINE NOT DEFINED BY DATA

ITERATIONS FOR WEDGE BOUNDARY MODEL WHERE M = 2

SUM OF ERRORS FOR MODEL = 131169.15 THETA = 180.00 ALPHA = 90.00 STD. DEV. = 36.773078

BEST FIT FOR WEDGE BOUNDARY MODEL WHERE M = 2

THETA = 180.00 ALPHA = 90.00 D2 = 882.

X	Y	Y(CALC)	DIF	DT(HRS)
-10962.460	9715.0000	9714.6465	.35351089	2.5166700
-10562.184	9744.0000	9746.6774	-2.6773891	3.0166700
-10223.920	9770.0000	9773.7123	-3.7122796	3.5166700
-9931.1186	9792.0000	9797.0846	-5.0845587	4.0166700
-9673.0810	9812.0000	9817.6562	-5.6561729	4.5166700
-9442.4911	9830.0000	9836.0166	-6.0166308	5.0166700
-9234.1235	9847.0000	9852.5870	-5.5869717	5.5166700
-9044.1160	9862.0000	9867.6784	-5.6784460	6.0166700
-8869.5333	9876.0000	9881.5277	-5.5276971	6.5166700
-8708.0919	9889.0000	9894.3189	-5.3189043	7.0166700
-8557.9806	9901.0000	9906.1983	-5.1982835	7.5166700
-8417.7386	9912.0000	9917.2839	-5.2839056	8.0166700
-8286.1704	9923.0000	9927.6725	-4.6725323	8.5166700
-8162.2853	9932.0000	9937.4445	-5.4444922	9.0166700
-8045.2534	9942.0000	9946.6672	-4.6672331	9.5166700
-7934.3719	9950.0000	9955.3980	-5.3979584	10.016670
-7829.0413	9959.0000	9963.6856	-4.6856166	10.516670
-7728.7452	9967.0000	9971.5724	-4.5724253	11.016670
-7633.0363	9974.0000	9979.0951	-5.0950550	11.516670
-7541.5243	9982.0000	9986.2856	-4.2855598	12.016670
-7453.8667	9989.0000	9993.1721	-4.1721188	12.516670
-7369.7611	9995.0000	9999.7796	-4.7796310	13.016670
-7288.9394	10002.000	10006.130	-4.1302002	13.516670
-7211.1628	10008.000	10012.244	-4.2435312	14.016670
-7136.2175	10014.000	10018.137	-4.1372580	14.516670
-7063.9115	10020.000	10023.827	-3.8272171	15.016670
-6994.0716	10025.000	10029.328	-4.3276770	15.516670
-6926.5412	10031.000	10034.652	-3.6515319	16.016670
-6861.1780	10036.000	10039.810	-3.8104667	16.516670
-6797.8525	10041.000	10044.815	-3.8150980	17.016670
-6736.4466	10046.000	10049.675	-3.6750950	17.516670
-6676.8520	10051.000	10054.399	-3.3992842	18.016670
-6618.9692	10055.000	10058.996	-3.9957404	18.516670
-6562.7068	10060.000	10063.472	-3.4718655	19.016670
-6507.9807	10064.000	10067.834	-3.8344580	19.516670
-6454.7128	10069.000	10072.090	-3.0897735	20.016670
-6352.2685	10077.000	10080.301	-3.3011956	21.016670
-6254.8565	10085.000	10088.147	-3.1472022	22.016670
-6162.0283	10093.000	10095.663	-2.6630206	23.016670
-6073.3928	10101.000	10102.879	-1.8790460	24.016670
-5988.6067	10108.000	10109.822	-1.8216493	25.016670
-5907.3670	10115.000	10116.514	-1.5138288	26.016670
-5829.4052	10121.000	10122.976	-1.9757399	27.016670
-5754.4819	10128.000	10129.225	-1.2251288	28.016670
-5682.3830	10134.000	10135.278	-1.2776894	29.016670
-5612.9162	10141.000	10141.147	-.14735897	30.016670
-5545.9079	10147.000	10146.847	.15343551	31.016670
-5481.2013	10152.000	10152.386	-.38642878	32.016670
-5418.6540	10158.000	10157.777	.22305616	33.016670
-5358.1363	10164.000	10163.027	.97288260	34.016670

-5299.5297	10169.000	10168.145	.85490290	35.016670
-5242.7259	10175.000	10173.138	1.8617236	36.016670
-5187.6254	10180.000	10178.013	1.9866148	37.016670
-5134.1367	10185.000	10182.777	2.2234327	38.016670
-5082.1753	10190.000	10187.433	2.5665523	39.016670
-5031.6634	10195.000	10191.989	3.0108100	40.016670
-4982.5286	10200.000	10196.449	3.5514529	41.016670
-4888.1275	10209.000	10205.095	3.9046819	43.016670
-4798.4903	10218.000	10213.405	4.5949104	45.016670
-4713.1983	10227.000	10221.405	5.5951035	47.016670
-4631.8850	10236.000	10229.118	6.8817378	49.016670
-4554.2283	10244.000	10236.566	7.4341886	51.016670
-4479.9428	10252.000	10243.746	8.2342462	53.016670
-4408.7753	10260.000	10250.734	9.2657297	55.016670
-4340.4996	10267.000	10257.486	9.5141761	57.016670
-4274.9129	10275.000	10264.033	10.966588	59.016670
-4211.8328	10282.000	10270.389	11.611229	61.016670
-4151.0944	10289.000	10276.563	12.437448	63.016670
-4092.5486	10296.000	10282.564	13.435545	65.016670
-4036.0597	10302.000	10288.403	13.596646	67.016670
-3928.7685	10315.000	10299.624	15.375936	71.016670
-3828.3521	10327.000	10310.283	16.717487	75.016670
-3734.0778	10339.000	10320.428	18.571718	79.016670
-3645.3220	10351.000	10330.104	20.895683	83.016670
-3561.5494	10361.000	10339.348	21.651860	87.016670
-3482.2974	10372.000	10348.193	23.807215	91.016670
-3407.1636	10383.000	10356.668	26.332468	95.016670
-3335.7955	10392.000	10364.798	27.201514	99.016670
-3284.5527	10400.000	10370.685	29.314748	102.01667
-3203.1514	10411.000	10380.120	30.879730	107.01667
-3111.4923	10425.000	10390.867	34.132942	113.01667
-3011.9669	10440.000	10402.683	37.316807	120.01667
-2906.8386	10456.000	10415.330	40.669713	128.01667
-2786.6491	10476.000	10429.997	46.003034	138.01667
-2698.3094	10490.000	10440.918	49.082445	146.01667
-2616.0576	10504.000	10451.192	52.808017	154.01667
-2502.6777	10524.000	10465.522	58.478093	166.01667
-2391.5368	10545.000	10479.755	65.244519	179.01667
-2305.6488	10561.000	10490.881	70.119484	190.01667
-2192.1185	10584.000	10505.753	78.247474	206.01667
-2114.6410	10599.000	10516.010	82.990287	218.01667
-1997.8783	10625.000	10531.632	93.368271	238.01667
-1884.4423	10650.000	10546.996	103.00447	260.01667
-1801.3712	10670.000	10558.362	111.63763	278.01667
-1678.9359	10700.000	10575.292	124.70800	308.01667
-1606.6230	10719.000	10585.389	133.61110	328.01667
-1515.7254	10744.000	10598.183	145.81707	356.01667

ARITH. SUM OF DIFFERENCES = 1516.9570 AVERAGE = 15.638732

SUM OF SQUARES OF DIFFERENCES = 131169.15 AVERAGE = 36.773078

ITERATIONS FOR WEDGE BOUNDARY MODEL WHERE M = 4

SUM OF ERRORS FOR MODEL □	13957.689	THETA = 90.00	ALPHA = 45.00	STD. DEV. =	11.995570
SUM OF ERRORS FOR MODEL =	14003.376	THETA = 90.00	ALPHA = 44.00	STD. DEV. =	12.015186
SUM OF ERRORS FOR MODEL =	18627.750	THETA = 90.00	ALPHA = 43.00	STD. DEV. =	13.857801
SUM OF ERRORS FOR MODEL =	27297.286	THETA □ 90.00	ALPHA = 42.00	STD. DEV. =	16.775438

BEST FIT FOR WEDGE BOUNDARY MODEL WHERE M = 4

THETA = 90.00 ALPHA = 45.00 D2 = 882.

X	Y	Y(CALC)	DIF	DT(HRS)
-10962.460	9715.0000	9712.6101	2.3898990	2.5166700
-10562.184	9744.0000	9744.2379	-.23790217	3.0166700
-10223.920	9770.0000	9770.8702	-.87018063	3.5166700
-9931.1186	9792.0000	9793.8403	-1.8403336	4.0166700
-9673.0810	9812.0000	9814.0103	-2.0103100	4.5166700
-9442.4911	9830.0000	9831.9696	-1.9696318	5.0166700
-9234.1235	9847.0000	9848.1394	-1.1393750	5.5166700
-9044.1160	9862.0000	9862.8309	-.83086661	6.0166700
-8869.5333	9876.0000	9876.2809	-.28088434	6.5166700
-8708.0919	9889.0000	9888.6738	.32618660	7.0166700
-8557.9806	9901.0000	9900.1562	.84384359	7.5166700
-8417.7386	9912.0000	9910.8464	1.1536474	8.0166700
-8286.1704	9923.0000	9920.8416	2.1583909	8.5166700
-8162.2853	9932.0000	9930.2228	1.7772330	9.0166700
-8045.2534	9942.0000	9939.0578	2.9421595	9.5166700
-7934.3719	9950.0000	9947.4046	2.5953619	10.016670
-7829.0413	9959.0000	9955.3127	3.6872626	10.516670
-7728.7452	9967.0000	9962.8250	4.1750062	11.016670
-7633.0363	9974.0000	9969.9787	4.0212874	11.516670
-7541.5243	9982.0000	9976.8066	5.1934321	12.016670
-7453.8667	9989.0000	9983.3373	5.6626647	12.516670
-7369.7611	9995.0000	9989.5965	5.4035200	13.016670
-7288.9394	10002.000	9995.6066	6.3933637	13.516670
-7211.1628	10008.000	10001.388	6.6119997	14.016670
-7136.2175	10014.000	10006.959	7.0413437	14.516670
-7063.9115	10020.000	10012.335	7.6651515	15.016670
-6994.0716	10025.000	10017.531	7.4687890	15.516670
-6926.5412	10031.000	10022.561	8.4390380	16.016670
-6861.1780	10036.000	10027.436	8.5639299	16.516670
-6797.8525	10041.000	10032.167	8.8326036	17.016670
-6736.4466	10046.000	10036.765	9.2351820	17.516670
-6676.8520	10051.000	10041.237	9.7626652	18.016670
-6618.9692	10055.000	10045.593	9.4068382	18.516670
-6562.7068	10060.000	10049.840	10.160189	19.016670
-6507.9807	10064.000	10053.984	10.015836	19.516670
-6454.7128	10069.000	10058.033	10.967469	20.016670
-6352.2685	10077.000	10065.864	11.135960	21.016670
-6254.8565	10085.000	10073.375	11.624584	22.016670
-6162.0283	10093.000	10080.602	12.398396	23.016670
-6073.3928	10101.000	10087.572	13.427521	24.016670
-5988.6067	10108.000	10094.314	13.686302	25.016670
-5907.3670	10115.000	10100.847	14.152606	26.016670
-5829.4052	10121.000	10107.193	13.807266	27.016670
-5754.4819	10128.000	10113.366	14.633615	28.016670
-5682.3830	10134.000	10119.383	14.617107	29.016670
-5612.9162	10141.000	10125.255	15.745003	30.016670
-5545.9079	10147.000	10130.994	16.006108	31.016670
-5481.2013	10152.000	10136.609	15.390551	32.016670
-5418.6540	10158.000	10142.110	15.889598	33.016670
-5358.1363	10164.000	10147.504	16.495503	34.016670

-5299.5297	10169.000	10152.799	16.201370	35.016670
-5242.7259	10175.000	10157.999	17.001042	36.016670
-5187.6254	10180.000	10163.111	16.889008	37.016670
-5134.1367	10185.000	10168.140	16.860322	38.016670
-5082.1753	10190.000	10173.089	16.910528	39.016670
-5031.6634	10195.000	10177.964	17.035605	40.016670
-4982.5286	10200.000	10182.768	17.231914	41.016670
-4888.1275	10209.000	10192.175	16.825307	43.016670
-4798.4903	10218.000	10201.332	16.667643	45.016670
-4713.1983	10227.000	10210.260	16.739632	47.016670
-4631.8850	10236.000	10218.975	17.024975	49.016670
-4554.2283	10244.000	10227.490	16.509766	51.016670
-4479.9428	10252.000	10235.818	16.182025	53.016670
-4408.7753	10260.000	10243.969	16.031340	55.016670
-4340.4996	10267.000	10251.951	15.048575	57.016670
-4274.9129	10275.000	10259.774	15.225652	59.016670
-4211.8328	10282.000	10267.445	14.555366	61.016670
-4151.0944	10289.000	10274.969	14.031245	63.016670
-4092.5486	10296.000	10282.353	13.647430	65.016670
-4036.0597	10302.000	10289.601	12.398586	67.016670
-3928.7685	10315.000	10303.713	11.286627	71.016670
-3828.3521	10327.000	10317.339	9.6605285	75.016670
-3734.0778	10339.000	10330.510	8.4901144	79.016670
-3645.3220	10351.000	10343.251	7.7488102	83.016670
-3561.5494	10361.000	10355.587	5.4128902	87.016670
-3482.2974	10372.000	10367.539	4.4609365	91.016670
-3407.1636	10383.000	10379.127	3.8734410	95.016670
-3335.7955	10392.000	10390.367	1.6325063	99.016670
-3284.5527	10400.000	10398.581	1.4192539	102.01667
-3203.1514	10411.000	10411.875	-.87454129	107.01667
-3111.4923	10425.000	10427.210	-2.2095752	113.01667
-3011.9669	10440.000	10444.304	-4.3044542	120.01667
-2906.8386	10456.000	10462.869	-6.8686631	128.01667
-2786.6491	10476.000	10484.737	-8.7368097	138.01667
-2698.3094	10490.000	10501.252	-11.251794	146.01667
-2616.0576	10504.000	10516.967	-12.967314	154.01667
-2502.6777	10524.000	10539.168	-15.168402	166.01667
-2391.5368	10545.000	10561.539	-16.539104	179.01667
-2305.6488	10561.000	10579.241	-18.240703	190.01667
-2192.1185	10584.000	10603.195	-19.194582	206.01667
-2114.6410	10599.000	10619.905	-20.905202	218.01667
-1997.8783	10625.000	10645.647	-20.646911	238.01667
-1884.4423	10650.000	10671.298	-21.298033	260.01667
-1801.3712	10670.000	10690.485	-20.484745	278.01667
-1678.9359	10700.000	10719.383	-19.382811	308.01667
-1606.6230	10719.000	10736.797	-17.797204	328.01667
-1515.7254	10744.000	10759.052	-15.052067	356.01667

ARITH. SUM OF DIFFERENCES = 473.80445 AVERAGE = 4.8845820

SUM OF SQUARES OF DIFFERENCES = 13957.689 AVERAGE = 11.995570

ITERATIONS FOR WEDGE BOUNDARY MODEL WHERE M = 3

SUM OF ERRORS FOR MODEL = 3024.9583 THETA = 120.00 ALPHA = 60.00 STD. DEV. = 5.5843654

BEST FIT FOR WEDGE BOUNDARY MODEL WHERE M = 3

THETA = 120.00 ALPHA = 60.00 D2 = 882.

X	Y	Y(CALC)	DIF	DT(HRS)
-10962.460	9715.0000	9713.5384	1.4616407	2.5166700
-10562.184	9744.0000	9745.3500	-1.3499505	3.0166700
-10223.920	9770.0000	9772.1658	-2.1658113	3.5166700
-9931.1186	9792.0000	9795.3193	-3.3193398	4.0166700
-9673.0810	9812.0000	9815.6725	-3.6724857	4.5166700
-9442.4911	9830.0000	9833.8148	-3.8147719	5.0166700
-9234.1235	9847.0000	9850.1673	-3.1672748	5.5166700
-9044.1160	9862.0000	9865.0413	-3.0413225	6.0166700
-8869.5333	9876.0000	9878.6737	-2.6736933	6.5166700
-8708.0919	9889.0000	9891.2488	-2.2487732	7.0166700
-8557.9806	9901.0000	9902.9131	-1.9130653	7.5166700
-8417.7386	9912.0000	9913.7850	-1.7850094	8.0166700
-8286.1704	9923.0000	9923.9618	-.96181261	8.5166700
-8162.2853	9932.0000	9933.5243	-1.5243155	9.0166700
-8045.2534	9942.0000	9942.5405	-.54053081	9.5166700
-7934.3719	9950.0000	9951.0683	-1.0682642	10.016670
-7829.0413	9959.0000	9959.1571	-.15708802	10.516670
-7728.7452	9967.0000	9966.8499	.15014918	11.016670
-7633.0363	9974.0000	9974.1838	-.18384715	11.516670
-7541.5243	9982.0000	9981.1917	.80826271	12.016670
-7453.8667	9989.0000	9987.9023	1.0977214	12.516670
-7369.7611	9995.0000	9994.3409	.65908629	13.016670
-7288.9394	10002.000	10000.530	1.4697506	13.516670
-7211.1628	10008.000	10006.490	1.5095508	14.016670
-7136.2175	10014.000	10012.240	1.7604404	14.516670
-7063.9115	10020.000	10017.794	2.2062180	15.016670
-6994.0716	10025.000	10023.168	1.8322976	15.516670
-6926.5412	10031.000	10028.374	2.6255137	16.016670
-6861.1780	10036.000	10033.426	2.5739552	16.516670
-6797.8525	10041.000	10038.333	2.6668226	17.016670
-6736.4466	10046.000	10043.106	2.8943041	17.516670
-6676.8520	10051.000	10047.753	3.2474685	18.016670
-6618.9692	10055.000	10052.282	2.7181724	18.516670
-6562.7068	10060.000	10056.701	3.2989773	19.016670
-6507.9807	10064.000	10061.017	2.9830785	19.516670
-6454.7128	10069.000	10065.236	3.7642416	20.016670
-6352.2685	10077.000	10073.405	3.5953359	21.016670
-6254.8565	10085.000	10081.248	3.7518091	22.016670
-6162.0283	10093.000	10088.801	4.1993369	23.016670
-6073.3928	10101.000	10096.091	4.9086474	24.016670
-5988.6067	10108.000	10103.145	4.8546584	25.016670
-5907.3670	10115.000	10109.984	5.0157786	26.016670
-5829.4052	10121.000	10116.627	4.3733399	27.016670
-5754.4819	10128.000	10123.089	4.9111320	28.016670
-5682.3830	10134.000	10129.385	4.6150193	29.016670
-5612.9162	10141.000	10135.527	5.4726254	30.016670
-5545.9079	10147.000	10141.527	5.4730699	31.016670
-5481.2013	10152.000	10147.393	4.6067502	32.016670
-5418.6540	10158.000	10153.135	4.8651579	33.016670
-5358.1363	10164.000	10158.759	5.2407259	34.016670

-5299.5297	10169.000	10164.273	4.7266983	35.016670
-5242.7259	10175.000	10169.683	5.3170216	36.016670
-5187.6254	10180.000	10174.994	5.0062516	37.016670
-5134.1367	10185.000	10180.211	4.7894746	38.016670
-5082.1753	10190.000	10185.338	4.6622403	39.016670
-5031.6634	10195.000	10190.379	4.6205040	40.016670
-4982.5286	10200.000	10195.339	4.6605776	41.016670
-4888.1275	10209.000	10205.027	3.9729347	43.016670
-4798.4903	10218.000	10214.425	3.5754606	45.016670
-4713.1983	10227.000	10223.552	3.4478257	47.016670
-4631.8850	10236.000	10232.427	3.5725011	49.016670
-4554.2283	10244.000	10241.066	2.9342094	51.016670
-4479.9428	10252.000	10249.480	2.5195022	53.016670
-4408.7753	10260.000	10257.684	2.3164330	55.016670
-4340.4996	10267.000	10265.686	1.3143008	57.016670
-4274.9129	10275.000	10273.497	1.5034472	59.016670
-4211.8328	10282.000	10281.125	.87509604	61.016670
-4151.0944	10289.000	10288.579	.42122312	63.016670
-4092.5486	10296.000	10295.866	.13445194	65.016670
-4036.0597	10302.000	10302.992	-.99203207	67.016670
-3928.7685	10315.000	10316.789	-1.7889976	71.016670
-3828.3521	10327.000	10330.015	-3.0153453	75.016670
-3734.0778	10339.000	10342.711	-3.7112053	79.016670
-3645.3220	10351.000	10354.912	-3.9122168	83.016670
-3561.5494	10361.000	10366.650	-5.6503045	87.016670
-3482.2974	10372.000	10377.954	-5.9542658	91.016670
-3407.1636	10383.000	10388.850	-5.8502272	95.016670
-3335.7955	10392.000	10399.362	-7.3620057	99.016670
-3284.5527	10400.000	10407.007	-7.0069026	102.01667
-3203.1514	10411.000	10419.318	-8.3184391	107.01667
-3111.4923	10425.000	10433.427	-8.4270401	113.01667
-3011.9669	10440.000	10449.041	-9.0405482	120.01667
-2906.8386	10456.000	10465.865	-9.8645481	128.01667
-2786.6491	10476.000	10485.514	-9.5142377	138.01667
-2698.3094	10490.000	10500.238	-10.237884	146.01667
-2616.0576	10504.000	10514.160	-10.159707	154.01667
-2502.6777	10524.000	10533.685	-9.6845337	166.01667
-2391.5368	10545.000	10553.197	-8.1970623	179.01667
-2305.6488	10561.000	10568.527	-7.5271321	190.01667
-2192.1185	10584.000	10589.124	-5.1240186	206.01667
-2114.6410	10599.000	10603.396	-4.3960297	218.01667
-1997.8783	10625.000	10625.232	-.23248519	238.01667
-1884.4423	10650.000	10646.821	3.1794453	260.01667
-1801.3712	10670.000	10662.861	7.1388055	278.01667
-1678.9359	10700.000	10686.856	13.144157	308.01667
-1606.6230	10719.000	10701.223	17.776621	328.01667
-1515.7254	10744.000	10719.488	24.512178	356.01667

ARITH. SUM OF DIFFERENCES = 52.177875 AVERAGE = .53791623

SUM OF SQUARES OF DIFFERENCES = 3024.9583 AVERAGE = 5.5843654

BEST FIT FOR WEDGE BOUNDARY ANALOGS

THETA = 120.00 ALPHA = 60.00 D2 = 882.

ITERATIONS FOR PARALLEL BOUNDARY MODEL

SUM OF ERRORS FOR MODEL =	3003.1892	D2 =	862.17	R =	1.00	STD. DEV. =	5.5641991
SUM OF ERRORS FOR MODEL =	3325.9792	D2 =	900.17	R =	.98	STD. DEV. =	5.8907399
SUM OF ERRORS FOR MODEL =	4804.3687	D2 =	918.93	R =	.96	STD. DEV. =	7.0377250
SUM OF ERRORS FOR MODEL =	7293.4450	D2 =	938.48	R =	.94	STD. DEV. =	8.6712257

BEST FIT FOR PARALLEL BOUNDARY MODEL

D1 = 882.17 D2 = 882.17 RATIO = 1.00

X	Y	Y(CALC)	DIF	DT(HRS)
-10962.460	9715.0000	9712.2863	2.7137288	2.5166700
-10562.184	9744.0000	9743.8494	.15057855	3.0166700
-10223.920	9770.0000	9770.4169	-.41694746	3.5166700
-9931.1186	9792.0000	9793.3222	-1.3222475	4.0166700
-9673.0810	9812.0000	9813.4273	-1.4272717	4.5166700
-9442.4911	9830.0000	9833.8148	-3.8147713	5.0166700
-9234.1235	9847.0000	9850.1673	-3.1672743	5.5166700
-9044.1160	9862.0000	9865.0413	-3.0413219	6.0166700
-8869.5333	9876.0000	9878.6737	-2.6736926	6.5166700
-8708.0919	9889.0000	9891.2488	-2.2487724	7.0166700
-8557.9806	9901.0000	9902.9131	-1.9130645	7.5166700
-8417.7386	9912.0000	9913.7850	-1.7850086	8.0166700
-8286.1704	9923.0000	9923.9618	-.96181174	8.5166700
-8162.2853	9932.0000	9933.5243	-1.5243146	9.0166700
-8045.2534	9942.0000	9942.5405	-.54052985	9.5166700
-7934.3719	9950.0000	9951.0683	-1.0682631	10.016670
-7829.0413	9959.0000	9959.1571	-.15708697	10.516670
-7728.7452	9967.0000	9966.8498	.15015028	11.016670
-7633.0363	9974.0000	9974.1838	-.18384601	11.516670
-7541.5243	9982.0000	9981.1917	.80826388	12.016670
-7453.8667	9989.0000	9987.9023	1.0977226	12.516670
-7369.7611	9995.0000	9994.3409	.65908753	13.016670
-7288.9394	10002.000	10000.530	1.4697519	13.516670
-7211.1628	10008.000	10006.490	1.5095521	14.016670
-7136.2175	10014.000	10012.240	1.7604417	14.516670
-7063.9115	10020.000	10017.794	2.2062193	15.016670
-6994.0716	10025.000	10023.168	1.8322989	15.516670
-6926.5412	10031.000	10028.374	2.6255150	16.016670
-6861.1780	10036.000	10033.426	2.5739566	16.516670
-6797.8525	10041.000	10038.333	2.6668240	17.016670
-6736.4466	10046.000	10043.106	2.8943055	17.516670
-6676.8520	10051.000	10047.753	3.2474700	18.016670
-6618.9692	10055.000	10052.282	2.7181738	18.516670
-6562.7068	10060.000	10056.701	3.2989787	19.016670
-6507.9807	10064.000	10061.017	2.9830799	19.516670
-6454.7128	10069.000	10065.236	3.7642430	20.016670
-6352.2685	10077.000	10073.405	3.5953373	21.016670
-6254.8565	10085.000	10081.248	3.7518105	22.016670
-6162.0283	10093.000	10088.801	4.1993382	23.016670
-6073.3928	10101.000	10096.091	4.9086487	24.016670
-5988.6067	10108.000	10103.145	4.8546596	25.016670
-5907.3670	10115.000	10109.984	5.0157797	26.016670
-5829.4052	10121.000	10116.627	4.3733410	27.016670
-5754.4819	10128.000	10123.089	4.9111329	28.016670
-5682.3830	10134.000	10129.385	4.6150201	29.016670
-5612.9162	10141.000	10135.527	5.4726261	30.016670
-5545.9079	10147.000	10141.527	5.4730705	31.016670
-5481.2013	10152.000	10147.393	4.6067506	32.016670
-5418.6540	10158.000	10153.135	4.8651582	33.016670
-5358.1363	10164.000	10158.759	5.2407261	34.016670

-5299.5297	10169.000	10164.273	4.7266984	35.016670
-5242.7259	10175.000	10169.683	5.3170216	36.016670
-5187.6254	10180.000	10174.994	5.0062514	37.016670
-5134.1367	10185.000	10180.211	4.7894743	38.016670
-5082.1753	10190.000	10185.338	4.6622398	39.016670
-5031.6634	10195.000	10190.379	4.6205033	40.016670
-4982.5286	10200.000	10195.339	4.6605768	41.016670
-4988.1275	10209.000	10205.027	3.9729336	43.016670
-4798.4903	10218.000	10214.425	3.5754591	45.016670
-4713.1983	10227.000	10223.552	3.4478239	47.016670
-4631.8850	10236.000	10232.428	3.5724990	49.016670
-4554.2283	10244.000	10241.066	2.9342069	51.016670
-4479.9428	10252.000	10249.481	2.5194994	53.016670
-4408.7753	10260.000	10257.684	2.3164298	55.016670
-4340.4996	10267.000	10265.686	1.3142972	57.016670
-4274.9129	10275.000	10273.497	1.5034433	59.016670
-4211.8328	10282.000	10281.125	.87509177	61.016670
-4151.0944	10289.000	10288.579	.42121849	63.016670
-4092.5486	10296.000	10295.866	.13444696	65.016670
-4036.0597	10302.000	10302.992	-.99203740	67.016670
-3928.7685	10315.000	10316.789	-1.7890037	71.016670
-3828.3521	10327.000	10330.015	-3.0153521	75.016670
-3734.0778	10339.000	10342.711	-3.7112127	79.016670
-3645.3220	10351.000	10354.912	-3.9122249	83.016670
-3561.5494	10361.000	10366.650	-5.6503132	87.016670
-3482.2974	10372.000	10377.954	-5.9542752	91.016670
-3407.1636	10383.000	10388.850	-5.8502372	95.016670
-3335.7955	10392.000	10399.362	-7.3620163	99.016670
-3284.5527	10400.000	10407.007	-7.0069137	102.01667
-3203.1514	10411.000	10419.318	-8.3184509	107.01667
-3111.4923	10425.000	10433.427	-8.4270528	113.01667
-3011.9669	10440.000	10449.041	-9.0405619	120.01667
-2906.8386	10456.000	10465.865	-9.8645629	128.01667
-2786.6491	10476.000	10485.514	-9.5142537	138.01667
-2698.3094	10490.000	10500.238	-10.237901	146.01667
-2616.0576	10504.000	10514.160	-10.159725	154.01667
-2502.6777	10524.000	10533.685	-9.6845529	166.01667
-2391.5368	10545.000	10553.197	-8.1970827	179.01667
-2305.6488	10561.000	10568.527	-7.5271536	190.01667
-2192.1185	10584.000	10589.124	-5.1240415	206.01667
-2114.6410	10599.000	10603.396	-4.3960536	218.01667
-1997.8783	10625.000	10625.233	-.23251059	238.01667
-1884.4423	10650.000	10646.821	3.1794184	260.01667
-1801.3712	10670.000	10662.861	7.1387774	278.01667
-1678.9359	10700.000	10686.856	13.144127	308.01667
-1606.6230	10719.000	10701.223	17.776591	328.01667
-1515.7254	10744.000	10719.488	24.512146	356.01667

ARITH. SUM OF DIFFERENCES = 60.921202 AVERAGE = .62805363

SUM OF SQUARES OF DIFFERENCES = 3003.1502 AVERAGE = 5.5641991