**FIREBALL RIDGE
GEOTHERMAL PROSPECT
CHURCHILL COUNTY
NEVADA**

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**Phillips Petroleum Company
Geothermal Operations**

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INTRODUCTION

The Fireball Ridge geothermal prospect is located in Churchill County, Nevada, approximately 50 miles northeast of Reno (Figure 1). The thermal anomaly straddles Fireball Ridge which is located about ten miles northwest of the Desert Peak geothermal power plant site. The thermal anomaly is transected by two 345 KV power lines.

The best access to Fireball Ridge is by way of Interstate Highway 80, Exit 65 (located about 50 miles east-northeast of Reno). The main access road is located 2.2 miles northeast of Exit 65 along the northwest frontage road (Plate 2). The thermal anomaly, two natural gas lines, and the two power lines are located about eight miles north-northwest along the main access road.

Within the 6°F/100' contour, the area of the thermal anomaly is approximately seven square miles. About one-half of this total is public land while the other half is Southern Pacific or other fee land. The thermal anomaly was first drilled in 1980 during reconnaissance evaluation of the Southern Pacific land. The anomaly was further delineated in 1983 and 1984. During the latter half of 1984, two 1,000 foot strat tests were also drilled.

Previous work conducted in the Fireball Ridge area consists of a geologic reconnaissance study by Willden and Speed, 1974, and a hydrologic reconnaissance study by Harrill, 1970.

FIGURE 1

4147-5-006-1

GEOLOGY

The Fireball Ridge geothermal prospect is located in the northwestern part of the Basin and Range physiographic province. The Basin and Range province consists of a series of elongate mountain ranges separated by alluvium filled valleys. The ranges are often tilted and folded, and are fault bounded on at least one side. This province was largely formed during the Tertiary period when the range blocks were upfaulted relative to the interlying areas. Volcanism is closely associated with this deformation and the northwestern and central parts of this province have a greater than normal heat flow.

Fireball Ridge is located in the structurally complex area of the northeastern part of the Truckee Range. The Truckee Range consists mainly of Tertiary volcanic and sedimentary rocks; however, in the area of Fireball Ridge, Mesozoic metasedimentary and plutonic rocks crop out (Plate 1).

Willden and Speed (1974) describe the northeastern part of the Truckee Range as:

"The eastern division is basalt to near the south end of Fireball Ridge, where high-angle faults bring older rocks in contact with the basalt. Rhyolite intruded and overlain by dacite occurs at the south end of Fireball Ridge, and these rocks are faulted against phyllite and slate assigned a Triassic and Jurassic age. The phyllite and slate unit overlies a unit of intermediate and siliceous metavolcanic rocks, and both units are intruded by a quartz diorite to gabbroic intrusive body. At the north end of Fireball Ridge, the intrusive rocks and probably roof pendants of metamorphic rocks, marble and phyllite, are overlain by dacite and are in fault contact with dacite

extrusives. The dacite is in fault contact with basalt and is probably unconformably overlain by basalt and interlayered sedimentary deposits still farther north."

The structure of the northeastern part of the range is reported by Willden and Speed (1974) as:

"Structurally the Truckee Range from the vicinity of Fireball Ridge southward is a broad, gently southward plunging anticline complicated by high-angle faults in the area of Fireball Ridge. The axis of the anticline lies near the west side of the Ridge and extends to the range front just southwest of the mouth of Miry Place Canyon. Faults that complicate this structure bound Fireball Ridge on the west, east, and south. The western boundary fault essentially parallels the trend of the fold; other faults cross it at small to large angles. Displacement on the faults has been greatest in the central part of Fireball Ridge and dies out to the north and south."

The generalized geologic map accompanying this report is a modified version from Willden and Speed, 1974. This geologic map (Plate 1) has been slightly modified mainly through aerial photographic studies.

HYDROLOGY AND GEOCHEMISTRY

Water Resources-Reconnaissance Series, Report 55 (Harrill, 1970) describes the water resources of the surrounding area; however, little is known about the subsurface hydrology in the proximity of the thermal anomaly. A water sample was taken from one windmill located about one mile southeast of the thermal anomaly and the analysis is included as Table 1 of this report. The windmill is located in Section 4, T23N-R26E (Plates 1 and 2) and has a static water level

of 291 feet. The static water level is at an elevation of approximately 4335 feet. Any geothermal component of this water is not obvious (Table 1).

Although most of the temperature gradient holes are about 300 feet deep and most were drilled with air, water was only evident in strat test #1. Water was encountered during the drilling of strat test #1 at a depth of 640 feet (no sample taken). One can only surmise that, in the main area of the thermal anomaly, the static water level is below a depth of 300 feet.

EXPLORATION RESULTS

In 1980 during evaluation of Southern Pacific land, a drill hole (T-72) was found to have a moderately anomalous ($6.3^{\circ}\text{F}/100'$) temperature gradient (Plate 2). Note that the gradients shown on Plate 2 are the average gradient when the drill holes were probed more than once. In 1983, another drill hole in the area (SP-5) was found to have a highly anomalous temperature gradient. The temperature profile of SP-5 (Appendix A) shows a $13.5^{\circ}\text{F}/100'$ gradient, with a bottom hole temperature of 114°F at 300 feet.

Later in 1983 and in 1984, nineteen additional temperature gradient holes and two 1000 foot strat tests were drilled. The result of this drilling and earlier temperature gradient hole drilling was the discovery of a moderate size thermal anomaly, with 21 of the gradient holes located within the $4^{\circ}\text{F}/100'$ contour (Plate 2). Within this area, all of the drill holes have conductive gradients. Within the $6^{\circ}\text{F}/100'$ contour, the thermal anomaly is approximately seven square miles in areal extent.

Strat test #1, drilled in the SW 1/4, SE 1/4, Section 31, T24N-R26E, was completed on August 20, 1984 (Plate 2). From top to bottom, the lithologic sequence intersected by strat test #1 consists of 130 feet of Quaternary

TABLE 1.

> AMTECH <				AMERICAN TECHNICAL LABORATORIES, INC. 8909 COMPLEX DRIVE - SUITE F SAN DIEGO, CALIFORNIA 92123 (619) 560-7717	
PHILLIPS PETROLEUM CO. 655 EAST 4500 SOUTH SALT LAKE CITY UTAH 84107				LABORATORY NO. 0743-83 DATE OF REPORT 11/07/83 DATE RECEIVED 09/20/83 IDENTIFICATION 49964	
MAJOR SPECIES	AS	Mg/L	Meq/L	SPECIES	ppb
Calcium	Ca	4.79	.239	Ag Silver	
Magnesium	Mg	.2	.0165	Al Aluminum	
Sodium	Na	205	8.896	As Arsenic	
Potassium	K	3	.0767	Au Gold	
Hydroxide	OH			B Boron	4270
Bicarbonate	HCO3	124	2.029	Ba Barium	
Carbonate	CO3			Be Beryllium	
Chloride	Cl	58.3	1.64	Cd Cadmium	
Sulfate	SO4	231	4.805	Ce Cerium	
Sulfide	S			Co Cobalt	
NO2 & NO3	NO3	1.5	.0242	Cr Chromium	
				Cs Cesium	
Fluoride	F	6	.316	Cu Copper	
Bromide	Br			Fe Iron	
Iodide	I			Hg Mercury	
				Li Lithium	< 50
Silica total	SiO2	7.2		Mn Manganese	
Ammonium	NH4	.17	9.42E-03	Mo Molybdenum	
TDS				Ni Nickel	
pH		7.89		P Phosphorus	
EC umhos/cm rec'd		902		Pb Lead	
EC umhos/cm diluted		1070		Rb Rubidium	
Dilution for EC		9		Sb Antimony	
				Se Selenium	
				Sn Tin	
Total major species		640.2	18.06	Sr Strontium	
Cation sum			9.245	Te Tellurium	
Anion sum			8.819	Ti Titanium	
Ratio cations/anions			1.05	Tl Thallium	
EC calculated			1030	U Uranium	
Ratio EC calc/obs			.957	V Vanadium	
				W Tungsten	
				Zn Zinc	
FIELD DATA					
Fireball Ridge NV					
Windmill					
8.25.83				Reno # 2557	
1 gpm				WLD	

T 23 N, R 26 E, Sec. 4 NE, NE

alluvium, 190 feet of Miocene rhyolite (?) tuff, and 680 feet of Miocene rhyolite (Figure 2). The temperature profile (Figure 4) of strat test #1 shows a high ($13.5^{\circ}\text{F}/100'$) conductive gradient, with a bottomhole temperature of 206°F at 1000 feet.

Strat test #2, drilled in the NE $1/4$ SE $1/4$, Section 29, T24N-R26E, was completed on August 7, 1984 (Plate 2). From top to bottom, the lithologic sequence intersected by strat test #2 consists of 120 feet of Quaternary alluvium and 880 feet of Pliocene sedimentary rocks that are mostly composed of shale (Figure 3). The temperature profile of strat test #2 (Figure 5) shows a high ($10.8^{\circ}\text{F}/100'$) conductive gradient, with a bottomhole temperature of 182°F at 990 feet.

DISCUSSION

The linear-trending, closely spaced temperature gradient contours in the central part of the anomaly indicate that the heat is structurally related (Plate 2). The linear trend of the $10^{\circ}\text{F}/100'$ contour suggests that the main structure trends about N50E. Comparison of this part of the anomaly with the geologic map (Plate 1) shows that only the one-half mile long fault southeast of strat test #1 correlates to this trend. However, the linear trending part of the anomaly parallels the natural gas line (Plate 2) which has been constructed along a zone of topographic breaks that may reflect a fault zone.

There are no chemical geothermometers available from the main anomaly area to predict the temperature of a possible geothermal reservoir. In order to have a commercial resource, the possible geothermal reservoir must have a reasonably high temperature within an economically drillable depth. Assuming a geothermal reservoir exists at 400°F in this area, then the projected depth to

FIREBALL RIDGE LITHOLOGIC LOG OF STRAT TEST # 1 COLLAR ELEVATION = 4800 FT.

FIGURE 2

**FIREBALL RIDGE
LITHOLOGIC LOG OF STRAT TEST #2
COLLAR ELEVATION = 4460 FT.**

FIGURE 3

FIGURE 4.

FIREBALL RIDGE STRAT #1 SEPTEMBER 18, 1984 SURVEY

FIGURE 5.

FIREBALL RIDGE STRAT #2 AUGUST 20, 1984 SURVEY

the reservoir is approximately 2500 feet using the temperature data from strat test #1. This projection is made with the assumption that the temperature gradient for the area remains constant with increasing depth; however, this may not be a valid assumption.

Within the main part of the thermal anomaly, about one-half of the land is public land while the other half is Southern Pacific or other fee land. Phillips has applied for the leases on the public land which are due to be issued in April 1985. Phillips has a lease option on all of the Southern Pacific land in the area. The other fee land in the main part of the thermal anomaly consists of less than 160 acres and belongs to a Nevada ranching concern.

SUMMARY AND RECOMMENDATIONS

A moderate size thermal anomaly occurs in the Fireball Ridge area. The geothermal potential of the area is very promising, with high conductive gradients up to $13.5^{\circ}\text{F}/100'$ and a high bottomhole temperature of 206°F at 1000 feet. The calculated depth to a possible 400°F geothermal reservoir is about 2500 feet, which definitely is an economically drillable depth. The main part of the thermal anomaly straddles two 345 KV power lines. Nearly 100% of the land in the anomalous area is controlled or soon will be controlled by Phillips.

It is not evident whether strat test #1 is located near the southwest end of the anomaly or if the anomaly extends further to the southwest. The first recommendation is to better determine the extent and center of the anomaly by drilling four 500 foot holes surrounding strat test #1 at a distance of about one-half mile from the strat test. The second recommendation is to drill one or more 2000 foot strat tests at locations that are dependent on the results from the 500 and 1000 foot holes.

REFERENCES

Harrill, J.R., 1970, Water-Resources Appraisal of the Granite Springs Valley Area, Pershing, Churchill, and Lyon Counties, Nevada: Water Resources-Reconnaissance Series, Report 55, 36 pp.

Willden, R. and Speed, R.C., 1974, Geology and Mineral Deposits of Churchill County, Nevada: Nevada Bur. Mines Bull. 83, 95 pp.

APPENDIX A
TEMPERATURE PROFILES

pp. A-1 to A-52

(240-305')

Prospect FIREBALL RIDGE NV Grad 9.7 DEG/F/100'
 Grad Hole DL-22 HFU _____
 T D 303 Owner PHILLIPS
 Location T24N R26E SEC 29 Leasor SP
SENE Driller WOYTEK
 La 3992033N Lo 11907790W Status ABANDONED
 Comments CHURCHILL COUNTY NEV
PROBE B BOX 185

at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q

Date 10/28/88 RTF

Date _____ Opr _____

Date _____ Opr _____

Quality

Depth Temp C Temp F

Depth Temp C Temp F

Depth Temp C Temp F

A B C D

10 17.9 64.2

210 30.2 86.4

80

DEG F

120

20 17.6 63.7

220 30.8 87.4

30 17.7 63.9

230 31.5 88.7

40 18.4 65.1

240 32.1 89.8

50 18.4 65.1

250 32.7 90.9

60 20.1 68.2

260 33.3 91.9

70 20.8 69.4

270 33.8 92.8

80 21.7 71.1

280 34.6 94.3

90 22.5 72.5

290 34.8 94.6

100 23.2 73.8

300 35.3 95.5

110 23.8 74.8

305 35.6 96.1

120 24.5 76.1

130 25.3 77.5

140 25.8 78.4

150 26.5 79.7

160 27.1 80.8

170 28.0 82.4

180 28.4 83.1

190 28.8 84.2

200 29.6 85.3

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-280')

Prospect NORTH VALLEY Grad 5.3 deg F/100' at 'K G Q
 Grad Hole N-1 HFU at 'K G Q
 T D 290 Owner at 'K G Q
 Location T23N R25E Leasor at 'K G Q
SEC 3 NENW Driller at 'K G Q
 La 3989907N Lo 11916440W Status ABANDONED at 'K G Q
 Comments PROBE C BOX 184 CABLE 51 & 53

Date 11/9/82			Opr	Date			Opr		
Depth	Temp C	Temp F		Depth	Temp C	Temp F	Depth	Temp C	Temp F
10	17.0	62.6		210	21.0	69.8			
20	17.0	62.6		220	21.4	70.5			
30	17.0	62.6		230	21.8	71.1			
40	16.8	62.2		240	22.1	71.8			
50	16.9	62.4		250	22.3	72.1			
60	17.1	62.8		260	22.6	72.7			
70	17.4	63.3		270	23.0	73.4			
80	17.6	63.7		280	23.3	73.9			
90	17.8	64.0		290	23.3	73.9			
100	18.0	64.4							
110	18.3	64.9							
120	18.5	65.3							
130	18.7	65.7							
140	18.0	66.2							
150	19.3	66.7							
160	18.6	67.3							
170	19.9	67.8							
180	20.2	68.4							
190	20.5	68.9							
200	20.7	69.3							

Quality
A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-290')

[illegible]

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

HI-LO BOX

Status

at 'K G Q

Quality

A B C D

55 60

[illegible]

1

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[illegible]

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[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

De:

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300)

Prospect GRANITE SPRINGS Grad 3.2 deg F/100' at 'K G Q
 Grad Hole GS-6 HFU at 'K G Q
 T D 300 Owner at 'K G Q
 Location T24N R26E Leasor at 'K G Q
SEC 9 SESE Driller at 'K G Q
 LA 3995595N Lo 11905760W Status ABANDONED at 'K G Q
 Comments PROBE A BOX 185 CABLE 56 & 108.
3/22/83 GOT PROBE OUT-ABANDONED HOLE. PROBE STUCK IN
HOLE 3/21/83.

Date <u>3/21/83</u> Opr <u>WLD</u>			Date <u> </u> Opr <u> </u>			Date <u> </u> Opr <u> </u>			Quality			
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F	A	B	C	D
10	11.3	52.3	210	18.4	65.1							
20	13.9	57.0	220	18.5	65.3							
30	14.8	58.6	230	18.7	65.7							
40	15.4	59.7	240	18.9	66.0							
50	15.8	60.1	250	19.1	66.4							
60	15.7	60.3	260	19.3	66.7							
70	15.9	60.6	270	19.4	66.9							
80	16.1	61.0	280	19.6	67.3							
90	16.3	61.3	290	19.8	67.6							
100	16.4	61.5	300	20.0	67.9							
110	16.6	61.9										
120	16.8	62.2										
130	17.0	62.6										
140	17.1	62.8										
150	17.3	63.1										
160	17.6	63.7										
170	17.7	63.9										
180	17.9	64.2										
190	18.1	64.6										
200	18.2	64.8

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-240')

Prospect GRANITE SPRINGS Grad 3.2 deg F/100' at 'K G Q
 Grad Hole GS-7 HFU at 'K G Q
 T D 240 Owner at 'K G Q
 Location T24N R26E Leasor at 'K G Q
SEC 9 SWSW Driller at 'K G Q
 La 3995625N Lo 11907490W Status ABANDONED at 'K G Q
 Comments PROBE C BOX 184 CABLE 51 & 53

Date <u>3/21/83</u> Opr <u>WLD</u>	Date _____ Opr _____	Date _____ Opr _____
Depth Temp C Temp F	Depth Temp C Temp F	Depth Temp C Temp F
<u>10</u> <u>11.2</u> <u>52.2</u>	<u>210</u> <u>18.2</u> <u>64.8</u>	_____
<u>20</u> <u>13.9</u> <u>57.0</u>	<u>220</u> <u>18.3</u> <u>64.9</u>	_____
<u>30</u> <u>14.8</u> <u>58.6</u>	<u>230</u> <u>18.5</u> <u>65.3</u>	_____
<u>40</u> <u>15.3</u> <u>59.5</u>	<u>240</u> <u>18.7</u> <u>65.7</u>	_____
<u>50</u> <u>15.5</u> <u>59.9</u>	_____	_____
<u>60</u> <u>15.6</u> <u>60.1</u>	_____	_____
<u>70</u> <u>15.8</u> <u>60.4</u>	_____	_____
<u>80</u> <u>16.0</u> <u>60.8</u>	_____	_____
<u>90</u> <u>16.1</u> <u>61.0</u>	_____	_____
<u>100</u> <u>16.2</u> <u>61.2</u>	_____	_____
<u>110</u> <u>16.4</u> <u>61.5</u>	_____	_____
<u>120</u> <u>16.5</u> <u>61.7</u>	_____	_____
<u>130</u> <u>16.7</u> <u>62.1</u>	_____	_____
<u>140</u> <u>17.0</u> <u>62.6</u>	_____	_____
<u>150</u> <u>17.2</u> <u>63.0</u>	_____	_____
<u>160</u> <u>17.4</u> <u>63.3</u>	_____	_____
<u>170</u> <u>17.5</u> <u>63.5</u>	_____	_____
<u>180</u> <u>17.6</u> <u>63.7</u>	_____	_____
<u>190</u> <u>17.8</u> <u>64.0</u>	_____	_____
<u>200</u> <u>18.0</u> <u>64.4</u>	_____	_____

Quality
 A B C D
 50

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Date Opr Date Opr

Quality

A B C D

<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
Surf	20.0	68.0
10	19.5	67.1
20	19.0	66.2
30	18.5	65.3
40	18.0	64.4
50	17.5	63.5
60	17.0	62.6
70	16.5	61.7
80	16.0	60.8
90	15.5	59.9
100	15.0	59.0
110	14.5	58.1
120	14.0	57.2
130	13.5	56.3
140	13.0	55.4
150	12.5	54.5
160	12.0	53.6
170	11.5	52.7
180	11.0	51.8
190	10.5	50.9
200	10.0	50.0
210	9.5	49.1
220	9.0	48.2
230	8.5	47.3
240	8.0	46.4
250	7.5	45.5
260	7.0	44.6
270	6.5	43.7
280	6.0	42.8
290	5.5	41.9
300	5.0	41.0
310	4.5	40.1
320	4.0	39.2
330	3.5	38.3
340	3.0	37.4
350	2.5	36.5
360	2.0	35.6
370	1.5	34.7
380	1.0	33.8
390	0.5	32.9
400	0.0	32.0
410	-0.5	31.1
420	-1.0	30.2
430	-1.5	29.3
440	-2.0	28.4
450	-2.5	27.5
460	-3.0	26.6
470	-3.5	25.7
480	-4.0	24.8
490	-4.5	23.9
500	-5.0	23.0
510	-5.5	22.1
520	-6.0	21.2
530	-6.5	20.3
540	-7.0	19.4
550	-7.5	18.5
560	-8.0	17.6
570	-8.5	16.7
580	-9.0	15.8
590	-9.5	14.9
600	-10.0	14.0
610	-10.5	13.1
620	-11.0	12.2
630	-11.5	11.3
640	-12.0	10.4
650	-12.5	9.5
660	-13.0	8.6
670	-13.5	7.7
680	-14.0	6.8
690	-14.5	5.9
700	-15.0	5.0
710	-15.5	4.1
720	-16.0	3.2
730	-16.5	2.3
740	-17.0	1.4
750	-17.5	0.5
760	-18.0	-0.4
770	-18.5	-1.3
780	-19.0	-2.2
790	-19.5	-3.1
800	-20.0	-4.0
810	-20.5	-4.9
820	-21.0	-5.8
830	-21.5	-6.7
840	-22.0	-7.6
850	-22.5	-8.5
860	-23.0	-9.4
870	-23.5	-10.3
880	-24.0	-11.2
890	-24.5	-12.1
900	-25.0	-13.0
910	-25.5	-13.9
920	-26.0	-14.8
930	-26.5	-15.7
940	-27.0	-16.6
950	-27.5	-17.5
960	-28.0	-18.4
970	-28.5	-19.3
980	-29.0	-20.2
990	-29.5	-21.1
1000	-30.0	-22.0

<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
Surf	22.5	72.5
10	22.5	72.5
20	22.5	72.5
30	22.5	72.5
40	22.5	72.5
50	22.5	72.5
60	22.5	72.5
70	22.5	72.5
80	22.5	72.5
90	22.5	72.5
100	22.5	72.5
110	22.5	72.5
120	22.5	72.5
130	22.5	72.5
140	22.5	72.5
150	22.5	72.5
160	22.5	72.5
170	22.5	72.5
180	22.5	72.5
190	22.5	72.5
200	22.5	72.5
210	22.5	72.5
220	22.5	72.5
230	22.5	72.5
240	22.5	72.5
250	22.5	72.5
260	22.5	72.5
270	22.5	72.5
280	22.5	72.5
290	22.5	72.5
300	22.5	72.5
310	22.5	72.5
320	22.5	72.5
330	22.5	72.5
340	22.5	72.5
350	22.5	72.5
360	22.5	72.5
370	22.5	72.5
380	22.5	72.5
390	22.5	72.5
400	22.5	72.5
410	22.5	72.5
420	22.5	72.5
430	22.5	72.5
440	22.5	72.5
450	22.5	72.5
460	22.5	72.5
470	22.5	72.5
480	22.5	72.5
490	22.5	72.5
500	22.5	72.5
510	22.5	72.5
520	22.5	72.5
530	22.5	72.5
540	22.5	72.5
550	22.5	72.5
560	22.5	72.5
570	22.5	72.5
580	22.5	72.5
590	22.5	72.5
600	22.5	72.5
610	22.5	72.5
620	22.5	72.5
630	22.5	72.5
640	22.5	72.5
650	22.5	72.5
660	22.5	72.5
670	22.5	72.5
680	22.5	72.5
690	22.5	72.5
700	22.5	72.5
710	22.5	72.5
720	22.5	72.5
730	22.5	72.5
740	22.5	72.5
750	22.5	72.5
760	22.5	72.5
770	22.5	72.5
780	22.5	72.5
790	22.5	72.5
800	22.5	72.5
810	22.5	72.5
820	22.5	72.5
830	22.5	72.5
840	22.5	72.5
850	22.5	72.5
860	22.5	72.5
870	22.5	72.5
880	22.5	72.5
890	22.5	72.5
900	22.5	72.5
910	22.5	72.5
920	22.5	72.5
930	22.5	72.5
940	22.5	72.5
950	22.5	72.5
960	22.5	72.5
970	22.5	72.5
980	22.5	72.5
990	22.5	72.5

<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
--------------	---------------	---------------

50

DEG. F

110

CERTIFICATE

400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect TRINITY MOUNTAINS Grad 5deg F/100' at 'K G Q
 Grad Hole T-14 HFU at 'K G Q
 T D 270 Owner SOUTHERN PACIFIC at 'K G Q
 Location T24N R26E Lessor at 'K G Q
SEC 17 SESE Driller OSTLUND at 'K G Q
 La 3994254N Lo 11907730W Status at 'K G Q
 Comments CHURCHILL COUNTY NEVADA - PROBE B BOX B

Date <u>6/15/77</u> Opr <u>WLD</u>	Date <u> </u> Opr <u> </u>	Date <u> </u> Opr <u> </u>
Depth Temp C Temp F	Depth Temp C Temp F	Depth Temp C Temp F
<u>10</u> <u>15.3</u> <u>59.5</u>	<u>210</u> <u>21.2</u> <u>70.2</u>	<u> </u> <u> </u> <u> </u>
<u>20</u> <u>15.8</u> <u>60.4</u>	<u>220</u> <u>21.6</u> <u>70.9</u>	<u> </u> <u> </u> <u> </u>
<u>30</u> <u>16.3</u> <u>61.3</u>	<u>230</u> <u>21.8</u> <u>71.2</u>	<u> </u> <u> </u> <u> </u>
<u>40</u> <u>16.6</u> <u>61.9</u>	<u>240</u> <u>22.1</u> <u>71.8</u>	<u> </u> <u> </u> <u> </u>
<u>50</u> <u>17.1</u> <u>62.8</u>	<u>250</u> <u>22.4</u> <u>72.3</u>	<u> </u> <u> </u> <u> </u>
<u>60</u> <u>17.3</u> <u>63.1</u>	<u>260</u> <u>22.8</u> <u>73.0</u>	<u> </u> <u> </u> <u> </u>
<u>70</u> <u>17.5</u> <u>63.5</u>	<u>270</u> <u>23.1</u> <u>73.6</u>	<u> </u> <u> </u> <u> </u>
<u>80</u> <u>17.8</u> <u>64.0</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>90</u> <u>18.1</u> <u>64.6</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>100</u> <u>18.4</u> <u>65.1</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>110</u> <u>18.6</u> <u>65.5</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>120</u> <u>18.8</u> <u>65.8</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>130</u> <u>18.1</u> <u>66.4</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>140</u> <u>18.3</u> <u>66.7</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>150</u> <u>18.5</u> <u>67.1</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>160</u> <u>18.8</u> <u>67.6</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>170</u> <u>20.1</u> <u>68.2</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>180</u> <u>20.3</u> <u>68.5</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>190</u> <u>20.7</u> <u>69.3</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>200</u> <u>21.0</u> <u>69.8</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>

Quality
 A (B) C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

A detailed topographic map of a study area, likely a river basin. The map features contour lines indicating elevation, with labels such as '10', '20', and '30'. A grid system is overlaid on the map, with vertical lines labeled '10', '20', and '30' at the bottom. A river network is shown, with a prominent river flowing from the top left towards the bottom right. The map is labeled 'SP33' in the bottom right corner. The map is oriented with North at the top.

60 120
DEG. F

0
DEPTH
400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect TRINITY MOUNTAINS Grad 4.9 deg F/100'

Grad Hole T-16

HFV

T D 260

Owner SOUTHERN PACIFIC

Location T23N R25E

Leasor

SEC 15 SWNW

Driller OSTLUND

La 3986337N Lo 11916570W Status

Comments PROBE A BOX HI-LO

at 'K G Q
at 'K G Q
at 'K G Q
at 'K G Q
at 'K G Q

Date 7/7/77 Opr WLD/AQH

Date _____ Opr _____

Date _____ Opr _____

Quality

Depth Temp C Temp F

Depth Temp C Temp F

Depth Temp C Temp F

A B C D

10 14.3 57.7

210 19.4 66.9

50

20 13.8 56.8

220 19.6 67.3

110

30 14.6 58.3

230 20.0 68.0

DEG F

40 15.0 59.0

240 20.2 68.4

DEPTH

50 15.3 59.5

250 20.5 68.9

400

60 15.5 59.9

260 20.8 69.4

70 15.7 60.3

80 16.0 60.8

90 16.2 61.2

100 16.4 61.5

110 16.6 61.9

120 16.9 62.4

130 16.9 62.4

140 17.5 63.5

150 17.7 63.9

160 18.0 64.4

170 18.3 64.9

180 18.5 65.3

190 18.8 65.8

200 19.1 66.4

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect TRINITY MOUNTAINS ^(200-300') Grad 6.0 deg F/100'
 Grad Hole T-72 HFU _____
 T D 300 Owner _____
 Location T23N R25E Lessor _____
SEC 1 NWNW Driller _____
 La 3989839N Lo 11913140W Status ABANDONED
 Comments PROBE A BOX 184 CABLE 123

at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____

Date 8/29/80 Opr WLD

Depth	Temp C	Temp F
10	17.3	63.1
20	18.5	61.7
30	15.2	59.4
40	15.5	59.9
50	16.2	61.2
60	16.6	61.9
70	16.9	62.3
80	17.2	63.0
90	17.5	63.5
100	17.8	64.0
110	18.2	64.8
120	18.5	65.3
130	18.8	65.8
140	18.1	68.4
150	18.4	68.9
160	18.8	67.6
170	20.3	68.5
180	20.8	69.4
190	21.2	70.2
200	21.4	70.5

Date _____ Opr _____

Depth	Temp C	Temp F
210	21.7	71.1
220	22.1	71.8
230	22.3	72.1
240	22.7	72.9
250	23.0	73.4
260	23.4	74.1
270	23.7	74.7
280	24.0	75.2
290	24.4	75.9
300	24.7	76.5

Date _____ Opr _____

Depth	Temp C	Temp F
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

at ___ 'K ___ G ___ Q ___
at ___ 'K ___ G ___ Q ___
at ___ 'K ___ G ___ Q ___
at ___ 'K ___ G ___ Q ___
at ___ 'K ___ G ___ Q ___
at ___ 'K ___ G ___ Q ___

Quality

A B C D

60

DEG F

120

The diagram illustrates the experimental design. It shows a sequence of three boxes connected by arrows. The first box contains a question mark. The second box contains a checkmark. The third box contains a question mark and a checkmark. Below the first box is the label 'Stimulus'. Below the second box is the label 'Response'. Below the third box is the label 'Feedback'. The sequence is repeated for multiple trials, as indicated by the 'n' at the end of the sequence.

the 1990s, the number of people in the world who are illiterate has increased from 1.2 billion to 1.5 billion. The number of illiterate people in the world is expected to reach 1.7 billion by the year 2015. The number of illiterate people in the world is expected to reach 1.7 billion by the year 2015.

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion. The number of people aged 65 and over is expected to increase from 200 million to 400 million. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion.

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (○), 10⁷ cells/ml (□), 10⁸ cells/ml (△), and 10⁹ cells/ml (◇). The error bars represent the standard deviation of three independent experiments.

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

1. *Journal of the American Medical Association*, 1997; 278: 1039-1044.

1000

1

Interpretation Difficult

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect TRINITY MOUNTAINS ^(100-280') Grad 3.1 deg F/100'

Grad Hole T-134 HFU _____

T D 280 Owner _____

Location T24N R26E Leasor _____

SEC 7 SWSE Driller _____

La 3995686N Lo 11910270W Status ABANDONED

Comments PROBE A BOX 184 CABLE 51 & 53

at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____

Date 11/4/82 Opr WLD

Depth Temp C Temp F

10 16.3 61.3

20 16.2 61.2

30 15.8 60.4

40 15.8 60.4

50 16.0 60.8

60 16.1 61.0

70 16.3 61.3

80 16.5 61.7

90 16.7 62.1

100 16.9 62.4

110 17.0 62.6

120 17.2 63.0

130 17.4 63.3

140 17.6 63.7

150 17.8 64.0

160 18.0 64.4

170 18.1 64.6

180 18.3 64.9

190 18.5 65.3

200 18.7 65.6

Date _____ Opr _____

Depth Temp C Temp F

210 18.8 65.8

220 19.0 66.3

230 19.3 66.6

240 19.4 66.9

250 19.6 67.3

260 19.7 67.5

270 19.8 67.6

280 20.0 68.0

Date _____ Opr _____

Depth Temp C Temp F

Quality (A) (B) C D

60

DEG. F

120

0

DEPTH

400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

A detailed topographic map of the study area. The map features contour lines indicating elevation, with labels such as 1000, 1200, 1400, 1600, 1800, and 2000. A network of roads is shown, including a major road labeled '100' and several smaller roads. The location of the study site is marked by a star in the lower right quadrant. The map is overlaid with a grid of latitude and longitude lines.

50 110
DEG. F

0
DEPTH
400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(230-300')

Prospect SOUTHERN PACIFIC Grad 13.4 deg F/100' at 'K G Q
 Grad Hole SP-5 HFV 0 at 'K G Q
 T D 300 Owner at 'K G Q
 Location T24N R26E Leasor at 'K G Q
SEC 31 SWSE Driller at 'K G Q
 La 3989808N Lo 11910040W Status ABANDONED at 'K G Q
 Comments PROBE 391 BOX 571 CABLE 171

Date <u>7/7/83</u> Opr <u>WLD</u>			Date <u></u> Opr <u></u>			Date <u></u> Opr <u></u>		
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
<u>10</u>	<u>18.3</u>	<u>64.9</u>	<u>210</u>	<u>38.7</u>	<u>101.6</u>	<u></u>	<u></u>	<u></u>
<u>20</u>	<u>18.8</u>	<u>62.2</u>	<u>220</u>	<u>39.5</u>	<u>103.1</u>	<u></u>	<u></u>	<u></u>
<u>30</u>	<u>18.4</u>	<u>65.1</u>	<u>230</u>	<u>40.4</u>	<u>104.7</u>	<u></u>	<u></u>	<u></u>
<u>40</u>	<u>19.9</u>	<u>67.8</u>	<u>240</u>	<u>41.1</u>	<u>106.0</u>	<u></u>	<u></u>	<u></u>
<u>50</u>	<u>21.3</u>	<u>70.3</u>	<u>250</u>	<u>42.0</u>	<u>107.6</u>	<u></u>	<u></u>	<u></u>
<u>60</u>	<u>22.2</u>	<u>72.0</u>	<u>260</u>	<u>42.7</u>	<u>108.9</u>	<u></u>	<u></u>	<u></u>
<u>70</u>	<u>23.0</u>	<u>73.4</u>	<u>270</u>	<u>43.5</u>	<u>110.3</u>	<u></u>	<u></u>	<u></u>
<u>80</u>	<u>24.0</u>	<u>75.2</u>	<u>280</u>	<u>44.1</u>	<u>111.4</u>	<u></u>	<u></u>	<u></u>
<u>90</u>	<u>25.1</u>	<u>77.2</u>	<u>290</u>	<u>44.8</u>	<u>112.6</u>	<u></u>	<u></u>	<u></u>
<u>100</u>	<u>26.4</u>	<u>79.5</u>	<u>300</u>	<u>45.8</u>	<u>114.1</u>	<u></u>	<u></u>	<u></u>
<u>110</u>	<u>27.6</u>	<u>81.7</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>120</u>	<u>28.8</u>	<u>83.8</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>130</u>	<u>30.0</u>	<u>86.0</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>140</u>	<u>31.1</u>	<u>88.0</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>150</u>	<u>32.2</u>	<u>90.0</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>160</u>	<u>33.4</u>	<u>92.1</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>170</u>	<u>34.5</u>	<u>94.1</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>180</u>	<u>35.6</u>	<u>96.1</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>190</u>	<u>36.7</u>	<u>98.1</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u>200</u>	<u>37.8</u>	<u>100.0</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____

[illegible]

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300')

Prospect SOUTHERN PACIFIC 4.7 deg F/100'
 Grad Hole SP-26 HFU _____
 T D 300 Owner PHILLIPS
 Location T23N R25E SEC 13 Leasor SP
NWNE Driller _____
 La 3986725N Lo 11912320W Status ABANDONED
 Comments PROBE A BOX 184 CABLE 169

at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q

Date	8/25/83	Opr	WLD	Date	Opr	Date	Opr	Quality
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
10	17.3	63.1	210	20.1	68.2			
20	15.7	60.3	220	20.3	68.5			
30	16.1	61.0	230	20.6	68.1			
40	16.1	61.0	240	20.9	68.5			
50	16.3	61.3	250	21.1	70.0			
60	16.5	61.7	260	21.4	70.3			
70	16.7	62.1	270	21.7	71.1			
80	16.8	62.4	280	22.0	71.6			
90	17.1	62.8	290	22.3	72.1			
100	17.3	63.1	300	22.5	72.5			
110	17.6	63.7						
120	17.8	64.0						
130	18.1	64.6						
140	18.3	64.9						
150	18.5	65.3						
160	18.8	65.8						
170	19.0	66.2						
180	19.3	66.7						
190	19.6	67.3						
200	19.8	67.6						

A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300')

Prospect SOUTHERN PACIFIC Grad 4.7 deg F/100'
 Grad Hole SP-26 HFU _____
 T D 300 Owner PHILLIPS
 Location T23N R25E SEC 13 Leasor SP
NWNE Driller _____
 La 3986725N Lo 11912320W Status ABANDONED
 Comments PROBE C BOX 185 CABLE 169

at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q

Date <u>8/25/83</u> Opr <u>WLD</u>			Date _____ Opr _____			Date _____ Opr _____		
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
20	15.7	60.3	_____	_____	_____	_____	_____	_____
40	16.2	61.2	_____	_____	_____	_____	_____	_____
60	16.5	61.7	_____	_____	_____	_____	_____	_____
80	16.9	62.4	_____	_____	_____	_____	_____	_____
100	17.4	63.3	_____	_____	_____	_____	_____	_____
120	17.9	64.2	_____	_____	_____	_____	_____	_____
140	18.3	64.9	_____	_____	_____	_____	_____	_____
160	18.8	65.8	_____	_____	_____	_____	_____	_____
180	19.3	66.7	_____	_____	_____	_____	_____	_____
200	19.9	67.8	_____	_____	_____	_____	_____	_____
220	20.4	68.7	_____	_____	_____	_____	_____	_____
240	20.9	69.6	_____	_____	_____	_____	_____	_____
260	21.5	70.7	_____	_____	_____	_____	_____	_____
280	22.0	71.6	_____	_____	_____	_____	_____	_____
300	22.6	72.7	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

Quality
 A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(200-300')

Prospect SOUTHERN PACIFIC Grad 6.1 deg F/100' at 'K G Q
 Grad Hole SP-27 HFU at 'K G Q
 T D 300 Owner at 'K G Q
 Location T24N R26E SEC 29 Leasor at 'K G Q
NWNW Driller at 'K G Q
 La 3992407N Lo 11809250W Status at 'K G Q
 Comments ABANDONED
PROBE A BOX 184 CABLE 168

Date <u>9/25/83</u> Opr <u>WLD</u>			Date_____Opr _____			Date_____Opr _____		
<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>	<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>	<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
<u>10</u>	<u>16.3</u>	<u>61.3</u>	<u>210</u>	<u>24.2</u>	<u>75.6</u>	<u> </u>	<u> </u>	<u> </u>
<u>20</u>	<u>15.8</u>	<u>60.4</u>	<u>220</u>	<u>24.5</u>	<u>76.1</u>	<u> </u>	<u> </u>	<u> </u>
<u>30</u>	<u>16.5</u>	<u>61.7</u>	<u>230</u>	<u>24.8</u>	<u>76.8</u>	<u> </u>	<u> </u>	<u> </u>
<u>40</u>	<u>16.9</u>	<u>62.4</u>	<u>240</u>	<u>25.3</u>	<u>77.5</u>	<u> </u>	<u> </u>	<u> </u>
<u>50</u>	<u>17.4</u>	<u>63.3</u>	<u>250</u>	<u>25.3</u>	<u>77.5</u>	<u> </u>	<u> </u>	<u> </u>
<u>60</u>	<u>17.9</u>	<u>64.2</u>	<u>260</u>	<u>25.9</u>	<u>78.6</u>	<u> </u>	<u> </u>	<u> </u>
<u>70</u>	<u>18.4</u>	<u>65.1</u>	<u>270</u>	<u>26.3</u>	<u>79.3</u>	<u> </u>	<u> </u>	<u> </u>
<u>80</u>	<u>18.6</u>	<u>65.5</u>	<u>280</u>	<u>26.8</u>	<u>80.2</u>	<u> </u>	<u> </u>	<u> </u>
<u>90</u>	<u>19.2</u>	<u>66.6</u>	<u>290</u>	<u>27.0</u>	<u>80.5</u>	<u> </u>	<u> </u>	<u> </u>
<u>100</u>	<u>19.6</u>	<u>67.3</u>	<u>300</u>	<u>27.3</u>	<u>81.1</u>	<u> </u>	<u> </u>	<u> </u>
<u>110</u>	<u>20.1</u>	<u>68.2</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>120</u>	<u>20.5</u>	<u>68.9</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>130</u>	<u>21.0</u>	<u>69.8</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>140</u>	<u>21.5</u>	<u>70.7</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>150</u>	<u>21.9</u>	<u>71.4</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>160</u>	<u>22.4</u>	<u>72.3</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>170</u>	<u>22.7</u>	<u>72.8</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>180</u>	<u>23.1</u>	<u>73.6</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>190</u>	<u>23.5</u>	<u>74.3</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>200</u>	<u>23.9</u>	<u>75.0</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Quality
 A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(200-300')

[illegible]

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Quality				
A	B	C	D	

<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
--------------	---------------	---------------

1. *Chlorophyll a* (Chl *a*)
 2. *Chlorophyll b* (Chl *b*)
 3. *Chlorophyll c* (Chl *c*)
 4. *Chlorophyll d* (Chl *d*)
 5. *Chlorophyll e* (Chl *e*)
 6. *Chlorophyll f* (Chl *f*)
 7. *Chlorophyll g* (Chl *g*)
 8. *Chlorophyll h* (Chl *h*)
 9. *Chlorophyll i* (Chl *i*)
 10. *Chlorophyll j* (Chl *j*)
 11. *Chlorophyll k* (Chl *k*)
 12. *Chlorophyll l* (Chl *l*)
 13. *Chlorophyll m* (Chl *m*)
 14. *Chlorophyll n* (Chl *n*)
 15. *Chlorophyll o* (Chl *o*)
 16. *Chlorophyll p* (Chl *p*)
 17. *Chlorophyll q* (Chl *q*)
 18. *Chlorophyll r* (Chl *r*)
 19. *Chlorophyll s* (Chl *s*)
 20. *Chlorophyll t* (Chl *t*)
 21. *Chlorophyll u* (Chl *u*)
 22. *Chlorophyll v* (Chl *v*)
 23. *Chlorophyll w* (Chl *w*)
 24. *Chlorophyll x* (Chl *x*)
 25. *Chlorophyll y* (Chl *y*)
 26. *Chlorophyll z* (Chl *z*)
 27. *Chlorophyll aa* (Chl *aa*)
 28. *Chlorophyll ab* (Chl *ab*)
 29. *Chlorophyll ac* (Chl *ac*)
 30. *Chlorophyll ad* (Chl *ad*)
 31. *Chlorophyll ae* (Chl *ae*)
 32. *Chlorophyll af* (Chl *af*)
  
 104. *Chlorophyll ayz* (Chl *ayz*)
 105. *Chlorophyll ayz* (Chl *ayz*)
 106. *Chlorophyll azz* (Chl *azz*)
 107. *Chlorophyll azaa* (Chl *aza*)
 108. *Chlorophyll abz* (Chl *abz*)
 109. *Chlorophyll acz* (Chl *acz*)
 110. *Chlorophyll adz* (Chl *adz*)
 111. *Chlorophyll aez* (Chl *aez*)
 112. *Chlorophyll afz* (Chl *afz*)
 113. *Chlorophyll agz* (Chl *agz*)
 114. *Chlorophyll ahz* (Chl *ahz*)
 115. *Chlorophyll aiz* (Chl *aiz*)
 116. *Chlorophyll ajz* (Chl *ajz*)
 117. *Chlorophyll akz* (Chl *akz*)
 118. *Chlorophyll alz* (Chl *alz*)
 119. *Chlorophyll amz* (Chl *amz*)
 120. *Chlorophyll anz* (Chl *anz*)
 121. *Chlorophyll aoz* (Chl *aoz*)
 122. *Chlorophyll apz* (Chl *apz*)
 123. *Chlorophyll aqz* (Chl *aqz*)
 124. *Chlorophyll arz* (Chl *arz*)
 125. *Chlorophyll asz* (Chl *asz*)
 126. *Chlorophyll atz* (Chl *atz*)
 127. *Chlorophyll auz* (Chl *auz*)
 128. *Chlorophyll avz* (Chl *avz*)
 129. *Chlorophyll awz* (Chl *awz*)
 130. *Chlorophyll axz* (Chl *axz*)
 131. *Chlorophyll ayz* (Chl *ayz*)
 132. *Chlorophyll ayz* (Chl *ayz*)
 133.

1. *Chlorophyll a* (Chl *a*)

Figure 1 is a schematic representation of the experimental design. It shows a sequence of three steps: 1. A stimulus (a word) is presented. 2. A response (a word) is generated. 3. A feedback (a word) is provided. The sequence is labeled 1, 2, and 3 respectively.

1. **Identify the main idea of the passage.**

Interpretation Difficult

DEPTH

0

400

(240-295')

Prospect SOUTHERN PACIFIC Grad 3.6 deg F/100'
 Grad Hole SP-28 HFU _____
 T D 295 Owner _____
 Location T24N R26E SEC 33 Lessor _____
SESE Driller _____
 La 3888781N Lo 11805780W Status ABANDONED
 Comments PROBE A BOX 184 CABLE 53 & 51

at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____

Date 8/25/83 pr WLD

Depth	Temp C	Temp F
10	16.7	62.1
20	15.6	60.1
30	15.6	60.4
40	16.1	61.0
50	16.3	61.3
60	16.4	61.5
70	16.6	61.9
80	16.7	62.1
90	16.9	62.4
100	17.0	62.6
110	17.2	63.0
120	17.4	63.3
130	17.6	63.7
140	17.8	64.2
150	18.1	64.6
160	18.4	65.1
170	18.6	65.5
180	18.2	66.8
185	18.3	67.1
200	18.9	67.8

Date _____ Opr _____

Depth	Temp C	Temp F
210	20.1	68.2
220	20.4	68.7
230	20.6	69.1
240	20.9	69.6
250	21.0	69.8
260	21.3	70.3
270	21.9	71.4
280	21.7	71.1
290	21.9	71.4
295	22.0	71.6
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Date _____ Opr _____

Depth	Temp C	Temp F
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect FIREBALL RIDGE NV Grad 5.2 deg F/100'

Grad Hole SP-30 HFU _____

T D 300 Owner _____

Location T23N R26E Leasor _____

SEC 5 SESE Driller WOYTEK

La 3988332N Lo 11907700W Status _____

Comments _____

at _____ 'K _____ G _____ Q _____

at _____ 'K _____ G _____ Q _____

at _____ 'K _____ G _____ Q _____

at _____ 'K _____ G _____ Q _____

at _____ 'K _____ G _____ Q _____

at _____ 'K _____ G _____ Q _____

Date _____ Opr RTF

Depth Temp C Temp F

50 17.5 63.5

80 18.2 64.8

100 19.0 66.2

130 19.6 67.3

150 20.1 68.2

170 20.7 69.3

200 21.4 70.5

220 22.1 71.8

250 22.9 73.2

270 23.5 74.3

290 24.1 75.4

300 24.5 76.1

Date _____ Opr _____

Depth Temp C Temp F

Date _____ Opr _____

Depth Temp C Temp F

Quality _____

A B C D

60

DEG. F

120

400

DEPTH

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(130-300')

Prospect FIREBALL RIDGE Grad 5.2 deg E/100' at 'K G Q
 Grad Hole SP-30 HFU at 'K G Q
 T D 300 Owner at 'K G Q
 Location T23N R26E Leasor at 'K G Q
SEC 5 SESE Driller WOYTEK at 'K G Q
 La 3988332N Lo 11907700W Status at 'K G Q
 Comments PROBE 355 BOX 173 CABLE 171

Date	12/21/99	WLN	Date	Opr		Date	Opr	
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
10	15.4	59.7	220	25.8	78.8			
20	18.5	65.3	230	26.6	79.9			
30	18.8	65.8	240	26.6	79.9			
40	19.1	66.4	250	26.2	79.2			
50	19.5	67.1	260	26.7	80.1			
60	20.0	68.0	270	27.2	81.0			
70	20.6	69.1	280	27.6	81.7			
80	20.8	69.4	290	27.6	81.7			
90	21.4	70.5	300	27.8	82.0			
100	21.7	71.1						
110	22.1	71.8						
120	22.4	72.3						
140	22.8	72.7						
150	23.0	73.4						
160	23.3	73.8						
170	23.6	74.5						
180	24.8	76.8						
190	24.8	76.8						
200	24.8	76.8						
210	25.1	77.2						

Quality
A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect SOUTHERN PACIFIC Grad 4.9deg E/100'

Grad Hole SP-31

HFU

T D 300

Owner

Location T24N R25E

Leasor

SEC 35 NENE

Driller WOYTEK

La 3991358N Lo 11913290W Status

Comments

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

Date _____ Opr _____

Depth Temp C Temp F

10 17.0 62.6

20 18.9 66.0

30 19.3 66.7

40 19.4 66.9

50 19.9 67.8

60 20.0 68.0

70 20.3 68.5

80 20.6 69.1

90 20.9 69.6

100 21.1 70.0

110 21.1 70.0

120 21.3 70.3

130 21.6 70.9

150 22.3 72.1

160 22.8 73.0

170 23.1 73.6

180 23.8 74.8

200 24.1 75.4

210 24.4 75.9

230 24.8 76.3

Date _____ Opr _____

Depth Temp C Temp F

240 24.8 76.6

250 25.2 77.4

260 25.5 77.9

270 25.9 78.6

280 25.9 78.6

300 26.5 79.7

Date _____ Opr _____

Depth Temp C Temp F

Quality
A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect FIREBALL RIDGE Grad 4.5 deg F/100' ^(180-300') at 'K G Q
 Grad Hole SP-32 HFU at 'K G Q
 T D 300 Owner at 'K G Q
 Location T24N R26E Leasor at 'K G Q
SEC 33 NENE Driller WOYTEK at 'K G Q
 La 3991020N Lo 11906070W Status at 'K G Q
 Comments _____

Date <u>1/5/84</u> Opr <u>RTF</u>			Date _____ Opr _____			Date _____ Opr _____		
<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>	<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>	<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
<u>10</u>	<u>14.5</u>	<u>58.1</u>	<u>210</u>	<u>18.8</u>	<u>65.8</u>	<u> </u>	<u> </u>	<u> </u>
<u>20</u>	<u>15.0</u>	<u>59.0</u>	<u>220</u>	<u>18.1</u>	<u>66.4</u>	<u> </u>	<u> </u>	<u> </u>
<u>30</u>	<u>15.1</u>	<u>59.2</u>	<u>230</u>	<u>18.3</u>	<u>66.7</u>	<u> </u>	<u> </u>	<u> </u>
<u>40</u>	<u>15.4</u>	<u>59.7</u>	<u>240</u>	<u>18.5</u>	<u>67.1</u>	<u> </u>	<u> </u>	<u> </u>
<u>50</u>	<u>15.6</u>	<u>60.1</u>	<u>250</u>	<u>18.8</u>	<u>67.6</u>	<u> </u>	<u> </u>	<u> </u>
<u>60</u>	<u>15.7</u>	<u>60.3</u>	<u>260</u>	<u>20.0</u>	<u>68.0</u>	<u> </u>	<u> </u>	<u> </u>
<u>70</u>	<u>15.8</u>	<u>60.6</u>	<u>270</u>	<u>20.3</u>	<u>68.5</u>	<u> </u>	<u> </u>	<u> </u>
<u>80</u>	<u>16.1</u>	<u>61.0</u>	<u>280</u>	<u>20.5</u>	<u>68.9</u>	<u> </u>	<u> </u>	<u> </u>
<u>90</u>	<u>16.3</u>	<u>61.3</u>	<u>290</u>	<u>20.8</u>	<u>69.4</u>	<u> </u>	<u> </u>	<u> </u>
<u>100</u>	<u>16.6</u>	<u>61.9</u>	<u>300</u>	<u>21.1</u>	<u>70.0</u>	<u> </u>	<u> </u>	<u> </u>
<u>110</u>	<u>16.8</u>	<u>62.2</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>120</u>	<u>17.0</u>	<u>62.6</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>130</u>	<u>17.2</u>	<u>63.0</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>140</u>	<u>17.4</u>	<u>63.3</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>150</u>	<u>17.6</u>	<u>63.7</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>160</u>	<u>17.8</u>	<u>64.0</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>170</u>	<u>18.0</u>	<u>64.4</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>180</u>	<u>18.1</u>	<u>64.6</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>190</u>	<u>18.4</u>	<u>65.1</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>200</u>	<u>18.6</u>	<u>65.5</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Date <u>1/5/84</u> Opr <u>RIF</u>			Date _____ Opr _____			Date _____ Opr _____			Quality _____			
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F	(A)	B	C	D
<u>10</u>	<u>4.1</u>	<u>39.4</u>	<u>230</u>	<u>26.0</u>	<u>78.8</u>	_____	_____	_____	<div style="text-align: center;">30</div>			
<u>20</u>	<u>5.8</u>	<u>42.4</u>	<u>240</u>	<u>27.1</u>	<u>80.8</u>	_____	_____	_____				
<u>30</u>	<u>13.1</u>	<u>55.6</u>	<u>250</u>	<u>27.6</u>	<u>81.7</u>	_____	_____	_____				
<u>50</u>	<u>18.4</u>	<u>65.1</u>	<u>260</u>	<u>28.0</u>	<u>82.4</u>	_____	_____	_____				
<u>60</u>	<u>19.0</u>	<u>66.2</u>	<u>270</u>	<u>28.3</u>	<u>82.9</u>	_____	_____	_____				
<u>70</u>	<u>19.4</u>	<u>66.9</u>	<u>280</u>	<u>28.5</u>	<u>83.3</u>	_____	_____	_____				
<u>80</u>	<u>19.9</u>	<u>67.8</u>	<u>290</u>	<u>28.7</u>	<u>83.7</u>	_____	_____	_____				
<u>90</u>	<u>20.4</u>	<u>68.7</u>	<u>300</u>	<u>29.2</u>	<u>84.6</u>	_____	_____	_____				
<u>100</u>	<u>20.8</u>	<u>69.4</u>	_____	_____	_____	_____	_____	_____				
<u>110</u>	<u>21.5</u>	<u>70.7</u>	_____	_____	_____	_____	_____	_____				
<u>120</u>	<u>21.9</u>	<u>71.4</u>	_____	_____	_____	_____	_____	_____				
<u>130</u>	<u>22.4</u>	<u>72.3</u>	_____	_____	_____	_____	_____	_____				
<u>140</u>	<u>22.8</u>	<u>73.0</u>	_____	_____	_____	_____	_____	_____				
<u>150</u>	<u>23.7</u>	<u>74.7</u>	_____	_____	_____	_____	_____	_____				
<u>160</u>	<u>23.5</u>	<u>74.3</u>	_____	_____	_____	_____	_____	_____				
<u>170</u>	<u>24.0</u>	<u>75.2</u>	_____	_____	_____	_____	_____	_____				
<u>180</u>	<u>24.4</u>	<u>75.9</u>	_____	_____	_____	_____	_____	_____				
<u>190</u>	<u>24.8</u>	<u>76.6</u>	_____	_____	_____	_____	_____	_____				
<u>210</u>	<u>25.8</u>	<u>78.6</u>	_____	_____	_____	_____	_____	_____				
<u>220</u>	<u>26.2</u>	<u>79.2</u>	_____	_____	_____	_____	_____	_____				

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300')

Prospect SOUTHERN PACIFIC Grad 4.1 deg E/100' at 'K G Q
 Grad Hole SP-38 HFU at 'K G Q
 T D 300 Owner PHILLIPS at 'K G Q
 Location T24N R25E Lessor SP at 'K G Q
SEC 15 NWNE Driller ODENBACH at 'K G Q
 La 3995713N Lo 11915740W Status ABANDONED at 'K G Q
 Comments PROBE 355 BOX 185 CABLE 122
CHURCHILL COUNTY NEVADA

Date <u>8/23/80</u> Opr <u>WLD</u>	Date <u> </u> Opr <u> </u>	Date <u> </u> Opr <u> </u>
Depth Temp C Temp F	Depth Temp C Temp F	Depth Temp C Temp F
<u>10</u> <u>13.9</u> <u>57.0</u>	<u>210</u> <u>17.6</u> <u>63.7</u>	<u> </u> <u> </u> <u> </u>
<u>20</u> <u>12.8</u> <u>55.0</u>	<u>220</u> <u>17.8</u> <u>64.0</u>	<u> </u> <u> </u> <u> </u>
<u>30</u> <u>13.2</u> <u>55.8</u>	<u>230</u> <u>18.0</u> <u>64.4</u>	<u> </u> <u> </u> <u> </u>
<u>40</u> <u>13.6</u> <u>56.5</u>	<u>240</u> <u>18.2</u> <u>64.8</u>	<u> </u> <u> </u> <u> </u>
<u>50</u> <u>13.9</u> <u>57.0</u>	<u>250</u> <u>18.4</u> <u>65.1</u>	<u> </u> <u> </u> <u> </u>
<u>60</u> <u>14.2</u> <u>57.6</u>	<u>260</u> <u>18.6</u> <u>65.5</u>	<u> </u> <u> </u> <u> </u>
<u>70</u> <u>14.4</u> <u>57.9</u>	<u>270</u> <u>18.9</u> <u>66.0</u>	<u> </u> <u> </u> <u> </u>
<u>80</u> <u>14.7</u> <u>58.5</u>	<u>280</u> <u>19.2</u> <u>66.6</u>	<u> </u> <u> </u> <u> </u>
<u>80</u> <u>14.9</u> <u>58.8</u>	<u>290</u> <u>19.4</u> <u>66.9</u>	<u> </u> <u> </u> <u> </u>
<u>100</u> <u>15.2</u> <u>59.4</u>	<u>300</u> <u>19.7</u> <u>67.5</u>	<u> </u> <u> </u> <u> </u>
<u>110</u> <u>15.4</u> <u>59.7</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>120</u> <u>15.7</u> <u>60.3</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>130</u> <u>16.0</u> <u>60.8</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>140</u> <u>16.2</u> <u>61.2</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>150</u> <u>16.4</u> <u>61.5</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>160</u> <u>16.6</u> <u>61.9</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>170</u> <u>16.8</u> <u>62.2</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>180</u> <u>17.0</u> <u>62.6</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>190</u> <u>17.2</u> <u>63.0</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>
<u>200</u> <u>17.4</u> <u>63.3</u>	<u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u>

Quality
 (A) B C D

50

DEG F

110

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300')

Prospect SOUTHERN PACIFIC Grad 4.1 deg F/100' at 'K G Q
 Grad Hole SP-38 HFU at 'K G Q
 T D 300 Owner PHILLIPS at 'K G Q
 Location T24N R25E Lessor SP at 'K G Q
SEC 15 NWNE Driller ODENBACH at 'K G Q
 La 3995713N Lo 11915740W Status ABANDONED at 'K G Q
 Comments PROBE 355 BOX 185 CABLE 122
CHURCHILL COUNTY NEVADA

Date <u>8/23/84</u> Opr <u>WLD</u>			Date <u> </u> Opr <u> </u>			Date <u> </u> Opr <u> </u>		
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
10	13.9	57.0	210	17.8	64.0			
20	12.8	55.0	220	17.8	64.0			
30	13.2	55.8	230	18.0	64.4			
40	13.6	56.5	240	18.2	64.8			
50	13.9	57.0	250	18.4	65.1			
60	14.2	57.6	260	18.6	65.5			
70	14.4	57.9	270	18.9	66.0			
80	14.7	58.5	280	19.2	66.6			
90	14.9	58.8	290	19.4	66.9			
100	15.2	59.4	300	19.7	67.5			
110	15.4	59.7						
120	15.7	60.3						
130	16.0	60.8						
140	16.2	61.2						
150	16.4	61.5						
160	16.6	61.9						
170	16.8	62.2						
180	17.0	62.6						
190	17.2	63.0						
200	17.4	63.3						

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(160-300)
Prospect FIREBALL RIDGE NW rad 4.1 DEG/F/100'

Grad Hole FR-1

HFV

T D 300

Owner PHILLIPS

Location T23N R25E SEC 1

Leasor SP

SESE CHURCHILL Driller ODENBACH

La 3988566N Lo 11911920W Status ABANDONED

Comments PROBE 391 BOX 184 CABLE 126

at 'K G Q
at 'K G Q
at 'K G Q
at 'K G Q
at 'K G Q
at 'K G Q

Date 6/13/80 Opr WLD

Depth Temp C Temp F

10 12.6 54.7

20 12.3 54.1

30 12.9 55.2

40 13.5 56.3

50 13.7 56.7

60 14.0 57.2

70 14.3 57.7

80 14.6 58.3

90 14.9 58.8

100 15.3 59.5

110 15.5 59.9

120 15.9 60.6

130 16.3 61.3

140 16.6 61.9

150 16.9 62.4

160 17.2 63.0

170 17.4 63.3

180 17.6 63.7

190 17.9 64.2

200 18.2 64.7

Date _____ Opr _____

Depth Temp C Temp F

210 18.4 65.1

220 18.6 65.5

230 18.8 65.8

240 19.0 66.2

250 19.3 66.7

260 19.5 67.1

270 19.8 67.6

280 20.0 68.0

290 20.2 68.4

300 20.5 68.8

Date _____ Opr _____

Depth Temp C Temp F

Quality

A B C D

50

DEG. F

110

0

DEPTH

400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-290')

Prospect FIREBALL RIDGE NV Grad 3.9 DEG/F/100' at 'K G Q
 Grad Hole ER-2 HFU at 'K G Q
 T D 290 Owner PHILLIPS at 'K G Q
 Location T23N R25 E SEC 25 Season SP at 'K G Q
NENE CHURCHILL CO Driller ODENBACH at 'K G Q
 LA 3983884N Lo 11911770W Status ABANDONED at 'K G Q
 Comments PROBE 355 BOX 185 CABLE 122

Date <u>5/14/84</u> Opr <u>WLD</u>			Date _____ Opr _____			Date _____ Opr _____		
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
10	15.1	59.2	210	19.4	66.9			
20	14.7	58.5	220	19.7	67.4			
30	15.2	59.4	230	19.9	67.8			
40	15.7	60.3	240	20.1	68.2			
50	16.0	60.8	250	20.3	68.5			
60	16.3	61.3	260	20.6	69.1			
70	16.5	61.7	270	20.8	69.4			
80	16.3	61.3	280	21.0	69.8			
90	16.7	62.1	290	21.3	70.3			
100	17.1	62.8						
110	17.3	63.1						
120	17.5	63.5						
130	17.7	63.9						
140	17.9	64.2						
150	18.1	64.6						
160	18.3	64.9						
170	18.5	65.3						
180	18.7	65.7						
190	19.0	66.2						
200	19.2	66.6						

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-2901)

[illegible]

Date _____ Opr _____

Quality

<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
Surf	18.0	64.4
10	17.5	63.5
20	17.0	62.6
30	16.5	61.7
40	16.0	60.8
50	15.5	59.9
60	15.0	59.0
70	14.5	58.1
80	14.0	57.2
90	13.5	56.3
100	13.0	55.4
110	12.5	54.5
120	12.0	53.6
130	11.5	52.7
140	11.0	51.8
150	10.5	50.9
160	10.0	50.0
170	9.5	49.1
180	9.0	48.2
190	8.5	47.3
200	8.0	46.4
210	7.5	45.5
220	7.0	44.6
230	6.5	43.7
240	6.0	42.8
250	5.5	41.9
260	5.0	41.0
 
890	-26.5	-15.7
900	-27.0	-16.6
910	-27.5	-17.5
920	-28.0	-18.4
930	-28.5	-19.3
940	-29.0	-20.2
950	-29.5	-21.1
960	-30.0	-22.0
970	-30.5	-22.9
980	-31.0	-23.8
990	-31.5	-24.7
1000	-32.0	-25.6

A B C D

50

1. *Journal of the American Medical Association*, 1997; 277: 1033-1036.

[illegible]

Abstract

[illegible]

1. *Chlorophyll a* (Chl *a*)

[illegible]

[illegible]

[illegible]

[illegible]

[illegible][illegible]

[illegible]

[illegible][illegible]

[illegible]

[illegible]

[illegible]

2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841.

[illegible]

[illegible]

[illegible]

Prospect FIREBALL RIDGE NV Grad 8.9 DEG/F/100' (170-300')
 Grad Hole FR-3 HFU _____
 T D 300 Owner PHILLIPS
 Location T24N R26E SEC 31 Leaser SP
SWSW CHURCHILL Driller ODENBACH
 La 3990006N Lo 11911310W Status ABANDONED
 Comments PROBE 355 BOX 185 CABLE 122

at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q

Date 6/23/84 Opr WLD

Depth	Temp C	Temp F
10	18.9	67.8
20	18.1	66.4
30	15.6	60.1
40	15.2	59.4
50	15.4	59.7
60	15.9	60.6
70	16.4	61.5
80	16.9	62.4
90	17.4	63.3
100	17.8	64.0
110	18.2	64.8
120	18.7	65.6
130	19.2	66.6
140	19.6	67.3
150	20.0	68.0
160	20.4	68.7
170	20.9	69.6
180	21.3	70.3
190	21.7	71.1
200	22.0	71.6

Date _____ Opr _____

Depth	Temp C	Temp F
210	22.5	72.5
220	22.8	73.0
230	23.2	73.8
240	23.6	74.5
250	24.0	75.2
260	24.4	75.9
270	24.8	76.6
280	25.2	77.4
290	25.6	78.1
300	25.9	78.6

Date _____ Opr _____

Depth	Temp C	Temp F
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Quality
 A B C D

50

DEG. F

110

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____

	Quality			
(A)	B	C	D	

[illegible]

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect FIREBALL RIDGE NW Grad 5.3 DEG/F/100' ^(100-300') at 'K G Q
 Grad Hole FR-4 HFU at 'K G Q
 T D 300 Owner PHILLIPS at 'K G Q
 Location T23N R26E SEC 6 Leasor BLM at 'K G Q
E-1/2 E-1/2 Driller ODENBACH at 'K G Q
 La 3988922N Lo 11909570W Status ABANDONED at 'K G Q
 Comments PROBE 355 BOX 185 CABLE 122 CHURCHILL CO

Date <u>8/23/84</u> Opr <u>WLD</u>			Date _____ Opr _____			Date _____ Opr _____		
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
10	14.9	58.8	210	21.1	70.0			
20	14.9	57.7	220	21.3	70.3			
30	14.8	58.6	230	21.6	70.9			
40	15.4	59.7	240	21.9	71.4			
50	16.0	60.8	250	22.1	71.8			
60	16.3	61.3	260	22.5	72.4			
70	16.8	62.2	270	22.8	73.0			
80	17.1	62.8	280	23.1	73.6			
90	17.4	63.3	290	23.4	74.1			
100	17.7	63.8	300	23.6	74.5			
110	18.0	64.4						
120	18.3	64.9						
130	18.6	65.5						
140	18.0	65.1						
150	19.2	66.6						
160	19.5	67.1						
170	19.8	67.6						
180	20.1	68.2						
190	20.5	68.8						
200	20.8	69.4						

Quality
 A B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300')

Prospect FIREBALL RIDGE NV Grad 5.1 DEG/F/100' at 'K G Q

Grad Hole FR-4 HFU at 'K G Q

T D 300 Owner BLM at 'K G Q

Location T29N R26 E SEC 6 Leasor PHILLIPS at 'K G Q

E-1/2 E-1/2 Driller ODENBACH at 'K G Q

La 3988922N Lo 11909570W Status ABANDONED at 'K G Q

Comments PROBE 391 BOX 184 CABLE 126 CHURCHILL CO

Date <u>8/24/84</u> Opr <u>WLD</u>			Date _____ Opr _____			Date _____ Opr _____		
Depth	Temp C	Temp F	Depth	Temp C	Temp F	Depth	Temp C	Temp F
20	14.4	57.9	_____	_____	_____	_____	_____	_____
40	15.4	59.7	_____	_____	_____	_____	_____	_____
60	16.1	61.0	_____	_____	_____	_____	_____	_____
80	16.8	62.2	_____	_____	_____	_____	_____	_____
100	17.5	63.5	_____	_____	_____	_____	_____	_____
120	18.1	64.6	_____	_____	_____	_____	_____	_____
140	18.8	65.5	_____	_____	_____	_____	_____	_____
160	19.1	66.4	_____	_____	_____	_____	_____	_____
180	19.7	67.5	_____	_____	_____	_____	_____	_____
200	20.4	68.8	_____	_____	_____	_____	_____	_____
220	20.9	69.6	_____	_____	_____	_____	_____	_____
240	21.5	70.7	_____	_____	_____	_____	_____	_____
260	22.1	71.8	_____	_____	_____	_____	_____	_____
280	22.6	72.7	_____	_____	_____	_____	_____	_____
300	23.1	73.6	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect FIREBALL RIDGE NV Grad 6.1° F/100' (200-300') at 'K G Q
 Grad Hole FR-5 HFU at 'K G Q
 T D 300 Owner PHILLIPS at 'K G Q
 Location T24N R26E SEC 33 Leasor BLM at 'K G Q
W-1/2 W-1/2 Driller ODENBACH at 'K G Q
 La 3990456N Lo 11907530W Status ABANDONED at 'K G Q
 Comments PROBE 355 BOX 185 CABLE 122 CHURCHILL CO

Date <u>2/23/84</u> Opr <u>WLD</u>			Date_____Opr _____			Date_____Opr _____		
<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>	<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>	<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>
<u>10</u>	<u>14.5</u>	<u>58.1</u>	<u>210</u>	<u>22.8</u>	<u>73.0</u>	_____	_____	_____
<u>20</u>	<u>14.1</u>	<u>57.4</u>	<u>220</u>	<u>23.1</u>	<u>73.6</u>	_____	_____	_____
<u>30</u>	<u>15.0</u>	<u>59.0</u>	<u>230</u>	<u>23.5</u>	<u>74.3</u>	_____	_____	_____
<u>40</u>	<u>15.8</u>	<u>60.4</u>	<u>240</u>	<u>23.8</u>	<u>74.8</u>	_____	_____	_____
<u>50</u>	<u>16.5</u>	<u>61.7</u>	<u>250</u>	<u>24.2</u>	<u>75.5</u>	_____	_____	_____
<u>60</u>	<u>17.0</u>	<u>62.6</u>	<u>260</u>	<u>24.5</u>	<u>76.1</u>	_____	_____	_____
<u>70</u>	<u>17.4</u>	<u>63.3</u>	<u>270</u>	<u>24.9</u>	<u>76.8</u>	_____	_____	_____
<u>80</u>	<u>17.8</u>	<u>64.0</u>	<u>280</u>	<u>25.2</u>	<u>77.4</u>	_____	_____	_____
<u>90</u>	<u>18.2</u>	<u>64.8</u>	<u>290</u>	<u>25.5</u>	<u>77.9</u>	_____	_____	_____
<u>100</u>	<u>18.6</u>	<u>65.5</u>	<u>300</u>	<u>25.8</u>	<u>78.4</u>	_____	_____	_____
<u>110</u>	<u>19.0</u>	<u>66.2</u>	_____	_____	_____	_____	_____	_____
<u>120</u>	<u>19.4</u>	<u>66.9</u>	_____	_____	_____	_____	_____	_____
<u>130</u>	<u>19.7</u>	<u>67.5</u>	_____	_____	_____	_____	_____	_____
<u>140</u>	<u>20.2</u>	<u>68.4</u>	_____	_____	_____	_____	_____	_____
<u>150</u>	<u>20.5</u>	<u>68.9</u>	_____	_____	_____	_____	_____	_____
<u>160</u>	<u>20.9</u>	<u>69.6</u>	_____	_____	_____	_____	_____	_____
<u>170</u>	<u>21.3</u>	<u>70.3</u>	_____	_____	_____	_____	_____	_____
<u>180</u>	<u>21.6</u>	<u>70.9</u>	_____	_____	_____	_____	_____	_____
<u>190</u>	<u>22.0</u>	<u>71.6</u>	_____	_____	_____	_____	_____	_____
<u>200</u>	<u>22.4</u>	<u>72.3</u>	_____	_____	_____	_____	_____	_____

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

[illegible]

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(160-300')

Prospect FIREBALL RIDGE NW Grad 8.1 DEG/F/100'
 Grad Hole FR-6 HFU _____
 T D 300 Owner PHILLIPS
 Location T24N R26E SEC 29 Leasor BLM
SWSW CHURCHILL CO Driller ODENBACH
 La 3991322N Lo 11909290W Status ABANDONED
 Comments PROBE 355 BOX 185 CABLE 122

at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____

Date 6/25/84 Opr WLD

Depth	Temp C	Temp F
10	16.2	61.2
20	15.0	59.0
30	15.7	60.3
40	16.7	62.1
50	17.4	63.3
60	18.0	64.4
70	18.6	65.5
80	19.2	66.6
90	19.8	67.6
100	20.6	69.1
110	21.2	70.2
120	21.7	71.1
130	22.2	72.0
140	22.6	72.7
150	23.1	73.6
160	23.6	74.4
170	24.1	75.4
180	24.6	76.3
190	25.1	77.2
200	25.6	78.1

Date _____ Opr _____

Depth	Temp C	Temp F
210	25.9	78.6
220	26.5	79.7
230	27.0	80.6
240	27.4	81.3
250	27.9	82.2
260	28.3	82.9
270	28.8	83.8
280	29.2	84.6
290	29.7	85.5
300	30.1	86.2
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Date _____ Opr _____

Depth	Temp C	Temp F
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Quality
 (A) B C D

50

DEG F

110

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(160-300')

Prospect FIREBALL RIDGE NV Grad 8.6 DEG/F/100'

Grad Hole FR-6

HFU

T D300

Owner PHILLIPS

Location T24N R26E SEC 29

Leasor SP

SWSW CHURCHILL

Driller ODENBACH

La 3991322N Lo 11909290W

Status ABANDONED

Comments PROBE C BOX 571 CABLE 56 & 175

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

Date 5/26/84 Opr WLD

Date _____ Opr _____

Date _____ Opr _____

Quality

Depth Temp C Temp F

Depth Temp C Temp F

Depth Temp C Temp F

A B C D

20 16.6 61.9

60

40 18.0 64.4

60 19.2 66.6

80 20.5 69.0

100 21.8 71.2

120 22.8 73.0

140 23.8 74.8

160 24.7 76.5

180 25.8 78.4

200 26.9 80.4

220 27.8 82.0

240 28.7 83.7

260 29.7 85.5

280 30.6 87.1

300 31.4 88.5

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____
at _____ 'K _____ G _____ Q _____

Quality

A B C D

50

DEG. F

110

FLD 30

[illegible]

 

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(220-300')

Prospect FIREBALL RIDGE NV Grad 4.6 DEG/F/100'
 Grad Hole FR-7 HFU _____
 T D 300 Owner PHILLIPS
 Location T24N R26E SEC 22 Leasor BLM
NENW CHURCHILL CO Driller ODENBACH
 La 3993449N Lo 11904850W Status ABANDONED
 Comments PROBE 391 BOX 184 CABLE 126

at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____

Date <u>6/24/84</u> Opr <u>WLD</u>	Date _____ Opr _____	Date _____ Opr _____
Depth Temp C Temp F	Depth Temp C Temp F	Depth Temp C Temp F
20 15.1 59.2	_____	_____
40 15.3 59.5	_____	_____
60 15.9 60.6	_____	_____
80 16.6 61.9	_____	_____
100 17.0 62.6	_____	_____
120 17.5 63.5	_____	_____
140 18.3 64.9	_____	_____
160 19.0 66.2	_____	_____
180 19.5 67.1	_____	_____
200 20.0 68.0	_____	_____
220 20.6 69.1	_____	_____
240 21.1 70.0	_____	_____
260 21.7 71.1	_____	_____
280 22.2 72.0	_____	_____
300 22.7 72.8	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Quality
 (A) B C D

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-300')
Prospect FIREBALL RIDGE NW Grad 3.2 DEG/F/100'

Grad Hole FR-8 HFU

T D 300 Owner PHILLIPS

Location T24N R26E SEC 12 Leasor BLM

SWSW CHURCHILL CO Driller ODENBACH

La 3995579N Lo 11901810W Status ABANDONED

Comments PROBE 355 BOX 185 CABLE 122

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

at 'K G Q

Date 5/25/84 Opr WLD

Depth Temp C Temp F

10 13.2 55.8

20 11.9 53.4

30 12.4 54.3

40 13.0 55.4

50 13.4 56.1

60 13.5 56.3

70 13.6 56.5

80 13.8 56.8

90 14.0 57.2

100 14.2 57.5

110 14.3 57.7

120 14.5 58.1

130 14.7 58.5

140 14.8 58.6

150 15.0 59.0

160 15.1 59.2

170 15.3 59.5

180 15.4 59.7

190 15.7 60.3

200 15.8 60.4

Date Opr

Depth Temp C Temp F

210 16.0 60.8

220 16.2 61.2

230 16.4 61.5

240 16.6 61.9

250 16.7 62.1

260 16.9 62.4

270 17.1 62.8

280 17.3 63.1

290 17.5 63.5

300 17.7 63.9

Date Opr

Depth Temp C Temp F

Quality
A B C D

50

DEG. F

110

0

DEPTH

400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

[illegible]

Quality	
A	B C

<u>Depth</u>	<u>Temp C</u>	<u>Temp F</u>

[illegible]

 

100

1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

1. *Journal of Management Studies*, 1990, 27, 1, 1-14.

50 DEG. F 110

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

Prospect FIREBALL RIDGE NV ^(100-260') Grad 1.1 deg F/100'
 Grad Hole FR-9 HFU _____
 T D 260 Owner PHILLIPS
 Location T24N R26E SEC 12 Leasor BLM
SESE CHURCHILL CO Driller ODENBACH
 La 3995573N Lo 11900190W Status ABANDONED
 Comments PROBE 355 BOX 185
CABLE 122

at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____
 at _____ 'K _____ G _____ Q _____

Date 5/23/84 Opr WLD

Depth	Temp C	Temp F
10	15.4	59.7
20	13.1	55.6
30	13.3	55.9
40	13.7	56.7
50	13.8	57.0
60	14.0	57.1
70	14.0	57.2
80	14.1	57.4
90	14.1	57.4
100	14.2	57.6
120	14.3	57.7
140	14.4	57.9
160	14.5	58.1
180	14.7	58.5
200	14.8	58.6
220	14.8	58.8
240	15.0	59.0
260	15.2	59.4

Date _____ Opr _____

Depth _____ Temp C _____ Temp F _____

Date _____ Opr _____

Depth _____ Temp C _____ Temp F _____

Quality

A B C D

50

DEG. F

110

0

DEPTH

400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(100-260')

Prospect FIREBALL RIDGE NV Grad 1.1 deg F/100'
 Grad Hole FR-9 HFU _____
 T D 260 Owner PHILLIPS
 Location T24N R26E SEC 12 Lessor BLM
SESE CHURCHILL CO Driller ODENBACH
 La 3985573N Lo 11900190W Status ABANDONED
 Comments PROBE 391 BOX 184 CABLE 126

at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q
 at 'K G Q

Date <u>6/24/84</u> Opr <u>WLD</u>	Date _____ Opr _____	Date _____ Opr _____
Depth Temp C Temp F	Depth Temp C Temp F	Depth Temp C Temp F
<u>20</u> <u>12.4</u> <u>54.3</u>	_____	_____
<u>40</u> <u>13.2</u> <u>55.8</u>	_____	_____
<u>60</u> <u>13.4</u> <u>56.1</u>	_____	_____
<u>80</u> <u>13.6</u> <u>56.5</u>	_____	_____
<u>100</u> <u>13.7</u> <u>56.7</u>	_____	_____
<u>120</u> <u>13.8</u> <u>56.8</u>	_____	_____
<u>140</u> <u>13.9</u> <u>57.0</u>	_____	_____
<u>160</u> <u>14.0</u> <u>57.2</u>	_____	_____
<u>180</u> <u>14.2</u> <u>57.6</u>	_____	_____
<u>200</u> <u>14.3</u> <u>57.7</u>	_____	_____
<u>220</u> <u>14.4</u> <u>57.9</u>	_____	_____
<u>240</u> <u>14.6</u> <u>59.3</u>	_____	_____
<u>260</u> <u>14.7</u> <u>58.5</u>	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Quality
 A (B) C D
 50

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

(160-300')

[illegible]

Quality

A B C D

110

DEPTH 400

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

[illegible]

Date _____ Opr _____

Date _____ Opr _____

Quality				
A	B	C	D	

[illegible][illegible]

A: >300' & Cond B: >100' & Cond C: <100' D: Interpretation Difficult

APPENDIX B

SHALLOW HOLE LITHOLOGIC DESCRIPTIONS

pp. B-1 to B-29

Hole No. N-1 Sheet No. 1
Coordinates NE NW 3T 23N-R25E
Type Drill Rotary Date Started 11/6
Bit Size 5 3/4 Date Completed 1

PHILLIPS PETROLEUM CO.

Drilled with mud

Collar Elevation 4665'
Total Footage 290'
Overall Core Recovery 290'
Logged By WLD

GEOLOGIC LOG

[illegible]

Hole No. DL 22 Sheet No. 1
Coordinates SE NB 29 T 24 N R 22 E

Sheet No. _____

PHILLIPS PETROLEUM CO.

Collar Elevation 4480'

Total Footage 305

Overall Core Recovery: 305

Logged By WLD

Type Drill ROTARY

Date Started 10-21-83

DRILLED W/AIR

Bit Size: 5 5/8"

Date Completed 10-21-83

GEOLOGIC LOG

[illegible]

PHILLIPS PETROLEUM CO.

Hole No. B-2

Sheet No. 1

BRADY'S

Collar Elevation_____

Total Footage_____500_____

Overall Core Recovery.....

Logged By Ken Hunt

Coordinates

Type Drill Mayhew 1000

Date Started B/14/73

Date Completed 8/15/73

GEOLOGIC LOG

Bit Size 4-3/4"

[illegible]

PHILLIPS PETROLEUM CO.

Hole No. B-3

Sheet No. 1

BRADY'S

Collar Elevation.....

Coordinates.

Type Drill Mayhew 100

Date Started 8/16/73

Bit Size 4-3/4"

Date Completed 8/17/73

GEOLOGIC LOG

Overall Core Recovery_____

Logged By Ken Hunt

[illegible]

Drilled with air

Sheet No. _____

Drilled with air

Date Started March 18, 1983

Date Completed March 17, 1983

GEOLOGIC LOG

Collar Elevation _____ 300'

Total Footage _____

Total Footage_____

Overall Core Recovery 300'

Logged By WLD

[illegible]

Drilled with air

Coordinates SW SW 9, 124N-R26E

Date Started March 17, 1983

Date Completed March 18, 1983

3 GEOLOGIC LOG

4715'

240

Overall Core Recovery 240'

240'

WLD

[illegible]

Hole No. T-14

Sheet No. 1

Drilled with mud

Collar Elevation _____

Coordinates.

Total Footage_____ **280.**

Type Drill Rotary

Date Started 6-3-77

Overall Core Recover, 280

Bit Size 4 3/4"

Date Completed 6-6-77

Logged By W. L. Desormier

[illegible]

Hole No. T-16 Sheet No. 1

Coordinates SW NW Sec 15 T23N R25E Drilled with mud

Type Drill Rotary

Date Started 6-12-77

Bit Size

Date Completed 6-14-77

Collar Elevation _____

Total Footage 280'

Overall Core Recovery-- 280'

Logged By W. L. Desormier
K. Q. Holmes

[illegible]

Hole No. T-72
Coordinates 23-25-166
Type Drill ROTARY
Bit Size 6 1/8

Sheet No. 1

PHILLIPS PETROLEUM CO.

Date Started 9-27-80
Date Completed 9-27-80

DRILLED W/ FOAM

GEOLOGIC LOG

Collar Elevation 4635'
Total Footage 300'
Overall Core Recovery 300'
Logged By WLD

[illegible]

Hole No. 7-139 Sheet No. 1

Sheet No. _____

PHILLIPS PETROLEUM CO.

Coordinates SW SE 7 T 24 N R 26 E

DRILLED W/FOAM

Type Drill ZOTARY

Date Started 11-1-82

Bit Size 5 3/4

Date Completed 11-1-82

GEOLOGIC LOG

Collar Elevation 4800-

Total Footage_____280

Overall Core Recovery 282

Logged By WLD

[illegible]

PHILLIPS PETROLEUM CO.

Hole No. SP-5

Sheet No. 1Coordinates SWSE31 T24NR26E

Drilled with Air

Type Drill Rotary_____

Date Started 7-5-83

Bit Size 5 5/8

Date Completed 7-5-83

GEOLOGIC LOG

Collar Elevation 4840'

Total Footage_____ **300**

Overall Core P score: 300

Logged By WLD

[illegible]

Hole No. SP-226
Coordinates NW NE 13
T23N R25E
Type Drill ROTARY
Bit Size 5 5/8

Sheet No. 1 PHILLIPS PETROLEUM CO.
Date Started 8-18-83 DRILLED W/AIR & HAMMER
Date Completed 8-22-83

Coffer Elevation 4840'
 Total Footage 300
 Overall Core Recovery 300
 Logged By WLD

GEOLOGIC LOG

[illegible]

Hole No. SP-116 27
Coordinates NW NW 29
T24N R26E
Type Drill ROTARY
Bit Size 5 5/8

Sheet No. 1

PHILLIPS PETROLEUM CO.

Date Started 8-23-83

DRILLED w/ AIR

Date Completed 8-23-83

Collar Elevation 4520'

Total Footage 300

Overall Core Recovery 3020

Logged By WLD

GEOLOGIC LOG

[illegible]

Hole No. SP-28
Coordinates SE SE 33
T24N R26E
Type Drill ROTARY
Bit Size 5 5/8

Sheet No. 1 PHILLIPS PETROLEUM CO.
Date Started 8-23-83 DRILLED W/ AIR
Date Completed 8-23-83

Collar Elevation 4340'
Total Footage 300
Overall Core Recovery 300
Logged By WLD

GEOLOGIC LOG

[illegible]

Hole No. SP-30
Coordinates SESE5
T23NR26E
Type Drill ROTARY
Bit Size 6"

Sheet No. 1

PHILLIPS PETROLEUM CO.

Date Started 12-19-83 DRILLED w/ HAMMER

Date Completed 12-19-83

Collar Elevation 4650

Total Footage 300

Overall Core Recovery 300

Logged By WLD

GEOLOGIC LOG

[illegible]

Hole No. SP-31
Coordinates NENE 35
T24NR25E
Type Drill ROTARY
Bit Size 6"

Sheet No. 1 PHILLIPS PETROLEUM CO.
Date Started 12-19-83 DRILLED W/FOAM
Date Completed 12-19-83

Collar Elevation 4800
Total Footage 300
Overall Core Recovery 300
Logged By WLP

GEOLOGIC LOG

[illegible]

Hold No. SP-32

Coordinates NENE 33

T24NR26E

THE ROTARY

Qty Size 6"

Sheet No. 1

PHILLIPS PETROLEUM CO.

Sheet No. 1270-83 DRILLED W/FOAM

Date Completed 8-20-83

Colony Elevation 4390'

Total Footage 300

Overall Case Recovery 300

Logged By WLD

GEOLOGIC LOG

[illegible]

Hole No. SP-33
Coordinates NESW 21
T 24N R 26E
Type Drill ROTARY
Bit Size 6"

Sheet No. 1 PHILLIPS PETROLEUM CO.
Date Started 12-20-83 DRILLED W/ AIR
Date Completed 12-20-83

Celler Elevation 4500
 Total Footage 300
 Overall Core Recovery 300
 Logged By WLD

GEOLOGIC LOG

[illegible]

CHURCHILL CD

Hole No. SP-38

Sheet No. 1

PHILLIPS PETROLEUM CO.

Coordinates NW NE 15 T24N R25E

DRILLED W/FOAM

Type Drill ROTARY

Date Started 6-20-84

Bit Size 5 1/8

Date Completed 6-21-84

GEOLOGIC LOG

Collar Elevation 5120'

Total Footage_____300'

Overall Core Recovery 300'

Logged By WLD

[illegible]

CHURCHILL CO,

Hole No. FR-1 Sheet No. 1

Coordinates SESEIT 23N R 25E

Type Drill ROTARY Date Started 6-11-84

Bit Size 4 3/4 Date Completed 6-11-84

PHILLIPS PETROLEUM CO.

DRILLED w/ HAMMER

GEOLOGIC LOG

Collar Elevation 4760'

Total Footage 3.00

Overall Core Recovery 300

Logged By WLP

[illegible]

Logged By WLD

[illegible]

Logged By WLD

[illegible]

CHURCHILL CO.

PHILLIPS PETROLEUM CO.

Hole No. FR-4

Sheet No. 1

Coordinates E 1/2 E 1/2 6 T 23 N R 26 E

DRILLED W/HAMMER

Type Drill ROTARY

Date Started 6-13-84

Bit Size. 4 3/4

Date Completed 6-14-84

GEOLOGIC LOG

Collar Elevation 5080'

Total Footage 300

Overall Core Recovery... 300

Logged By WLD

[illegible]

CHURCHILL CO

PHILLIPS PETROLEUM CO.

Hole No. FR-5 Sheet No. 1

Coordinates $W \frac{1}{2} W \frac{1}{2} 33$ T24N R26E

Type Drill ROTARY Date Started 6-14-84

Bit Size 4 3/4 Date Completed 6-15-84

GEOLOGIC LOG

Collar Elevation 4460'

Total Footage 300'

Overall Core Recovery 300

Logged By WLD

[illegible]

Logged By WLD

[illegible]

CHORCHILL CO.

PHILLIPS PETROLEUM CO.

Hole No. FR-7 Sheet No. 1

Sheet No. 1

Coordinates NE NW 22 T24N R26E

DRILLED W/ HAMMER

Type Drill ROTARY

Date Started 6-18-84

Bit Size 4 3/4

Date Completed 6-18-84

GEOLOGIC LOG

Collar Elevation 4560

Total Footage 300'

Overall Core Recovery 300'

Logged By WLD

[illegible]

Hole No. FR 8

Sheet No. 1

PHILLIPS PETROLEUM CO.

Collar Elevation 4570'

Total Footage_____300'

Overall Core Recovery 300'

Logged By WLP

Coordinates SW SW 12 T24N R26E

DRILLED W/ HAMMER

Type Drill ROTARY

Date Started 6-19-84

Bit Size 4 3/4

Date Completed 6-19-84

GEOLOGIC LOG

[illegible]

Logged By WLD

[illegible]

Logged By WLD

[illegible]

APPENDIX C

STRAT TEST LITHOLOGIC DESCRIPTIONS

pp. C-1 to C-2

1007

Sheet No. 1

Coordinates SW 3E 31 T 24 N R 26 E

DRILLED W/MUD & AIR

Date Started 7-31-84

Date Completed 8-20-84

GEOLOGIC LOG

Total Footage 1000'

Overall Core Recovery 1000'

Logged By WLD

[illegible]

FIREBALL RIDGE
CHORCHILL CO.

PHILLIPS PETROLEUM CO.

Hole No. 51#2

Sheet No. 1

Coordinates NW 9E 29 T 24 N R 26 E

DRILLED W/ MOD

Type Drill GD 1500

Date Started 8-2-84

Bit Size 6 1/4 - 9 1/8

Date Completed 8-7-84

GEOLOGIC LOG

Collar Elevation 4460'

Total Footage 1000'

Overall Core Recover: 1000'

Logged By WLD

[illegible]

- QUATERNARY
- Qya Younger Alluvium
 - Qp Pediment Gravel
 - Qoa Older Alluvium
 - Qog Older Gravels
- TERTIARY
- Tys Younger Sedimentary Rock
 - Tyb Younger Basalt and Andesite
 - Td Dacite (Principally Flows)
 - Tr Rhyolite (Flows, Tuffs, and Welded Tuffs)
- JURASSIC
- Jd Dioritic Rocks
 - Jrls Limestone and Marble
 - Jkph Hornfels, Phyllite and Schist
 - Jkmv Metavolcanic Rocks
- TRIASSIC AND OR JURASSIC
- Lithologic Contact
 - Fault (Dashed Where Inferred, Dotted Where Concealed)

(Geology Modified From Willden and Speed 1974)

PLATE I

PHILLIPS PETROLEUM COMPANY
GEOTHERMAL OPERATIONS
655 EAST 4500 SOUTH SALT LAKE CITY, UTAH 84107

FIREBALL RIDGE PROSPECT
CHURCHILL & WASHOE CO.s, NEVADA

GENERALIZED
GEOLOGIC MAP

0 2000 4000 6000 Ft
SCALE

GEOLOGIST W. L. DESORMIER DATE FEB. 25, 1985
DRAFTSMAN W. HOLMES DATE FEB. 25, 1985
REVISED DATE

PHILLIPS PETROLEUM COMPANY
GEOTHERMAL OPERATIONS
655 EAST 4500 SOUTH SALT LAKE CITY, UTAH 84107

FIREBALL RIDGE PROSPECT
CHURCHILL & WASHOE CO'S, NEVADA

TEMPERATURE GRADIENT MAP

0 2000 4000 6000 FT
SCALE

GEOLOGIST W. L. DESORMIER DATE FEB. 25, 1985
DRAFTSMAN W. HOLMES DATE FEB. 25, 1985
REVISED DATE