

CRC-9

GLO24103

# Completion Report New Well PRO-318

Field Beowawe Property: \_\_\_\_\_  
 Well No. Soda Lake 1-29 Sec. 29 T. 20N R. 28E MD B.&M.  
 Location 777.8'N, 777.8'W, SE Cor Sect 29 (Final) Churchill Co. Nevada  
 Elevation 3990' (Est) Derrick Floor \_\_\_\_\_ D.F. is \_\_\_\_\_ ' above mat.  
 Date 11-9-78

Chevron Resources Company

B. D. Garrett/ R. B. Murray

(For Operations Manager, Producing Dept.)

Drilled By Hunnicut & Camp Rig #4  
 Date Commenced Drilling December 11, 1974 Date Completed Drilling December 30, 1974  
 Date of Initial Production -----

Production:	Daily Average, 1st _____ Days _____ Gravity _____ °API _____ Pump _____
	Oil _____ Bbls. _____ T.P. _____ PSI _____ Flowing _____
	Water _____ Bbls. _____ C.P. _____ PSI _____ Gas Lift _____
	Gas _____ Mcf. _____ Bean _____ /64"

### Summary

Total Depth: 4306'  
 Casing : 40' (below G. L. ) 20" S. O. W. casing  
1008' 13 3/8" x 68# K-55 Buttress.  
 Tubing : 4267' (141 JTS) 2 3/8" Used Tubing  
 Logs : DIL, BHC, FDC, CNL, Dipmeter, Temperature Surveys

SODA LAKE 1-29

Hunnicut & Camp Rig #4

- 12-11-74 Prepared site, spudded in and drilled 17½" 40' to 255' through 40' of 20" conductor pipe.
- 12-12-74 Drilled ahead 17½" to 954'. Lost partial circulation. Drilled ahead 17½" to 984' with partial circulation - ran out of mud. POOH.
- 12-13-74 Mixed 100 bbl mud. RIH to 500' - regained circulation. RIH to 984'. Drilled ahead 17½" to 1025' with no mud loss. Circulated hole clean. Ran Schlumberger temperature survey. Spotted thick gel pill on bottom. POOH. Ran Schlumberger IES log 1025' to surface. Ran 1019' of 13 3/8" x 68# K-55 casing. Casing stopped at 982'. Circulated and worked casing to 992'. Lost circulation. Mixed mud with LCM.
- 12-14-74 Could not regain circulation. POOH and layed down 13 3/8" casing. RIH with 17½" bit to 1025' with partial circulation. POOH. RIH with open end 4½" drill pipe to 1011'. Halliburton equalized 100 sx neat cement treated with 3% CaCl<sub>2</sub> and 10 sx LCM. Cement in place 12:15. POOH. RIH w/ 17½" bit. Located cement at 1009'. Cleaned out cement to 1022'. Circulated to condition hole.
- 12-15-74 POOH. Rigged up and ran 1019' of 13 3/8" x 68# K-55 casing. Stopped at 984', installed casing head. Pumped and worked casing to 1008'. Halliburton equipment cemented casing at 1008' with 255 cu. ft. 1 to 1 Pozzalin and 35% silica flour, followed by 200 cu ft neat cement with 35% silica flour. Partial cement returns. Cemented outside casing with 80 sx neat cement plus 3% CaCl<sub>2</sub>. Landed casing and installed class III BOPE.

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Casing Detail

1008' of 13 3/8 x 68# K-55 Buttress casing of unk. mfg. with Baker guide shoe, Baker float at 984', KK-6 turbine centralizers on bottom 3 joints and every third joint to surface

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- 12-16-74 Tested BOPE to 2000 PSI. RIH with 11" bit to 964'. Plugged jets in bit. POOH, cleaned jets. RIH to 964'. Drilled out float collar, cement and casing shoe to 1008'. Drilled ahead 11" to 1100'. Lost circulation. Mixed gel mud. Drilled ahead 11" to 1110" with no returns. Spotted gel pill on bottom. POOH to 1000'.
- 12-17-74 RIH to TD. Top of mud at 85'. Pumped in 100 bbls of gel mud. No returns to surface. Top of fluid at 85'. Mix 200 bbls gel mud with 20% LCM. Regained partial circulation. Drilled ahead with partial circulation to 1140'. Plugged jets with LCM. Tripped hole to clear

- 12-17-74 jets. Drilled ahead 11" to 1350' with partial circulation.  
cont. Drilled ahead 11" to 1377' with 75% returns.
- 12-18,19,20 Drilled ahead 11" to 2900'.
- 12-21-74 Drilled ahead 11" to 2994'. Ran temperature survey @ 2970'.  
Parted wire line. POH. Retrieved instrument. RIH & stuck bit  
at 1391', worked it free. Reamed tight hole 1391' to 1420'.
- 12-22,23-74 Continued reaming to 1776'. RIH to 1816' reamed hole. RIH to  
2994'. Drilled ahead 11" to 3838'.
- 12-24-74 Drilled ahead 11" to 3847'. Tripped to change bits. Reamed  
tight hole 1835' - 1870'. Drilled ahead 11" to 3958'.
- 12-25-74 Drilled ahead 11" to 4248'.
- 12-26-74 Drilled ahead 11" to 4274'. Circulated hole clean for 10 hr  
temperature survey. Rigged up and ran 8 3/4" x 30' Mercury  
Christiansen Core Bbl.
- 12-27-74 Cored 4274' to 4288' POOH. RIH and opened hole to 11" to 4288'.  
Drilled ahead 11" to 4306'. Circulated hole clean. POOH to run  
E logs.
- 12-28-74 Rigged up Schlumberger and ran DIL, BHC, FDC & CNL logs and dipmeter.  
Rigged down Schlumberger.
- 12-29-74 Circulated hole clean. POOH and layed down drill pipe. Picked up  
and ran 141 joints (4267') used 2 3/8" tubing. Landed tubing  
in 12"-3000# casing head. Bottom of tubing at 4281'. Rabbitted  
tubing, removed BOPE.
- 12-30-74 Installed 3" gate valve on top of doughnut. Installed bullplugs in  
valves on casing head. Rigged down and released.
- 12-31-78 Cleared site
- 1-1-75 Holiday
- 1-2 to 10 Cleared site, pumped out & back filled sump.
- 1-10-75 Ran Agnew & Sweet temp survey 4280' to surface.

Suspended all Operations

CRC-9

Soda Lake 1-29  
Summary of Production Test 5-20-75 thru 5-25-75

Well File

Nevada  
Soda Lake  
1-29

5/20/75 Moved in unit and rigged up. Filled hole with approximately 2-3 bbl.

5/21/75 Pulled 2-3/8" tubing to 1700' and attempted to circulate. Hole remained full but returns could not be attained.

7/3/75

Pulled to 1160' and circulated out  $\pm$  20 bbl. of thick mud, then  $\pm$  40 bbl. blackish water with temp. of 118°F and salinity of 7500 ppm. At this time circulation was lost and hole would not stand full. Spotted 40 bbl. thick gel pill @ 1160 and pulled tubing.

Ran 11" bit to 1008 - unable to fill hole with 50 bbl. gel mud. Ran bit to 1700' and pulled out of hole.

Ran open end tubing to 1694' and equalized 95 sx Class "G" cement treated with .2#/Sk HR-7. No circulation; C.I.P. 10:30 PM.

5/22/75 Located top of cement at 1531 and spotted 30 bbl. fresh water.

Ran Halliburton RTTS packer and set at 958'. Filled annulus with mud.

Conducted 18 $\frac{1}{4}$  hour test. See attached report Test #1.

5/23/75 Pulled tester, pumped in 50 bbl. mud and 50 bbl. water to cool hole.

Attempted to run Welex sidewall sample gun which stopped at 1067'. Could not work sampler below 1067.

Ran 13-3/8" Baker Model "N" cast iron bridge plug on wire line and set at 991'.

Using Welex Super Dynajet DP charges, perforated 2 $\frac{1}{2}$ " holes per foot 791 to 980' (189').

5/24/75 Ran Halliburton RTTS packer and set at 744'. Filled annulus with water.

Conducted 13 $\frac{1}{2}$  hour test. See attached report Test #2.

5/25/75 Landed 2-3/8" open end tubing at 945'. Release rig.

B. D. GARRETT

*B.D.G.*

Copy sent to Paul English (Phillips) 7/3/75

*B*

Soda Lake 1-29  
Test #1 5/22/75

T.D. 4306 Plug 1531  
Csg. 13-3/8 @ 1008

Test interval 1008-1531 (523')  
Packer set at 958'  
Pressure recorders @ 973'  
Max. reading thermometers @ 973'  
Rat hole volume (below packer) 83 bbl.

With the packer set at 958, Nowsco 1" tubing was run to 800'. Nitrogen lift started at 4:45 PM (5/22/75) at 100 cfm and fluid surfaced at 4:55 (10 min.)

The well was produced for 756 minutes (12 hours-36 minutes) and shut in for 336 minutes (5 hours-36 minutes).

Production was gaged in a 350<sup>±</sup> bbl. tank at 15-30 minute intervals. Wave action in the tank made individual gages very erratic. Gages ranged from 220 B/D to 1250 B/D with an overall average of 577 bbls. A total of 300 bbls. was brought to the surface including 83 bbl. of rat hole fluid.

The well was allowed to flow without nitrogen lift on two occasions while pressure samples were taken. The flowing rate was  $\pm$  220 B/D but with the down hole cooling that was taking place the well would have died in a very few minutes.

The four maximum reading thermometers gave erratic data as follows:

<u>Range</u>	<u>Reading</u>
100-500°F	365°F
200-400	325
60-300	over range
100-500	351

Since prior temperature surveys indicate a temperature of 320<sup>±</sup> °F this data appears incorrect.

One of the two pressure recorders stopped about the middle of the test; the other functioned properly and the readings are attached.

The pressures indicated by the recorder do not reflect differences of flow rate or shut in - in fact, the shut in pressure is less than the flowing pressure. It appears that the pressure changes were too small for the recorder to resolve.

B. D. GARRETT

Soda Lake 1-29  
Test #2 5/24/75

T.D. 4306 Plugs 1531 and 991  
Csg. 13-3/8 @ 1008  
Perforations: 2/ft. 791-980 (189')

Test interval 791-980  
Packer set at 744  
Pressure recorders at 760'  
Max. reading thermometers at 760'  
Rat hole volume (below packer) 37 bbl.

With the packer set at 744', Nowsco 1" tubing was run to 700'. Nitrogen lift was started at 3:53 AM (5/24/75) at 100 cfm and fluid surfaced at 3:57 (4 minutes).

The well was produced for 457 minutes (7 hours-37 minutes) and shut in for 345 minutes (5 hours-45 minutes).

Production was gaged as in Test #1 at rates ranging from 586 to 1380~~0~~ A total of 307 bbl. was brought to the surface, including 37 bbl. of rat hole fluid. (See attached detail). The well would not flow without nitrogen lift.

The four maximum reading thermometers were read as follows: 312, 315, 320, 322°F.

Neither of the two pressure recorders functioned - I believe this was due to operator error when the recorders were installed.

B. D. GARRETT

JORDA LAKE 1-29 PROTEST #1 5/22/75

REAL TIME	ELAPSED TIME	NOWSCO TUBE DEPTH	N <sub>2</sub> RATE	RAINS RATE	COM. PROD.	BOTTOM HOLE PRESS (973') PSI	SURFACE TEMP*
	MIN	FT	CFM	B/D	BBL		
INITIAL HYDROSTATIC	- 95					385.85	
	- 11					380.71	
START N <sub>2</sub> INJECTION	0	800	100			502.30	
2:45 PM (5/22/75)	3					369.67	
	46			75 @ 35 MIN		369.58	
5:54	69			459	20		
6:05	80		100	501	24		
	84					370.18	240
6:12	87			685	27		250
	91	947		213	30		
6:29	104	NOTE:		636	36		252
	113	TUBE STOPPED		766	41		
	121	ON SUR ABOVE				370.07	257
6:57	132	PACKER - COULD	150	944	53		258
	150	NOT WORK		892	59		259
	158	DEEPER				370.69	
	165			827	73		260
	182			649	80		
	196					371.31	
	215			837	100		265
	233					371.93	
FROM 9:10 - 10:42 N <sub>2</sub> HAS SHUT OFF TO LET WELL FLOW & TAKE PRESSURE SAMPLE w/o N <sub>2</sub> FLOW RATE ± 220 B/D	9:10	265		772	126		269
	270		0	220		373.29	
	308		1	?		373.18	238
	346		150	?		373.18	
	383					373.18	
	405			689	164		265
11:30	420					373.18	
12:00 AM (5/23/75)	435		100	735	180		262
	457					371.28	

JODA LANE 1-29 PROOTEST #1 (CONT'D)

	REAL TIME	ELAPSED TIME	NOMINAL TUBE DEPTH	N <sub>2</sub> RATE	BRINE RATE	CUM PROD	BOTTOM THIS PASS (978') PSI	SURFACE TEMP. * °F
		MIN	FT	CFM	BLU	BAR		
FROM 1:20 TO 3:42 GAGE TR. MINS DRAINED & NO GAGES TAKEN. ASSUME 565% RATE	1:20 AM	494 515	947	100	707	219	368.98	257
		532			565		369.60	
		569					367.29	
		606					367.91	
		643					367.91	
SHUT OFF N <sub>2</sub> @ 3:50 (LBSM) HALL FLOWING	3:42	657		0			367.91	270
		680						262
	4:34	709			424	290		
		718					368.32	
	4:46	721			230	292		
	5:00	735			295	295		
SI @ SURF FOR FINAL	5:21	756	60			<u>301</u>	368.94	
		793					369.56	
		830					370.18	
		868					370.07	
		905					369.96	
		942					367.67	
		979					367.67	
		1016					367.67	
		1054					365.87	
		1092	0				362.10	
PUMP H <sub>2</sub> O DOWN TBNA TO COOL & KILL HALL	11:00	1095					434.90	
		1102					440.04	
		1108					454.04	
		1110					476.17	
		1122					482.79	
FINAL HYDROSTATIC		1123					389.11	

\* SURFACE TEMPERATURE WAS MEASURED WITH A CONTACT THERMOMETER ATTACHED TO THE OUTSIDE OF THE FLOW LINE. THESE READINGS ARE AFFECTED BY AMBIENT TEMP. & WIND CONDITIONS & ARE AT LEAST 10°F LOW.

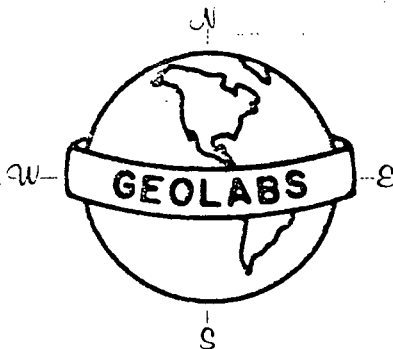


3000 LANE 1-29 PROD. TEST #2 5/24/75

	REAL TIME	ELAPSED TIME	HOWS CO TUBE DEPTH	N <sub>2</sub> RATE	BRINE RATE	CUM. PROD	BOTTOM TUBE PRESS (760') PSI	SURFACE TEMP OF
START N <sub>2</sub> INJ	5/24/75 5:53 AM	0	700	100	-	-		
	4:16	23		}	872	12		100
	4:31	38		}	922	21		
	5:01	68		200				133
	5:16	83		}	528	50		
	5:22	89		}	792	53		142
	5:30	97		}	1132	59		144
	5:32	99		300				
	5:46	113		100				
	5:49	116		}	727	69		144
	5:59	126		}	535	75		163
	6:07	134		}	1381	83		174
	6:34	161		}	1072	103		194
NO GAGES TAKEN - TANK DRAINED	6:58	185		}	1380	126		210
	8:35	282		}	1200 Est	207		217
	8:54	301		}	1016	220		244
	9:07	314		}	850	228		248
NO GAGES TAKEN - TANK DRAINED	9:27	334		}	1102	243		258
	10:45	425		SI N <sub>2</sub> TO TAKE PRESSURE SAMPLE				200
	10:58	425		100	840 Est	296		
	11:12	439		50-100	586	302		231
STOP N <sub>2</sub>	11:25	452	100	0	0	307		240
S.I. AT SURFACE	11:30	457						
Pump H <sub>2</sub> O To Cool Well	5:15 PM	802						
Well Pauser	5:30	817						

RECORDS WIP NOT FUNCTIONAL

GEOLABS  
 1100 Simins Street  
 Lakewood, Colorado  
 Phone (303) 237-5122



Mailing Address:  
 P.O. Box 702  
 Edgemont Branch  
 Golden, Colo. 80401

June 18, 1975  
 Job: 5-989

*RJA*

MINERALS STAFF

JUN 30 1975

*File Soda Lake 29-*

*3-9-1975 2c*

*W. J. ...  
 ...*

A DIVISION OF  
 NATURAL RESOURCES LABORATORY, INC.

Mr. Roger F. Allmendinger  
 Chevron Oil Company  
 225 Bush St.  
 San Francisco, California 94104

REPORT OF ANALYSES

All analyses reported in mg/l.

<u>Sample</u>	<u>F<sup>-</sup></u>	<u>Cl<sup>-</sup></u>	<u>CO<sub>3</sub><sup>=</sup></u>	<u>HCO<sub>3</sub><sup>-</sup></u>	<u>SO<sub>4</sub><sup>=</sup></u>	<u>SiO<sub>2</sub>*</u>	<u>TDS**</u>
SL1-5	1.9	2550	22	150	160	31.6	5220
SL1-10	1.9	2850	25	135	120	30.8	4900
SL2-3	1.4	2500	N.D.	150	120	133	4700
SL2-5	1.4	2480	N.D.	155	120	28.7	4700
SL2-6	1.7	2580	13	115	120	29.4	4670
SL2-7	1.6	2950	N.D.	105	110	30.1	4740

<u>Sample</u>	<u>pH</u>	<u>K, umho/cm</u>	<u>U</u>	<u>Na</u>	<u>K</u>	<u>Ca</u>	<u>Mg</u>	<u>Li</u>
SL1-5	8.6	8000	-	1600	160	75	8	2.6
SL1-10	8.6	7490	<0.002	1520	160	86	10	2.6
SL2-3	8.0	7490	-	1480	160	97	1	2.6
SL2-5	8.2	7460	<0.002	1480	150	96	1	2.6
SL2-6	8.4	7700	<0.002	1500	160	96	<1	2.6
SL2-7	8.4	7800	-	1520	160	86	1	2.6

<u>Sample</u>	<u>B</u>	<u>As</u>	<u>Al</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Fe</u>	<u>Mn</u>	<u>Hg</u>
SL1-5	10.0	0.05	-	-	-	-	-	-	-
SL1-10	10.0	0.05	24.	0.020	<0.5	0.20	70	1.7	<0.0001
SL2-3	10.0	0.05	-	-	-	-	-	-	-
SL2-5	10.0	0.05	0.40	0.075	0.15	0.25	0.95	0.2	0.0001
SL2-6	10.0	0.05	0.40	0.050	0.12	0.24	0.60	<0.1	0.0001
SL2-7	10.0	0.05	-	-	-	-	-	-	-

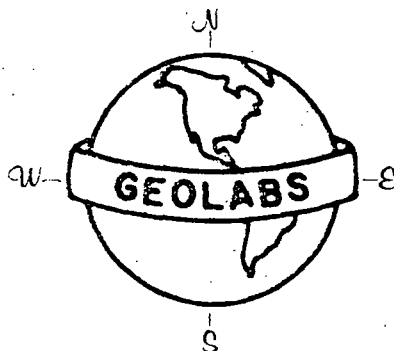
\*SiO<sub>2</sub> analyses on diluted sample as provided; no diluted sample available for SL2-3 and analysis on raw sample.

\*\*TDS - Total dissolved solids.

N.D. - not detectable by definition (pH < 8.3)

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June 18, 1975  
Job: 5-989  
Page 2

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Cu, Pb, Zn run by AA-chelation/extraction due to interference in direct aspiration from high alkalis. Sample SL1-10 reported to <0.5 mg/l Pb due to interference from high Fe. High Fe, Al on this sample may be due to acid leaching of sediment in the sample.

Ronald L. Keil

PRODUCTION RECORD

Test #1 - May 22, 1975 (4:54 PM) - May 23, 1975 (5:12 AM)

<u>Time</u>	<u>Tank Depth</u>	<u>Inches</u>	<u>Cumulative Inches</u>	<u>Cumulative Barrels</u>	<u>Barrels</u>	<u>Bbl./day Rate</u>
5:45	4.5	-	-	-	-	-
5:54	5.25	.75	.75	2.87	2.87	459
6:05	6.25	1	1.75	6.7	3.83	501
6:12	7.12	.87	2.62	10.03	3.33	685
6:16	8.0	.88	3.5	13.40	3.37	1213
6:29	9.5	1.5	5.0	19.15	5.74	636
6:38	10.75	1.25	6.25	23.94	4.79	766
6:57	14.0	3.25	9.5	36.38	12.45	944
7:15	16.75	2.75	12.25	46.92	10.53	892
7:30	19.0	2.25	14.5	55.54	8.62	827
7:47	21.0	2.0	16.5	63.3	7.66	649
8:20	26	5	21.5	82.4	19.18	837
9:10	33	7	28.5	109.3	26.84	773
DRAIN PIT						
10:42	19	-	-	-	-	-
11:30	25	6	34.5	132.3	23.01	690
12:00	29	4	38.5	147.6	15.34	736
1:10	39.25	10.25	48.75	187.0	39.31	708
DRAIN PIT						
3:42	29	-	-	-	-	-
4:34	33	4	52.75	202.3	15.34	425
4:46	33.5	.5	53.25	204.2	1.92	230
5:00	34.25	.75	54.0	207.1	2.88	296

PRODUCTION RECORD

Test #2 - May 24, 1975 (3:57 AM - 11:30 AM)

<u>Time</u>	<u>Tank Depth</u>	<u>Inches</u>	<u>Cumulative Inches</u>	<u>Cumulative Barrels</u>	<u>Barrels</u>	<u>Bbl./day Rate</u>
3:57	9	-	-	-	-	-
4:16	12	3	3	11.50	11.5	872
4:31	14.5	2.5	5.5	21.1	9.6	922
4:56	19	4.5	10	38.4	17.3	996
5:16	22	3	13	49.9	11.5	828
5:22	22.85	0.85	13.85	53.1	3.3	792
5:30	24.5	1.65	15.5	59.4	6.33	1139
5:49	27	2.5	18	69.03	9.6	727
5:59	28.5	1.5	19.5	74.8	5.8	835
6:07	30.5	2.0	21.5	82.5	7.67	1381
6:34	35.75	5.25	26.75	102.6	20.1	1072
6:58	41.75	6.0	32.75	125.6	23.0	1380
DRAIN						
8:35	32.5	-	-	-	-	-
8:54	36.0	3.5	36.25	139.0	13.4	1016
9:07	38.0	2.0	38.25	146.7	7.67	850
9:27	42.0	4.0	42.25	162.0	15.3	1102
DRAIN						
10:53	27	-	-	-	-	-
11:12	28.5	1.5	43.75	16.78	5.7	586

Estimated volumes produced while  
tank was being drained

TEST PERIOD #1

1. 220 bbl/day  $\times$  1.5 hrs = 14.8 bbl.
2. 565 bbl/day  $\times$  2.33 hrs = 54.8 bbl.

TEST PERIOD #2

1. 1200 bbl/day  $\times$  1.5 hrs = 80.8 bbl.
2. 840 bbl/day  $\times$  1.5 hrs = 52.5 bbl.

Total production

Test # 1

$$\begin{array}{r} 14.8 \\ 54.8 \\ + 207.1 \\ \hline 276.7 \end{array}$$

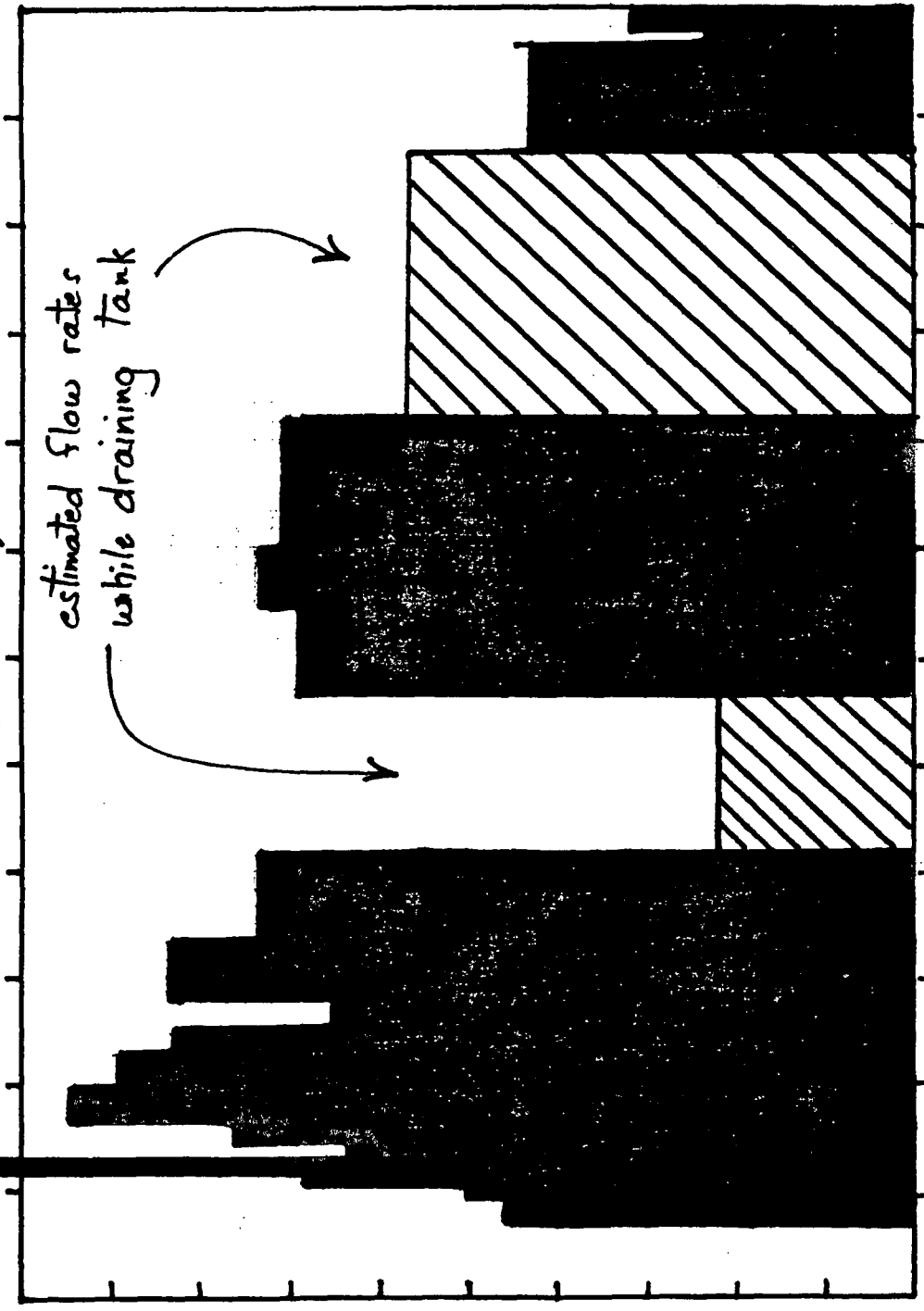
Test # 2

$$\begin{array}{r} 80.8 \\ 52.5 \\ + 178.8 \\ \hline 312.1 \end{array}$$

TEST PERIOD #1

- SL7-10 →
- SL7-9 →
- SL7-8 →
- SL7-7 →
- SL7-6 →
- SL7-5 →
- SL7-4 →
- SL7-3 →

Time

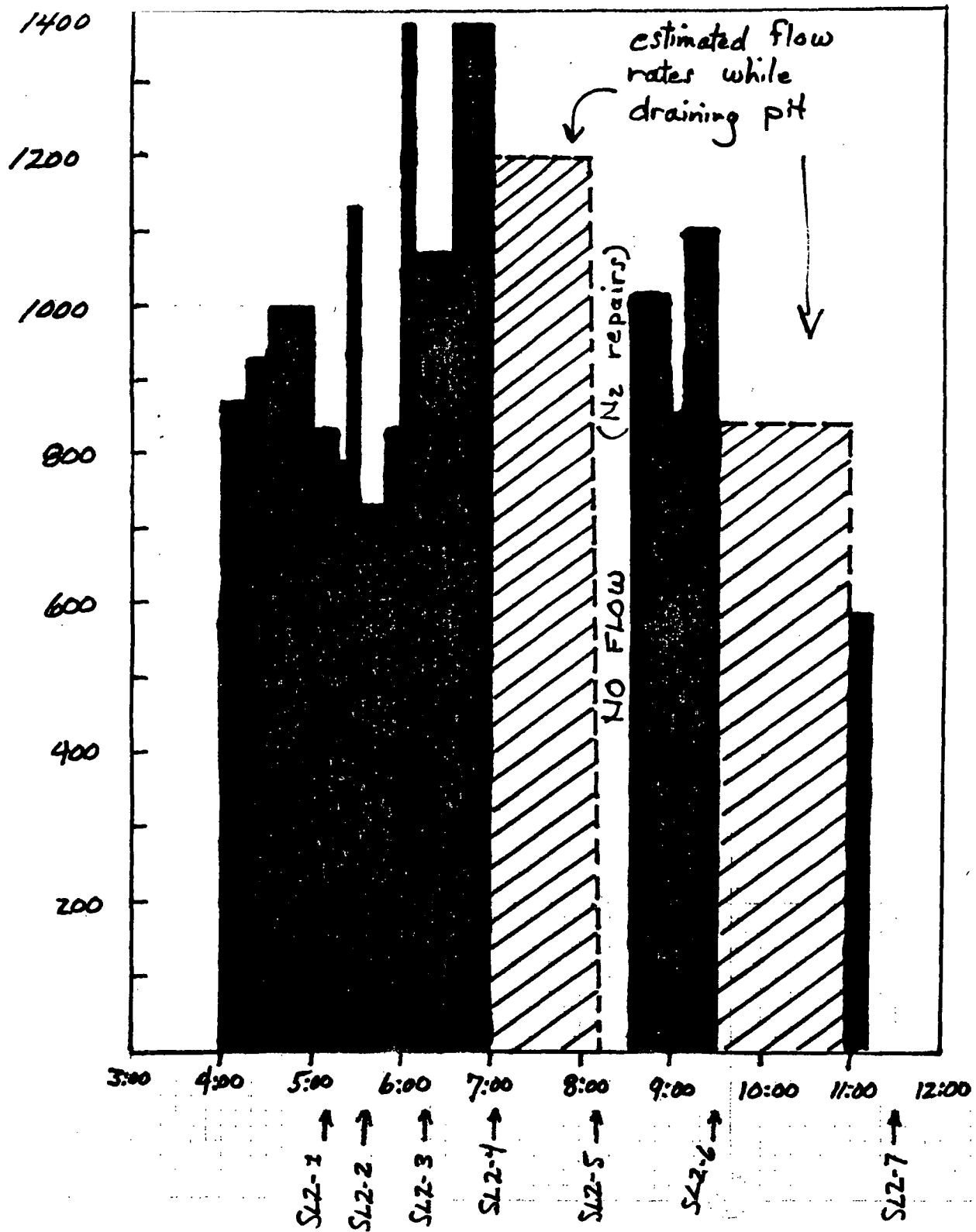


hop/199

estimated flow rates while draining tank

May 23, 1975 (A.M.)

May 22 1975 (P.M.)





# SKYLINE LABS, INC.

SPECIALISTS IN EXPLORATION GEOCHEMISTRY

12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

## REPORT OF ANALYSIS

Job No. 120154  
June 11, 1975

Chevron Oil Company  
Minerals Staff  
225 Bush Street  
San Francisco, California 94104

Attention: Roger J. Allmendinger

### Analysis of 13 Water Samples

Item	Sample No.		Li (mg/l)	Na (mg/l)	K (mg/l)	Mg (mg/l)	Ca (mg/l)	Al (mg/l)	Mn (mg/l)
1.	SL1-3	Acid	2.8	1,710.	170	21.	355.	*	*
2.	4	Acid	3.0	1,570.	220	20.	210.	*	*
3.	5	Acid	3.0	1,550.	180	8.9	94.	15.	.51
4.	6	Acid	2.9	1,490.	160	10.	100.	*	*
5.	7	Acid	2.8	1,420.	160	7.5	98.	*	*
6.	8	Acid	3.0	1,500.	150	9.2	110.	*	*
7.	9	Acid	2.9	1,430.	140	12.	115.	*	*
8.	SL1-10	Acid	2.9	1,400.	130	17.	130.	25.	1.1
9.	SL2-1	Acid	2.9	1,380.	140	1.8	105.	*	*
10.	2	Acid	2.9	1,350.	130	1.5	100.	*	*
11.	3	Acid	2.8	1,330.	140.	1.1	100.	*	*
12.	SL2-4	Acid	2.8	1,340.	140.	.90	98.	2.0	.09
13.	SL2-H <sub>2</sub> O		*	1.0	<.1	*	.14	*	*

Item	Sample No.		Cu (mg/l)	Pb (mg/l)	Zn (mg/l)	Fe (mg/l)	U (ppb)	Hg (mg/l)
1.	SL1-5	Acid	.012	<.02	.10	26.	3	<.005
2.	SL1-10	Acid	.014	.02	.16	50.	<2	<.005
3.	SL2-4	Acid	.13	.30	.70	1.0	<2	<.005

Item	Sample No.	As (mg/l)	B (mg/l)	SO <sub>4</sub> (mg/l)	F (mg/l)	Cl (mg/l)	CO <sub>3</sub> (mg/l)
1.	SL1-3 Raw	.12	11.	200.	2.0	2,120.	86
2.	4 Raw	.10	12.	40.	2.0	1,900.	36
3.	5 Raw	<.05	12.	20.	2.0	1,990.	32
4.	6 Raw	.07	12.	20.	2.0	2,040.	34
5.	7 Raw	<.05	11.	20.	2.0	1,975.	22
6.	8 Raw	<.05	12.	10.	2.0	1,975.	30
7.	9 Raw	<.05	11.	20.	.19	1,860.	28
8.	SL1-10 Raw	.12	11.	50.	.18	2,130.	30
9.	SL2-1 Raw	.10	11.	10.	.15	1,960.	<2
10.	2 Raw	.05	11.	10.	.15	1,790.	<2
11.	3 Raw	<.05	11.	10.	.16	2,150.	<2
12.	SL2-4 Raw	<.05	12.	10.	.16	1,990.	10
13.	SL2-H <sub>2</sub> O	*	*	<2.	*	<1.0	*

Item	Sample No.	HCO <sub>3</sub> (mg/l)	T.D.S. by Evaporation (mg/l)	pH	Specific Conductivity (micromhos/cm)
1.	SL1-3 Raw	225.	6,540.	9.3	6,820
2.	4 Raw	130.	5,250.	9.0	6,780
3.	5 Raw	100.	4,810.	8.9	6,450
4.	6 Raw	86.	4,950.	8.9	6,570
5.	7 Raw	130.	4,220.	8.7	6,330
6.	8 Raw	80.	4,770.	8.8	6,710
7.	9 Raw	78.	4,160.	8.8	6,620
8.	SL1-10 Eaw	105.	4,480.	8.8	6,460
9.	SL2-1 Raw	130.	4,380.	7.8	6,510
10.	2 Raw	130.	4,510.	8.2	6,520
11.	3 Raw	130.	3,610.	8.1	6,270
12.	SL2-4 Raw	105.	4,310.	8.4	6,390
13.	SL2-H <sub>2</sub> O	2.	*	*	*

SKYLINE LABS, INC.

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Item	Sample No.	SiO <sub>2</sub> (mg/l)
1.	SL1-3 Raw	190.
2.	4 Raw	195.
3.	5 Dil	60.
4.	6 Raw	240.
5.	7 Dil	30.
6.	8 Raw	205.
7.	9 Dil	48.
8.	SL1-10 Dil	45.
9.	SL2-1 Raw	220.
10.	2 Raw	205.
11.	3 Dil	30.
12.	SL2-4 Dil	30.
13.	SL2-H <sub>2</sub> O	<.5

\* Analysis not requested.

Note:

H<sub>2</sub>O = Distilled water, Acid = Acidified sample, Dil = Diluted sample

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Charles E. Thompson  
Chief Chemist

LRC-9

# AGNEW AND SWEET

3914 GILMORE AVENUE  
BAKERSFIELD, CALIFORNIA  
93308

24 HOUR PHONE 327-2267  
AREA CODE 805

Production

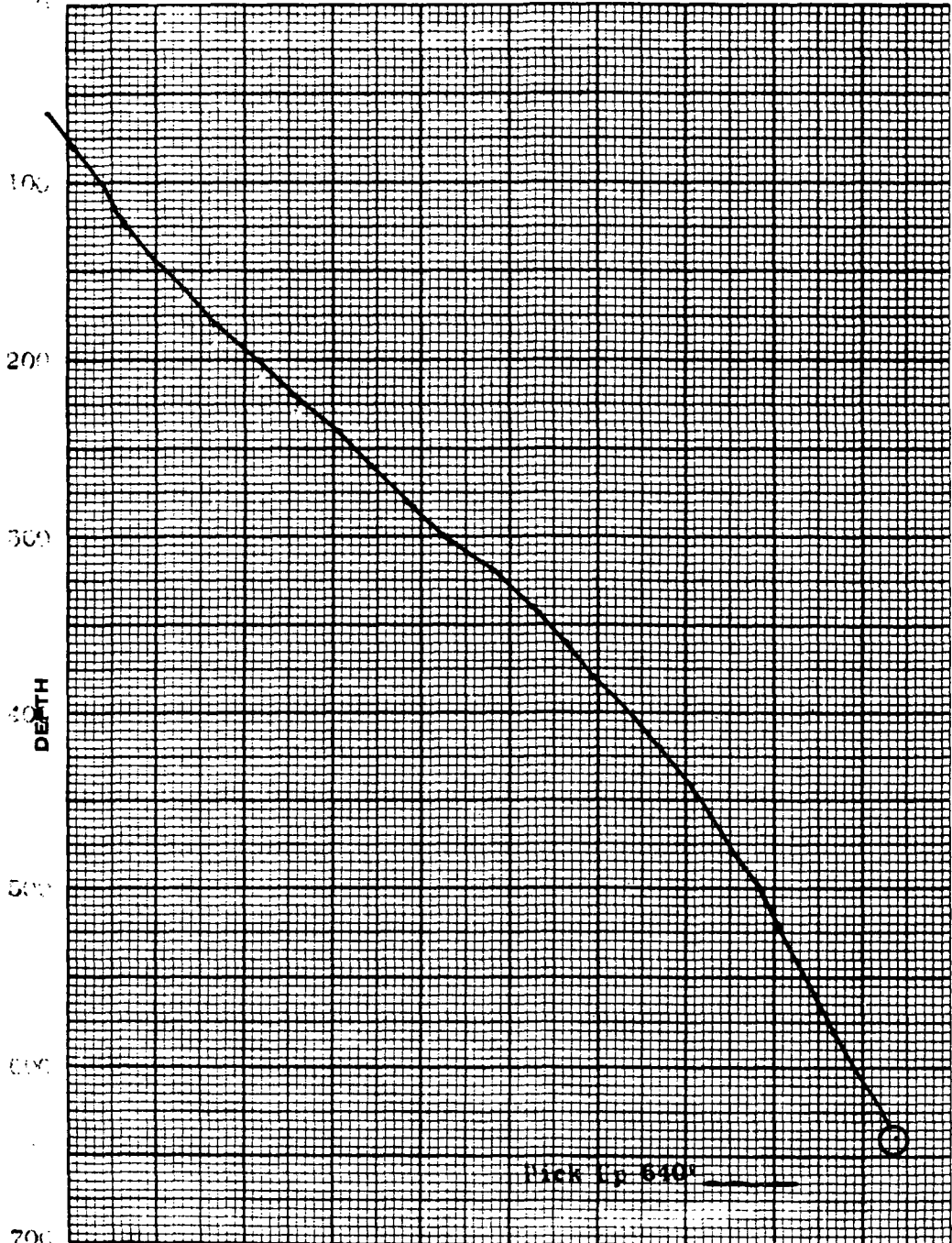
Specialists

## SUBSURFACE TEMPERATURE SURVEY

*Well # 1-29  
Nasuda  
Soda Lake  
1-29*

OWNER CHEVRON OIL COMPANY FIELD Soda Lake WELL NAME 1-29  
 CASING ELEV. DATE: May 30, 1975  
 LINER DESCRIPTION: ZERO POINT 12'  
 DEPTH 990' - plug  
 ZONE  
 TUBING DETAIL: 2-5/8" @ 945'  
 INSTRUMENT 90 - 660 \* FAH  
 SERIAL NO. 10008  
 PUMP SHOE GAS ANCHOR INTAKE:  
 PURPOSE Static Temperature Survey - Traverse 20'/min. MAX. TEMP. 287.0 °F @ 640'  
 REMARKS:

100 120 140 160 180 200 220 240 260 280 300  
TEMPERATURE



STABILIZATION PERIOD

GROSS OIL RATE B/D

NET OIL RATE B/D

FORMATION GAS MCF/D

GOR CFT/BBL

CIRCULATED GAS MCF/D

OIL DRY GRAVITY °API

PRESSURE	OBS	COR
CASING, PSIG	0	0
TUBING, PSIG	0	0

DEPTH	TEMP.	DEPTH	TEMP.
0		340	205.0
20		360	212.3
40		380	218.8
60	97.4	400	227.5
80	101.8	420	234.0
100	107.1	440	240.2
120	112.0	460	245.5
140	118.5	480	250.8
160	126.0	500	256.7
180	132.5	520	260.7
200	143.9	540	265.0
220	151.4	560	269.1
240	160.6	580	273.7
260	168.6	600	275.0
280	176.1	620	281.0
300	184.7	640	287.0
320	190.2		

Time on bottom 7:03 pm  
Time off bottom 7:04 pm

Back to 640'

BY: Bruett & Norson

TEMPERATURE BUILD UP DATA

DRILLED DEPTH 4274'; DRILL RATE (FT./HR.) 14 1/2 (LAST 80' DRILLED).

TIME REACHED DRILLED DEPTH 10:23 <sup>OF</sup> ~~11:23~~; TIME SINCE LAST CIRCULATION 12:05 PM.

TYPE TEMP. SURVEY: inside Drill pipe; MUD TEMP. 135°F IN 156°F OUT; DATE: 12/26/74.

Cumulative time since  
Last circulation

TEMPERATURE RUN

	40	89	136	195	316	360	408	455	499	550		
	1	2	3	4	5	6	7	8	9	10	11	12
TIME TEMP. TOOL REACHED BOTTOM	12:25	1:14	2:01	3:00	5:00	5:45	6:30	7:17	8:03	8:51		
TIME TEMP. TOOL ON BOTTOM	<del>20</del>	20	20	20	21	20	23	23	21	24		
TIME PULL OFF BOTTOM	12:45	1:34	2:21	3:20	5:21	6:05	6:53	7:40	8:24	9:15		
TEMP. READINGS:												
THERMOMETER # <u>774</u>	164	171	185	191	211	215	221	226	233	238		
THERMOMETER # <u>777</u>	164	171	180	191	212	216	224	227	234	238		
THERMOMETER # <u>784</u>	162	171	181	191	212	216	222	228	234	238		
DEPTH OF THERMOMETERS <u>4220'</u>												

REMARKS: Reached 4220' at 4 AM.

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24  
15  
5  
—  
44

TEMPERATURE BUILD UP DATA

DRILLED DEPTH 2994 ; DRILL RATE (FT./HR.) 70'/hr (LAST 80' DRILLED).

TIME REACHED DRILLED DEPTH 8:40 AM ; TIME <sup>OF</sup> SINCE LAST CIRCULATION 11:07.

TYPE TEMP. SURVEY: Inside drill pipe ; MUD TEMP. 144°F IN 157°F OUT; DATE: 12/21/74.

TEMPERATURE RUN

Cumulative time since Circulation

	38 1	80 2	118 3	159 4	201 5	241 6	282 <del>X</del> 7	320 <sup>**</sup> 8	9	10	11	12
TIME TEMP. TOOL REACHED BOTTOM	11:24	12:07	12:45	13:26	14:08	14:48	15:27	16:07	16:47			
TIME TEMP. TOOL ON BOTTOM Time Pull off BOTTOM	21 <del>0</del>	20	<del>20</del> 20	20	<del>20</del> 20	20	22	20				
TEMP. READINGS: °F												
THERMOMETER # <u>774</u>	166	173	181	187	196	203	209	216				
THERMOMETER # <u>777</u>	167	174	180	189	197	203	210	216				
THERMOMETER # <u>784</u>	167	174	181	189	197	203	210	216				
DEPTH OF THERMOMETERS <u>2974'</u>												

REMARKS: Pipe worked ~ 3' both when sub pulled off bottom and also after thermometers have surfaced.

\* After run #7 - pipe worked twice ~ 20'

\*\* Wire broke when pull out of hole

805 AM Drilled passed 2974'

- 3 1. ✓ Drilling and Completion History
- 3 2. ✓ Flow Test Data, 5-20-75 through 5-25-75 including, Report of Analysis, 6-18-75 (Geolabs), Production Record, and Report of Analysis, 6-11-75 (Skyline Labs)
- 3 3. ✓ Static Temperature Survey, 5-30-75. 1"=100'
- 3 4. ✓ Maximum Reading Thermometer Data
- 2 \* 5. ✓ Borehole Compensated Sonic Log, 12-28-74 - with Caliper
- 2 \* 6. ✓ Dual Induction Laterolog w/Linear Correlation Log, 12-28-74
- 2 \* 7. ✓ Continuous Dipmeter, 12-28-74
- 2 \* 8. ✓ Induction Electric Log, 12-13-74, Run 1
- 2 \* 9. ✓ Compensated Neutron - Formation Density, 12-28-74 - with Gamma Ray
- 2 \* 10. ✓ Agnew & Sweet Subsurface Temperature Survey, 1-10-75
- 2 \* 11. ✓ Agnew & Sweet Subsurface Temperature Survey, 1-27-75
- 2 \* 12. ✓ Agnew & Sweet Subsurface Temperature Survey, 2-27-75
- 2 \* 13. ✓ Agnew & Sweet Subsurface Temperature Survey, 4-29-75
- 2 \* 14. ✓ Mud Log, 2"=100' (Exploration Logging), with core description
- 2 \* 15. ✓ Mud Log, 2"-1000' (Exploration Logging)

\* Indicates that 4th copy is reproducible