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103.05249



LOG OF #1 GOVERNMENT CHORNEY

RIO BLANCO COUNTY, COLORADO

OPERATOR: ARGO OIL CORPORATION
1700 BROADWAY, DENVER, COLORADO

LOCATION: SE $\frac{1}{4}$ NW $\frac{1}{4}$ SECTION 35, T. 1 N., R. 103 W.

ELEVATION: 5410' GROUND 5423' KELLY BUSHING
ALL MEASUREMENTS ARE TAKEN FROM KELLY BUSHING.

DRILLING COMMENCED: AUGUST 16, 1957

DRILLING CEASED: NOVEMBER 3, 1957

CONTRACTOR: LOFFLAND BROTHERS

THE FOLLOWING INFORMATION IS A COMPLETE LOG OF THE
WELL DERIVED FROM MICROSCOPIC EXAMINATION OF THE
DRILL CUTTINGS AND CORES.

DATE: DECEMBER 2, 1957

G. L. Helmke

G. L. HELMKE
CONSULTING GEOLOGIST

FORMATION AND MARKER BED TOPS FROM SCHLUMBERGER ELECTRIC LOG:

<u>FORMATION</u>	<u>TOP</u>	<u>THICKNESS</u>	<u>ELEVATION</u>
MESAVERDE	SURFACE	2950	+ 5423
MANCOS	2950	4662	+ 2473
DAKOTA	7212	70	- 1789
MORRISON	7282	647	- 1859
CURTIS	7929	95	- 2506
ENTRADA	8024	185	- 2601
CARMEL	8209	25	- 2786
NAVAJO	8234	622	- 2811
CHINLE	8856	161	- 3433
MOENKOPI	9017	690	- 3594
WEBER--MAROON	9707		- 4284
TOTAL DEPTH	10,270		- 4847



CASING RECORD: 22" AT 43' WITH 22 SACKS
13-3/8" AT 600' WITH 600 SACKS

HOLE DIMENSIONS: 16" TO A DEPTH OF 605'
8-3/4" TO TOTAL DEPTH.

PLUGGING RECORD:

PLUG #1	9677-9757	80'	30 SACKS	
PLUG #2	7994-8074	80'	30 SACKS	
PLUG #3	7218-7298	80'	56 SACKS	
PLUG #4	2652-2732	80'	56 SACKS	
PLUG #5	550-650	100'	96 SACKS	BASE SURFACE
	SURFACE TO 50'		40 SACKS	

PLUGGED AND ABANDONED: NOVEMBER 3, 1957



SAMPLE DESCRIPTION

600	760	SAMPLES START IN MESAVERDE FORMATION.
760	780	VERY POOR SAMPLES - LOST CIRCULATION MATERIAL
		SANDSTONE, SALT AND PEPPER, FINE--MEDIUM GRAINED, FRIABLE.
780	800	SANDSTONE AS ABOVE.
800	810	SANDSTONE AS ABOVE WITH CARBONACEOUS SHALE.
810	900	SANDSTONE AS ABOVE.
900	930	SANDSTONE, GRAY, FINE GRAINED, LIMY, WITH CARBONACEOUS SHALE AND COAL.
930	940	COAL.
940	980	SANDSTONE, FINE GRAINED, FRIABLE.
980	1000	COAL.
1000	1030	SANDSTONE, FINE--MEDIUM, QUARTZ, FRIABLE.
1030	1050	SANDSTONE, SALT AND PEPPER, FINE, GLAUCONITIC.
1050	1070	SANDSTONE AS ABOVE AND GRAY SHALE.
1070	1090	SHALE, BLACK, CARBONACEOUS, WITH COAL.
1090	1100	SANDSTONE, SALT AND PEPPER, FINE--MEDIUM, GLAUCONITIC.
1100	1110	SHALE, BLACK, CARBONACEOUS.
1110	1120	SANDSTONE AS ABOVE.
1120	1130	SANDSTONE AS ABOVE WITH CARBONACEOUS STREAKS AND CARBONACEOUS SHALE.
1130	1150	COAL AND CARBONACEOUS SHALE.
1150	1160	BROWN SILTY SHALE.
1160	1170	SANDSTONE AS ABOVE AND COAL.
1170	1180	COAL.
1180	1190	SHALE, GRAY, DENSE, AND CARBONACEOUS SHALE.
1190	1200	SHALE, GRAY, SILTY.
1200	1220	SHALE AS ABOVE AND CARBONACEOUS SHALE.
1220	1230	SANDSTONE, SALT AND PEPPER, FINE--MEDIUM, GLAUCONITIC.
1230	1240	SHALE, CARBONACEOUS.
1240	1250	SHALE, CARBONACEOUS, AND COAL.
1250	1260	SANDSTONE, BROWN, FINE, AND CARBONACEOUS SHALE.
1260	1270	SANDSTONE, FINE, SUB-ROUND, CARBONACEOUS STREAKS.
1270	1290	SHALE, BLACK, CARBONACEOUS.
1290	1300	SILTSTONE AND VERY FINE GRAINED SANDSTONE, CARBONACEOUS SHALE, COAL.
1300	1320	SHALE, GRAY, AND SHALE, BLACK, CARBONACEOUS.
1320	1330	SHALE, GRAY.
1330	1360	COAL AND GRAY SHALE.
1360	1370	SHALE, BLACK, CARBONACEOUS.
1370	1380	SHALE, GRAY.
1380	1400	SANDSTONE, FINE, TIGHT, LIMY (TRACE OF FLUORESCENCE).
1400	1420	COAL.
1420	1430	SANDSTONE, VERY FINE GRAINED, TIGHT.
1430	1440	GRAY SILTY SHALE, SANDSTONE AS ABOVE, AND COAL.
1440	1450	SANDSTONE, SALT AND PEPPER, FINE--MEDIUM, AND COAL.



1450	1460	COAL.
1460	1520	SHALE, GRAY AND BLACK.
1520	1530	SHALE, SILTY, GRAY.
1530	1560	SHALE, SILTY, GRAY.
1560	1590	COAL.
1590	1600	BLACK CARBONACEOUS SHALE.
1600	1620	BLACK CARBONACEOUS SHALE AND COAL.
1620	1630	SANDSTONE, LIGHT GRAY, FINE, WHITE CLAY CEMENT.
1630	1640	SHALE, CARBONACEOUS, AND SHALE, GRAY, SILTY.
1640	1650	SANDSTONE, LIGHT GRAY, FRIABLE, TIGHT.
1650	1680	COAL.
1680	1700	SHALE, GRAY, AND COAL.
1700	1710	SHALE, GRAY, AND COAL.
1710	1720	COAL.
1720	1740	SHALE, GRAY, AND COAL.
1740	1770	COAL, AND SHALE, BLACK, CARBONACEOUS.
1770	1790	COAL.
1790	1820	SHALE, GRAY, AND COAL.
1820	1850	GRAY SHALE.
1850	1860	SHALE, LIGHT GRAY.
1860	1870	SHALE, LIGHT GRAY AND COAL.
1870	1880	COAL.
1880	1900	SHALE, LIGHT GRAY, SILTY.
1900	1910	SHALE AND COAL.
1910	1920	SHALE, LIGHT GRAY, COAL.
1920	1930	SHALE, GRAY, CARBONACEOUS.
1930	1950	SHALE, GRAY AND BROWN.
1950	1990	SHALE, GRAY, AND SHALE, CARBONACEOUS.
1990	2000	SANDSTONE, GRAY, FINE, AND SILTY GRAY SHALE.
2000	2020	SAME AS ABOVE.
2020	2040	SHALE, GRAY AND BLACK, CARBONACEOUS.
2040	2060	SHALE, LIGHT GRAY, SILTY, AND GRAY SHALE.
2060	2090	LIGHT GRAY SHALE AND CARBONACEOUS SHALE.
2090	2100	COAL AND BLACK CARBONACEOUS SHALE.
2100	2110	SHALE, GRAY-BROWN, SILTY.
2110	2120	CAVINGS.
2120	2130	LIGHT GRAY SHALE.
2130	2140	LIGHT GRAY SHALE, AND CARBONACEOUS SHALE.
2140	2160	COAL.
2160	2180	COAL AND GRAY SHALE.
2180	2200	COAL.
2200	2210	SHALE, GRAY, SILTY, AND CARBONACEOUS SHALE.
2210	2220	COAL AND CARBONACEOUS SHALE.
2220	2230	SHALE, GRAY, SILTY.
2230	2260	SHALE, GRAY, COAL.
2260	2270	LIGHT GRAY SILTY SHALE.
2270	2300	SHALE, CARBONACEOUS, AND COAL.
2300	2340	SHALE, GRAY.
2340	2350	SHALE, CARBONACEOUS, AND COAL.
2350	2360	SHALE, GRAY.



2360	2370	SHALE, CARBONACEOUS, AND COAL.
2370	2380	GRAY SILTY SHALE.
2380	2400	SHALE, GRAY, AND COAL.
2400	2470	SANDSTONE, FINE GRAINED, FRIABLE.
2470	2480	SHALE, CARBONACEOUS, AND COAL.
2480	2490	SHALE, GRAY, AND SANDSTONE AS ABOVE.
2490	2540	SANDSTONE AS ABOVE.
2540	2550	COAL.
2550	2570	SANDSTONE AS ABOVE.
2570	2580	COAL?
2580	2590	GRAY SHALE.
2590	2620	SANDSTONE AS ABOVE.
2620	2640	SHALE, GRAY, SILTY.
2640	2650	GRAY SHALE.
2650	2670	GRAY SILTY SHALE.
2670	2680	COAL.
2680	2700	GRAY SHALE AND COAL.

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RIMROCK SAND--MOROPAS

2700	2720	GRAY SHALE AND COAL.
2720	2730	COAL.
2730	2740	GRAY SILTY SHALE.
2740	2810	SANDSTONE, FRIABLE, FINE, WHITE CLAY CEMENT, SUB-ROUND.
2810	2830	SHALE, GRAY, COAL, AND GRAY SILTY SHALE.
2830	2840	LIGHT GRAY SILTY SHALE,
2840	2870	GRAY SHALE.
2870	2890	GRAY SILTY SHALE.
2890	2900	SHALE, CARBONACEOUS AND COAL.
2900	2920	GRAY SHALE AND COAL.
2920	2930	LIGHT GRAY SILTY SHALE.
2930	2950	SAME AS ABOVE.

2950

MANCOS - SCHLUMBERGER TOP

2950	3010	SHALE, GRAY
3010	3020	SANDSTONE AS ABOVE.
3020	3060	SANDSTONE AS ABOVE.
3060	3120	COAL AND CARBONACEOUS SHALE.
3120	3160	DARK GRAY SHALE.
3160	3170	GRAY SILTY SHALE AND SANDSTONE.
3170	3200	GRAY SHALE.
3200	3360	GRAY SHALE.
3360	3410	SHALE, GRAY, SLIGHTLY SILTY.
3410	3490	SHALE, GRAY.
3490	3520	VERY FINE GRAINED SANDSTONE, AND SILTY GRAY SHALE.
3520	3530	DARK GRAY SHALE.
3530	3640	DARK GRAY SHALE.
3640	3680	GRAY SILTY SHALE.
3680	3690	GRAY SHALE.



3690	3800	GRAY SHALE.
3800	3850	POOR SAMPLES - CAVINGS AND LOST CIRCULATION MATERIAL.
3850	3860	SHALE, DARK GRAY.
3860	3950	SILTSTONE, GRAY, SLIGHTLY LIMY, SMALL GAS READING.
3897	3965	<u>DRILL STEM TEST #1</u>
		OPEN 1½ HOURS, SHUT IN 30 MINUTES.
		RECOVERED 30' SLIGHTLY GAS CUT MUD.
		I.F.P. 45#
		F.F.P. 45#
		H.H. 1905#
		B.H.P.S.I. 90#
3970	4000	CAVINGS.
4000	4100	GRAY SHALE,
4100	4890	DARK GRAY SHALE.
4890	4900	DARK GRAY SHALE, SILTY?
4900	4940	SHALE, DARK GRAY.
4940	4950	SHALE, DARK GRAY, SANDY.
4950	5030	SHALE, DARK GRAY.
5030	5040	SHALE, DARK GRAY, MORE LIMY.
5040	5080	SHALE, DARK GRAY, AND SANDSTONE, MEDIUM--FINE, CALCAREOUS, TRACE ANGULAR SANDSTONE.
5080	5100	AS ABOVE, VERY FINE GRAINED, CALCAREOUS SANDSTONE.
5100	5140	AS ABOVE, SILTY
5140	5160	AS ABOVE, SILTY, AND CALCAREOUS SANDSTONE, FINE GRAINED.
5160	5300	GRAY SHALE.
5300	5480	DARK GRAY SHALE.
5480	5490	DARK GRAY SHALE, ARAGONITE.
5490	5690	DARK GRAY SHALE.
5690	5770	DARK GRAY SHALE AND ARAGONITE.
5770	5780	CALCITE, AND DARK GRAY SHALE.
5780	5870	DARK GRAY SHALE.
5870	5880	DARK GRAY SHALE AND ARAGONITE.
5880	5890	DARK GRAY SHALE, SILTY.
5890	5920	DARK GRAY SHALE.
5920	5930	DARK GRAY SHALE, SILTY.
5930	5990	DARK GRAY SHALE.
5990	6000	DARK GRAY SHALE, TRACE SANDSTONE, GRAY.
6000	6100	SAME AS ABOVE.
6100	6120	DARK GRAY SHALE, TRACE SANDSTONE, CALCAREOUS.
6120	6180	DARK GRAY SHALE, VERY FINE GRAINED SANDSTONE, LIMY.
6180	6210	CAVINGS.
6210	6240	DARK GRAY SHALE, VERY FINE GRAINED, LIMY, SANDSTONE, GRAY.
6240	6270	SAME AS ABOVE.
6270	6280	DARK GRAY SHALE, VERY FINE GRAINED, LIMY, SANDSTONE, GRAY.
6280	6340	SAME AS ABOVE.
6340	6350	SHALE, DARK GRAY.
6350	6400	SHALE, DARK GRAY, SCATTERED SANDSTONE, GRAY, LIMY.
6400	6440	SHALE, DARK GRAY, LIMY STRINGERS.



6440	6470	SHALE, DARK GRAY.
6470	6480	SHALE, DARK GRAY, ARAGONITE.
6480	6500	SHALE, DARK GRAY, <u>SLICKENSIDES</u> , ARAGONITE.
6500	6520	BLACK SHALE, ARAGONITE, <u>SLICKENSIDES</u> .
6520	6540	BLACK SHALE, ARAGONITE.
6540	6600	DARK GRAY SHALE, LIMY AND SILTY.
6600	6610	DARK GRAY SHALE, LIMY, SOME SILTSTONE.
6610	6660	SAME AS ABOVE.
6660	6670	DARK GRAY SHALE, LIMY,
6670	6690	DARK GRAY SHALE, LIMY AND SILTY.
6690	6700	DARK GRAY SHALE, LIMY.
6700	6780	DARK GRAY SHALE, LIMY AND SILTY.
6780	6880	DARK GRAY SHALE.
6880	6920	DARK GRAY SHALE, ARAGONITE.
6920	6930	DARK GRAY SHALE, VERY FINE GRAINED SANDSTONE.
6930	6950	DARK GRAY SHALE.
6950	6960	DARK GRAY SHALE, TAN BENTONITE WITH MICA.
6960	6970	GRAY, LIMY, SILTY SHALE.
6970	7000	GRAY SHALE AND VERY HARD, VERY FINE GRAINED, LIMY SANDSTONE.
7000	7020	SHALE, DARK GRAY.
7020	7030	SHALE, DARK GRAY, SILTY.
7030	7050	SHALE WITH FINE GRAINED SAND STREAKS.
7050	7090	SHALE, GRAY, SLIGHTLY LIMY.
7090	7100	SHALE, GRAY, CALCITE.
7100	7167	SHALE, BLACK, LIMY SAND STREAKS.
7167		CIRCULATED - SANDSTONE, FINE GRAINED, HARD. SMALL GAS READING.
7167	7180	SANDSTONE, FINE GRAINED, HARD, TIGHT.
7180	7220	SHALE, BLACK, SILTSTONE STREAKS.
7220	7241	SHALE, BLACK, WITH SILTSTONE STREAKS.
7241		CIRCULATED - SANDSTONE, WHITE QUARTZ, MEDIUM GRAINED, SLIGHT POROSITY, VERY SMALL GAS READING.
7212		DAKOTA - SCHLUMBERGER TOP
7241	7271	SANDSTONE AS ABOVE, NO GAS SHOW, SCATTERED WEAK FLUORESCENCE.
7271	7282	SHALE, DARK GRAY TO BLACK, CARBONACEOUS.
7282		MORRISON - SCHLUMBERGER TOP
7282	7298	<u>CORE #1</u> RECOVERED 14'
7282)		3' SHALE, CARBONACEOUS.
7285)		
7285)		1½' SHALE, GRAY, BROWN, CARBONACEOUS.
7286½)		
7286½)		1½' SILTSTONE, GRAY-GREEN, SILICEOUS, VERY FINE AT 7287½-88.
7288)		
7288)		1' SHALE, GRAY-GREEN, SOFT, BENTONITIC.
7289)		



7289)

7295)

7295)

7298)

4' SILTSTONE AS ABOVE.

3' SHALE, GRAY, BENTONITIC.

7298 7306

CORE #2 RECOVERED 4'

SHALE, GRAY-GREEN, BENTONITIC.

7242 7343

DRILL STEM TEST #2 FAILED

7243 7315

DRILL STEM TEST #3 FAILED

7246 7318

DRILL STEM TEST #4 FAILED

7249 7321

DRILL STEM TEST #5 FAILED

TESTS 3, 4 AND 5 WERE STRADDLE PACKER TESTS. CALIPER LOG INDICATED THAT HOLE HAD WASHED TO 15"; THEREFORE PACKERS WOULD NOT HOLD.

7310 7320

CAVINGS.

7320 7330

SANDSTONE, WHITE, PALE GREEN, FINE GRAINED, TIGHT, NO SHOWS.

7330 7370

SAME AS ABOVE, MUCH CAVINGS.

7370 7380

RED SHALE, SOFT.

7380 7390

MEDIUM GRAINED SANDSTONE.

7390 7400

SHALE, VARIEGATED, RED AND GREEN BENTONITIC SHALE.

7400 7420

SHALE, GREEN, BENTONITIC.

7420 7430

SANDSTONE, WHITE, FINE--MEDIUM.

7430 7440

SHALE, VARIEGATED.

7440 7470

SHALE, MAROON AND VARIEGATED SHALE.

7470 7480

SHALE, GREEN, HARD.

7490 7510

VARIEGATED SHALE.

7510 7600

SHALE, LIGHT GRAY--GRAY.

7600 7610

SHALE, VARIEGATED.

7610 7620

SHALE, VARIEGATED, AND LIGHT GRAY SANDSTONE.

7620 7640

SHALE, LIGHT GRAY--GRAY.

7640 7690

SHALE, VARIEGATED.

7690 7700

SHALE, LIGHT GREEN.

7700 7730

SHALE, VARIEGATED, AND SANDSTONE, FINE GRAINED, WHITE.

7730 7740

SANDSTONE, WHITE, MEDIUM GRAINED, GLASSY, LIMY.

7740 7780

SHALE, VARIEGATED.

7780

CIRCULATED - SANDSTONE, WHITE, MEDIUM GRAINED--COARSE, ANGULAR TO SUB-ROUND.

7780 7800

SANDSTONE AS ABOVE WITH VARIEGATED SHALE.

7800 7810

SANDSTONE AS ABOVE WITH VARIEGATED SHALE.

7810 7820

SANDSTONE, WHITE, FINE, LIMY.

7820 7830

SHALE, VARIEGATED.

7830 7840

SANDSTONE, WHITE--GRAY, FINE, LIMY.

7840 7850

SHALE, VARIEGATED.



7850	7860	SHALE, VARIEGATED, WITH SANDSTONE AS ABOVE.
7860	7880	SHALE, VARIEGATED, WITH SANDSTONE AS ABOVE.
7880	7890	SANDSTONE, WHITE, FINE--MEDIUM, LIMY.
7895		CIRCULATED - SANDSTONE AS ABOVE, LIMY, TIGHT.
7900	7920	SANDSTONE AS ABOVE, RED CLAY CEMENT.
7920	7930	SANDSTONE, OCCASIONAL GLAUCONITE, FINE, LIMY.
7929		CURTIS - SCHLUMBERGER TOP
7930	7940	SANDSTONE, OCCASIONALLY VERY COARSE GRAINED, SUB-ROUND.
7940	7950	SHALE, GREEN.
7960	7970	SANDSTONE, WHITE, AS ABOVE, AND GREEN SHALE.
7970	7990	VERY POOR SAMPLE.
7990	8000	SANDSTONE, WHITE, FINE--MEDIUM, GLASSY, TIGHT, LIMY.
8000	8010	SANDSTONE, WHITE, FINE, OCCASIONAL GLAUCONITE, LIMY, TIGHT.
8010	8032	CAVINGS - VERY POOR SAMPLES.
8024		ENTRADA - SCHLUMBERGER TOP
8032		CIRCULATED - SANDSTONE, WHITE, FINE--MEDIUM, SUB-ROUND.
8040	8070	SAME AS CIRCULATION SAMPLE ABOVE.
8070	8100	SANDSTONE AS ABOVE WITH OCCASIONAL PINK SAND GRAINS.
8100	8140	SANDSTONE, WHITE--LIGHT ORANGE, FRIABLE, SLIGHTLY CALCAREOUS.
8140	8209	SANDSTONE AS ABOVE.
8209		CARMEL - SCHLUMBERGER TOP
8209	8234	SANDSTONE AS ABOVE, AND SOFT RED SHALE.
8234		NAVAJO - SCHLUMBERGER TOP
8234	8300	SANDSTONE, CREAM--PINK, SUB-ROUND TO ROUNDED, SLIGHTLY CALCAREOUS.
8300	8380	SANDSTONE, ORANGE--SALMON, POROUS, SUB-ROUND TO ROUNDED.
8380	8390	CAVINGS.
8390	8510	SANDSTONE AS ABOVE.
8510	8540	SANDSTONE AS ABOVE, SOME COARSE GRAINED, AND RED SHALE.
8540	8550	SANDSTONE, PINK--ORANGE, OCCASIONAL COARSE GRAINS, SUB-ROUND TO ROUNDED.
8550	8620	SANDSTONE, SALMON--ORANGE, OCCASIONAL COARSE, FRIABLE, TRACE OF BRICK RED SHALE.
8620	8650	SANDSTONE AS ABOVE.
8650	8690	SANDSTONE AS ABOVE, AND SILTY RED SHALE.
8690	8780	SANDSTONE, SALMON--ORANGE, MEDIUM--COARSE, SLIGHTLY LIMY, TRACE RED SHALE.
8780	8850	SANDSTONE AS ABOVE WITH BRICK RED--PURPLE SHALE, AND RED SILTSTONE, SLIGHTLY LIMY.



8856		CHINLE - SCHLUMBERGER TOP
8860	8950	SHALE, MAROON--PURPLE, SILTY, SLIGHTLY LIMY.
8950	8960	SHALE, RED, SOFT, ANHYDRITIC (?)
8960	9000	SHALE, RED, LIMY.
9000	9017	SHALE, RED, LIMY.
9017		MOENKOPI - SCHLUMBERGER TOP
9017	9040	SHALE, BRICK RED AND MAROON, SILTY.
9040	9050	SHALE, MAROON--PURPLE.
9050	9060	SHALE, MAROON--PURPLE, OCCASIONAL VERY COARSE QUARTZ GRAINS, ROUNDED, FROSTED.
9060	9090	SHALE, RED--MAROON, WHITE CALCAREOUS INCLUSIONS.
9090	9160	SHALE, RED--MAROON, SILTY.
9160	9170	SHALE, RED--MAROON, SILTY, OCCASIONAL VERY COARSE, WELL-ROUNDED, ORANGE QUARTZ GRAINS.
9170	9220	SHALE, RED--MAROON, SILTY, AND OCCASIONAL WHITE ANHYDRITE.
9220	9320	SILTSTONE, RED, HARD, AND RED SHALE.
9320	9330	SHALE, BRICK RED--MAROON, SOME MICA.
9330	9340	SHALE, RED, ANHYDRITIC.
9340	9390	SHALE, RED--MAROON, SLIGHTLY SILTY.
9390	9420	SHALE, MAROON--PURPLE.
9420	9430	SILTSTONE, RED-BROWN, HARD.
9430	9480	SHALE, MAROON, WHITE ANHYDRITE.
9480	9490	SHALE, RED, SILTY, HARD, OCCASIONAL COARSE PINK--SALMON ROUNDED QUARTZ GRAINS.
9490	9510	SHALE, RED, AND WHITE ANHYDRITE.
9510	9560	SHALE, RED--MAROON, SILTY, OCCASIONAL WHITE ANHYDRITE.
9560	9690	SHALE, RED--MAROON, AND RED SILTY SHALE.
9690	9700	SHALE, MAROON, WITH STRINGERS OF WHITE SANDSTONE, MEDIUM GRAINED, SLIGHTLY LIMY.
9707		WEBER MAROON - SCHLUMBERGER TOP

CORE ANALYSIS BY CORE LABORATORIES, INC., OF ONLY PORTION OF WEBER FORMATION HAVING SHOWS:

SAMPLE No.	DEPTH FEET	PERMEABILITY MILLIDARCYS		POROSITY PERCENT	RESIDUAL SATURATION	
		HORIZONTAL	VERTICAL		OIL %VOL. % PORE	TOTAL WATER % PORE
11	9750	0.36	0.17	4.8	0.0	60.3
12	9751	2.2	1.8	8.3	0.0	59.1
13	9752	0.36	0.17	8.8	0.0	62.5
14	9753	0.17	<0.1	7.5	0.0	64.0
15	9754	<0.1	<0.1	6.0	0.0	68.4



CORE ANALYSIS

SAMPLE No.	DEPTH FEET	PERMEABILITY MILLIDARCYS		POROSITY PERCENT	RESIDUAL SATURATION	
		HORIZONTAL	VERTICAL		OIL %VOL. % PORE	TOTAL WATER % PORE
16	9755	0.17	<0.1	8.3	6.0	63.8
17	9756	<0.1	<0.1	9.5	7.4	45.3
18	9757	1.0	0.36	11.8	10.2	52.6
19	9758	0.56	0.56	11.2	10.7	53.6
20	9759	0.75	0.36	11.2	10.7	53.6
21	9760	0.56	0.17	11.3	10.6	53.0
22	9761	0.75	0.17	11.5	6.1	52.2
23	9762	<0.1	<0.1	5.2	0.0	92.3
24	9763	<0.1	<0.1	6.1	19.7	39.4
25	9764	<0.1	<0.1	4.5	15.5	53.3
26	9765	<0.1	<0.1	8.1	14.8	43.2
27	9766	<0.1	<0.1	7.5	16.0	50.7
28	9767	<0.1	<0.1	2.2	0.0	68.2
29	9768	<0.1	<0.1	3.2	0.0	87.6
30	9769	<0.1	<0.1	3.9	0.0	89.8

9742 9769 DRILL STEM TEST #6 NO TEST, TOOL FAILED.

9729 9769 DRILL STEM TEST #7

OPEN 1 HOUR, SHUT IN 30 MINUTES.
WEAK BLOW FOR 1 HOUR DYING AT END OF TEST.
RECOVERED 95' SLIGHTLY GAS CUT MUD.
I.F.P. 95#
F.F.P. 100#
I.H.H. 5085#
F.H.H. 5070#
B.H.P.S.I. 122#

10,064 10,172

DRILL STEM TEST #8

OPEN 1 HOUR, SHUT IN 30 MINUTES.
WEAK BLOW THROUGHOUT TEST DYING AT END.
RECOVERED 300' SLIGHTLY GAS AND SALT WATER CUT MUD.
I.F.P. 80#
F.F.P. 160#
I.H.H. 5195#
F.H.H. 5100#
B.H.P.S.I. 2575#



00566932

9702 9739 CORE #3 CORED 37', RECOVERED 37'

9702)
9713) 11' MOTTLED SILTSTONE, SHALEY, MICACEOUS, MAROON;
SANDSTONE, COARSE GRAINED, POORLY SORTED, VERY
MICACEOUS, TIGHT, GREEN, GRAY, WITH SANDSTONE
BECOMING FINE TO MEDIUM GRAINED AT BOTTOM. NO SHOW.

9713)
9723) 10' SANDSTONE, FINE TO MEDIUM GRAINED, LIMY, SLIGHTLY
MICACEOUS, BUFF, GRAY, TIGHT, NO SHOW, NO
FLUORESCENCE.

9723)
9728) 5' SANDSTONE, FINE TO MEDIUM GRAIN, VERY LIMY,
MICACEOUS, DARK GRAY, TIGHT WITH FINELY DISEMIN-
ATED SOLID HYDROCARBONS (GILSONITE) IN PART.
NO SHOW.

9728)
9739) 11' SANDSTONE, FINE TO MEDIUM GRAINED, VERY LIMY,
TIGHT, DARK GRAY TO BLACK. HAD MORE GILSONITE
THAN ABOVE.

9739 9769 CORE #4 CORED 30', RECOVERED 28'

9739)
9741) 2' NO RECOVERY.

9741)
9744) 3' SANDSTONE, VERY FINE GRAINED, SUB-ROUNDED,
MICACEOUS, LIMY, TIGHT, GRAY, NO SHOWS.

9744)
9762) 18' SANDSTONE, COARSE TO MEDIUM GRAINED, POORLY
SORTED, SUB-ANGULAR, SLIGHTLY MICACEOUS, TIGHT
TO SLIGHTLY POROUS AT BOTTOM, GRAY. STARTED
PICKING UP ODOR, TASTE AND FLUORESCENCE AT 9755-
9762. FAIR STAIN WITH BRIGHT BLUE-WHITE
FLUORESCENCE.

9762)
9767) 5' SANDSTONE, FINE GRAINED, SUB-ROUNDED, CLEAN,
SLIGHTLY MICACEOUS, SLIGHTLY GLAUCONITIC, MOTTLED
GRAY AND WHITE. LAMINATED GRAY AND WHITE. IT
WAS IN THIS INTERVAL THAT GAS AND OIL BLED AND
WAS MOSTLY CONFINED TO THE WHITE SANDSTONE.
THERE WAS A 1.5' FRACTURE FROM 9764-65.5' WITH
LIVE GREENISH EMER COLORED OIL. SANDSTONE
LOOKED QUARTZITIC.

9767)
9769) 2' SANDSTONE, VERY FINE GRAINED, ROUNDED TO SUB-
ANGULAR, SLIGHTLY MICACEOUS, DARK GRAY TO GREEN
WITH SOME SHALY STREAKS, NO SHOW.

9769 9829 CORE #5 CORED 60', RECOVERED 60'

9769)
9770) 1' SANDSTONE, FINE GRAINED, CONTAINING SOME
GILSONITE.

9770)
9780) 10' RED SILTY SHALE.



CORE #5 CONTINUED:

- 9780 }
9782 } 2' SANDSTONE, GRAY, POORLY SORTED, TIGHT.
- 9782 }
9800 } 18' RED SHALE, SILTY, HARD.
- 9800 }
9817 } 17' RED SANDSTONE, FINE TO COARSE.
- 9817 }
9817½ } ½' WHITE, FINE TO RED SANDSTONE, TIGHT.
- 9817½ }
9829 } 11½' RED SILTY SHALE AND RED, VERY FINE GRAINED SANDSTONE. NO SHOWS IN ABOVE CORE.

9829 9887

CORE #6 CORED ~~53~~ 58', RECOVERED 58'

- 9829 }
9831 } 2' SANDSTONE, MEDIUM GRAINED, MICACEOUS, SLIGHTLY LIMY, MOTTLED RED AND GREEN, TIGHT.
- 9831 }
9835 } 4' SANDSTONE, FINE TO MEDIUM GRAINED, MICACEOUS, LIMY, TIGHT, SANDSTONE WITH 3" STREAKS OF FINE GRAINED SANDSTONE AT 9835'.
- 9835 }
9840 } 5' SHALE, SILTY, MAROON.
- 9840 }
9843 } 3' SANDSTONE, VERY FINE GRAINED, LIMY, TIGHT, LIGHT GRAY.
- 9843 }
9844 } 1' AS ABOVE, POORLY SORTED WITH COARSE SALMON PINK GRAINS, TIGHT.
- 9844 }
9857½ } 13½' SILTSTONE AND SHALE, MOTTLED RED AND GREEN GRAY, MICACEOUS, WITH TRACE OF GILSONITE, WITH OCCASIONAL SANDY PATCHES AND STREAKS.
- 9857½ }
9859 } 1½' SANDSTONE, COARSE TO FINE GRAINED, POORLY SORTED, LIMY, TIGHT, GRAY.
- 9859 }
9867 } 8' SANDSTONE, FINE TO MEDIUM GRAINED, SILTY, LIMY, MICACEOUS, OCCASIONAL TIGHT MAROON, ARKOSIC.
- 9867 }
9871 } 4' SANDSTONE, VERY FINE GRAINED TO FINE GRAINED, TIGHT, LIGHT GRAY TO SALMON PINK WITH VERTICAL FRACTURE 9868½-70.
- 9871 }
9881 } 10' SANDSTONE, VERY FINE GRAINED, SLIGHTLY ARKOSIC, DENSE, TIGHT, MAROON WITH VERTICAL FRACTURE 9872-75, MAY HAVE CAUSED GAS.
- 9881 }
9883 } 2' SHALE, SILTY, MAROON.
- 9883 }
9887 } 4' SANDSTONE, SILTY, VERY FINE GRAINED, MAROON, TIGHT, NO SHOWS IN ABOVE CORE.



9887 9946

CORE #7 CORED 59', RECOVERED 59'

- | | | |
|--------|-----|---|
| 9887) | 5' | SANDSTONE, VERY FINE TO FINE GRAINED, HARD, TIGHT, |
| 9892) | | RED WITH OCCASIONAL MOTTLED GRAY-GREEN INCLUSIONS. |
| 9892) | 1' | SANDSTONE, FINE TO COARSE GRAINED, POORLY SORTED, |
| 9893) | | GRAY-GREEN, TIGHT. |
| 9893) | 8' | SANDSTONE, FINE TO COARSE GRAINED, ARKOSIC, |
| 9901) | | MICACEOUS, TIGHT, MAROON. |
| 9901) | 3' | SHALE, SILTY, MICACEOUS, MAROON. |
| 9904) | | |
| 9904) | 2' | SANDSTONE, ARKOSIC, FINE TO COARSE GRAINED, MOTTLED |
| 9906) | | GRAY-GREEN AND MAROON, TIGHT. |
| 9906) | 3' | SHALE, SILTY, MAROON. |
| 9909) | | |
| 9909) | 4' | SANDSTONE, FINE TO MEDIUM GRAINED, ARKOSIC, |
| 9913) | | MICACEOUS, MAROON, TIGHT. |
| 9913) | 33' | SANDSTONE, VERY FINE TO FINE GRAINED, TIGHT, |
| 9946) | | MAROON TO ORANGE-RED WITH STREAKS OF MAROON |
| | | SHALE AND OCCASIONAL LIGHT GRAY SANDSTONE STREAKS. |
| | | NO SHOWS IN ENTIRE CORE. |

9946 9997

CORE #8 CORED 51', RECOVERED 51'

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|---------|-----|--|
| 9946) | 4' | SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, RED, |
| 9950) | | TIGHT. |
| 9950) | 3' | SANDSTONE, VERY FINE TO FINE GRAINED, SLIGHTLY |
| 9953) | | LIMY, MICACEOUS, MAROON, TIGHT. |
| 9953) | 4' | SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, MICACEOUS, |
| 9957) | | MAROON WITH PATCHES CREAMY SANDSTONE, SHALY. |
| 9957) | 19' | SANDSTONE, FINE TO MEDIUM GRAINED, MICACEOUS, |
| 9976) | | LIMY, TIGHT, RED, WITH FRACTURES 9974-76. |
| 9976) | 1' | LIMESTONE, SANDY, DENSE, LIGHT GRAY. |
| 9977) | | |
| 9977) | 2½' | SANDSTONE, FINE GRAINED, LIMY, TIGHT, PINK. |
| 9979½) | | |
| 9979½) | ½' | SANDSTONE, VERY FINE GRAINED, OCCASIONAL RED |
| 9980) | | GRAINS, SLIGHTLY LIMY, TIGHT, GRAY-GREEN. |
| 9980) | 2' | SANDSTONE, VERY FINE GRAINED, TIGHT, BRICK RED |
| 9982) | | WITH MAROON SILTSTONE PARTINGS. |
| 9982) | 1' | SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, TIGHT, |
| 9983) | | GRAY-GREEN WITH TRACE GILSONITE. |



9997 10,002

CORE #9 CORED 59', RECOVERED 59'

- 9997)
10,002) 5' SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, TIGHT, WHITE.
- 10,002)
10,012) 10' SANDSTONE, FINE GRAINED, TIGHT, MAROON, WITH RED SHALY STREAKS, TIGHT.
- 10,012)
10,017) 5' SANDSTONE, FINE GRAINED, LIMY, TIGHT, WHITE.
- 10,017)
10,022) 5' SANDSTONE, FINE GRAINED, TIGHT, RED.
- 10,022)
10,043) 21' SANDSTONE, FINE GRAINED, ARKOSIC, TIGHT, RED TO MAROON.
- 10,043)
10,056) 13' SANDSTONE, FINE GRAINED, MICACEOUS, TIGHT, BRICK RED WITH OCCASIONAL RED-MAROON SHALE PARTINGS. NO SHOWS IN ENTIRE CORE.

10,056 10,114

CORE #10 CORED 58', RECOVERED 58'

- 10,056)
10,067) 11' SANDSTONE, FINE GRAINED, TIGHT, LIGHT RED TO SALMON PINK WITH VERTICAL FRACTURES AT 10,066-67.
- 10,067)
10,068) 1' SHALE, MAROON.
- 10,068)
10,071) 3' SANDSTONE, FINE GRAINED, TIGHT, SLIGHTLY LIMY, LIGHT RED TO SALMON PINK WITH VERTICAL FRACTURES AT 10,070-71.
- 10,071)
10,071½) ½' SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, TIGHT, WHITE.
- 10,071½)
10,074) 2½' SANDSTONE, FINE GRAINED, LIMY, TIGHT, SALMON PINK.
- 10,074)
10,081) 7' SANDSTONE, FINE TO MEDIUM GRAINED, ARKOSIC, TIGHT, RED TO PINK WITH SHALE, RED, AND PATCHES OF COARSE GRAINED GRAY-GREEN SANDSTONE INTERVAL, HIGHLY FRACTURED.
- 10,081)
10,085) 4' SHALE, MOTTLED MAROON AND GRAY-GREEN.
- 10,085)
10,108) 23' SANDSTONE, FINE TO MEDIUM GRAINED, ARKOSIC, TIGHT, RED TO PINK WITH TRACES AND STREAKS OF GILSONITE.
- 10,108)
10,112) 4' SANDSTONE, VERY FINE GRAINED, SLIGHTLY LIMY, LIGHT RED TO SALMON PINK WITH MAROON SHALE PARTINGS.
- 10,112)
10,113) 1' SANDSTONE, VERY FINE GRAINED, LIMY, TIGHT, WHITE.
- 10,113)
10,114) 1' SANDSTONE, VERY FINE GRAINED, RED TO SALMON PINK, TIGHT. NO SHOWS IN ENTIRE CORE.



10,114 10,172
 10,114)
 10,172)

CORE #11 CORED 58', RECOVERED 58'

58' SANDSTONE, FINE GRAINED, CROSS-BEDDED, TIGHT WITH FEW SHALY STREAKS, NO SHOW OR FLUORESCENCE WITH FRACTURED ZONE 10,113 - 10,153. MUD LOGGER RECORDED MORE THAN 150 UNITS, BELIEVED TO BE WHILE CORING IN FRACTURED ZONE.

10,172 10,230
 10,172)
 10,198)

CORE #12 CORED 58', RECOVERED 58'

26' SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, RED, TIGHT, 1' TO $\frac{1}{2}$ ' VERTICAL FRACTURES AT 10,175 AND 10,198.

10,198)
 10,201)

3' SANDSTONE, FINE TO COARSE GRAINED, ARKOSIC, MICACEOUS, TIGHT, MAROON.

10,201)
 10,206)

5' SANDSTONE, FINE GRAINED, TIGHT, RED, OCCASIONAL MAROON SHALE PARTINGS.

10,206)
 10,220)

14' SANDSTONE, FINE GRAINED, SLIGHTLY LIMY, TIGHT, RED.

10,220)
 10,223)

3' SANDSTONE AS ABOVE WITH FEW PATCHES OF GRAY, LIMY SANDSTONE AND FEW MAROON SHALE PARTINGS.

10,223)
 10,230)

7' SANDSTONE AS ABOVE, TIGHT.
 NO SHOWS IN ENTIRE CORE.

10,230 10,270
 10,230)
 10,261)

CORE #13 CORED 40', RECOVERED 37'

31' SANDSTONE, FINE TO MEDIUM GRAINED, SLIGHTLY ARKOSIC, SILTY, SHALY, MAROON TO BROWN-RED, OCCASIONAL MAROON SHALE PARTINGS.

10,261)
 10,265)

4' SHALE, MAROON, SILTY.

10,265)
 10,267)

2' SANDSTONE, ARKOSIC, FINE TO COARSE GRAINED, MICACEOUS, RED-BROWN, TIGHT.
 NO SHOWS IN ENTIRE CORE.

10,270

TOTAL DEPTH