

BEST IMAGE
AVAILABLE

DATA SHEET AND DISCUSSION



LOCATION: NW NW (663 feet South of North line and 663 feet East of West line), Section 1, Township 2 North, Range 54 West, Washington County, Colorado

COMMENCED: November 24, 1958

COMPLETED: November 30, 1958

CONTRACTOR: Exeter Drilling Company, Denver, Colorado

CASING: Set 4 joints, 111 feet of 8 5/8 inch, 24 pound new casing at 123 feet with 85 sacks of cement, 2% Calcium Chloride, 1/2 Gal.

MEASUREMENTS: All measurements are taken from the kelly bushing approximately 9 feet above the ground. A 7 foot upward correction was made at 4380 (4380-4373).

ELEVATION: 4465 Ground (Powers) - 4474 Kelly Bushing

<u>Formation</u>	<u>Sample Tops</u>	<u>Log Wells Tops</u>	<u>Datum</u>
Niobrara	3905	3905	+ 569
Timpas	4227	4226	+ 248
Carlile	4287	4280	+ 194
Greenhorn	4385	4388	+ 86
Mowry	4615	4614	- 140
Brown Line	4622	4620	- 146
"D" Sand	4706	4702	- 228
"J" Siltstone	4767	4765	- 291
"J" Sand	4782	4782	- 308
Total Depth	4930	4926	- 452

DISCUSSION:

The "D" Sand, 4702 (-228), was drilled to 4710 with no shows noted in the samples or indicated on the log, then cored from 4710 to 38 1/2. The only show noted in the core was from 4720 to 22, but core analysis indicated this zone too high in water saturation to produce oil.

The "J" Sand, 4782 (-308), was cored to 4820. Shows were noted in the core to 4813, however, the sands were tight with erratic water saturations. A drill stem test from 4801 to 11 failed to get a bottom shut off, but indicated this zone would produce a small amount of gas, oil, and water, and could not be considered commercial. About 3% of fluid recovered on the test was oil. The lower sands ground up badly and very little sand recovered in the samples, however, no shows were noted in the samples or indicated on the log.

Discussion (Continued)

The well was plugged November 30, 1958 by filling it with heavy mud from the total depth to the bottom of the surface pipe (4950 - 120). A 10 sack cement plug was set in the bottom 30 feet of the surface pipe 120 to 90, then the casing was filled with heavy mud to within 20 feet of the top. A 7 sack cement plug was set in the top 20 feet of the surface pipe (32 - 12).

All measurements are taken from the Kelly bushing which was approximately 9 feet above the ground.

Submitted by,

George D. Volk

GEORGE D. VOLK
Petroleum Geologist

GDV:sh

SAMPLE LOG

3800-10	Shale dark gray
20	Ditto
30	Ditto
40	Ditto
50	Ditto
60	Ditto
70	Ditto
80	Ditto
90	Ditto
3900	Ditto
3905	<u>Niobrara</u>
3900-10	Ditto
20	Ditto
30	Ditto
40	Ditto
50	Ditto
60	Ditto
70	Ditto
80	Ditto
90	Ditto
4000	Ditto; trace shale dark mottled buff calcareous
4000-10	Ditto; little ditto
20	Ditto and ditto
30	Shale gray to dark gray mottled white to brown calcareous and shale dark gray
40	Ditto and ditto
50	Ditto; little ditto
60	Same
70	Same
80	Same
90	Same
4100	Same
4100-10	Same
20	Same
30	Same
40	Same
50	Same
60	Same
70	Same
80	Same
90	Same
4200	Same
4200-10	Same; more shale
20	Same; more shale
4227	<u>Timpas</u>
30	Same; more shale
40	Same; more shale
50	Same; more shale; little limestone white dense
60	Limestone white to buff dense and shale dark gray; little calcareous shale as above
70	Ditto and ditto; little ditto
80	Ditto and ditto; trace ditto
4237	<u>Little</u>

Sample Log (Continued)



4280-90	Limestone white to buff dense and shale dark gray
4300	Ditto and ditto
4300-10	Shale dark gray; little limestone white dense
20	Ditto; little ditto
30	Ditto; little ditto
40	Ditto; trace ditto
50	Ditto; trace ditto
60	Ditto; trace ditto
70	Ditto
80	Ditto
4385	<u>Greenhorn</u>
90	Ditto; trace limestone white dense
4460	Ditto; trace ditto
4400-10	Shale dark gray; trace limestone white dense; trace siltstone gray
20	Ditto; trace limestone gray to buff crystalline; trace ditto
30	Ditto; trace ditto; little ditto
40	Ditto; trace ditto; little ditto
50	Ditto; trace ditto; little ditto
60	Ditto; trace ditto; trace ditto
70	Ditto; trace siltstone gray
80	Ditto; trace ditto
90	Ditto
4500	Ditto
4500-10	Ditto
20	Ditto; trace siltstone gray
30	Ditto; trace ditto
40	Ditto
50	Ditto
60	Ditto
70	Ditto; trace limestone buff crystalline and white dense
80	Ditto; trace ditto
90	Ditto
4600	Ditto
4600-10	Ditto
4615	<u>Mary</u>
20	Ditto
4622	<u>Brown Lime</u>
30	Ditto
40	Ditto; trace bentonite gray
50	Ditto; little limestone gray to brown crystalline
60	Ditto; trace ditto
70	Ditto
80	Ditto
85	Ditto
90	Ditto
95	Shale dark gray to black
4700	Ditto
4700-05	Ditto
4706 (232)	<u>"D" Sand</u>
10	Ditto
4710 Circ. 30	
M n.	Ditto; sand gray fine silty tight, no show; trace siltstone gray
4710 Circ. 60	
Min.	Ditto; little ditto
	little ditto



DEPT. OF
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3.

Sample Log (Continued)

6710-38½	See Core Description
4738½-45	Shale dark gray to black; little sand gray fine silty tight, no show
50	Ditto; trace ditto
55	Ditto; little sand gray fine partly silty porous; trace fluorescence
60	Ditto; little ditto; trace ditto
65	Ditto; trace ditto
4767	<u>"J" Siltstone</u>
70	Ditto
75	Ditto
80	Ditto; trace siltstone gray to dark gray
4780 Circ. 30	
Min.	Ditto; little ditto
4780 Circ. 45	
Min.	Ditto; little ditto
4782	<u>"J" Sand</u>
4780-4820	See Core Description
4820-25	Ditto; little sand gray fine partly silty porous; 1 cluster fluorescence
30	Ditto; trace ditto some unconsolidated
35	Ditto; little ditto; some unconsolidated
40	Ditto; little ditto, partly fluorescence; some unconsolidated
45	Ditto; little ditto; trace fluorescence
50	Ditto; trace ditto, no show
55	Ditto; trace ditto, no show
60	Ditto; trace ditto, no show
65	Ditto; some ditto
70	Ditto; little ditto some unconsolidated
75	Ditto; trace ditto
80	Ditto
85	Ditto
90	Ditto; trace ditto, no show
95	Ditto; little ditto
4900	Ditto
4900-85	Ditto
10	Ditto
15	Ditto; trace siltstone gray
20	Ditto; trace ditto
25	Ditto; little sand gray fine salt and pepper, no show
30	Ditto; little ditto
4930 Circ. 30	
Min.	Ditto; trace ditto
4930 Circ. 60	
Min.	Ditto

CORE DESCRIPTION AND CORE ANALYSIS RECORD

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Core #1 4710 - 39½ Full Recovery

6' - 0" Sand gray fine silty tight, no show, thinly laminated and slightly reworked with shale dark gray

2' - 0" Shale black carbonaceous lamination with siltstone gray

2' - 0" Shale black carbonaceous

2' - 0" Sand gray fine firm vertical fractured streaks laminated with shale black, top foot saturated.

1' - 0" Shale black carbonaceous, few siltstone laminations.

5' - 0" Sand gray fine silty tight, no show, streaks laminated with shale black

9' - 6" Sand gray fine firm porous, no show, vertical fractured, few shale laminations.

1' - 0" Reworked sand and shale

Core #2 4780 - 4820

1' - 0" Shale black hard

1' - 0" Bentonite gray

3' - 0" Reworked sand gray fine silty tight and shale dark gray spotty fluorescence

1' - 0" Sand gray fine hard tight fossiliferous fair odor spotty fluorescence

0' - 6" Shale black slightly reworked with siltstone gray

3' - 6" Sand gray fine hard tight glauconitic vertical fractured

3' - 0" Reworked and thinly laminated sand gray fine silty tight, no show, and shale dark gray

3' - 0" Sand gray fine silty, no show

4' - 0" Thinly laminated and slightly reworked sand and shale

4' - 6" Reworked shale and sand

1' - 6" Sand gray fine firm good odor saturation and fluorescence bleeding oil, bottom 6" reworked

6' - 0" Sand gray fine silty tight, thin shale laminations streaks slightly reworked fair streaked odor and fluorescence

5' - 0" Thinly laminated and slightly reworked sand, shale, and siltstone

1' - 0" Sand gray fine silty, no show, few thin shale laminations

DRILL STEM TEST RECORD



DRILL STEM TEST #1 4001 - 11

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Tested between packers with total depth at 4820. The packers were seated and initial shut in pressure started where it was discovered a plugged joint was used on top. When unseating the packers the bottom packer was damaged and failed to fully reseal. A 10 minute, then 40 minute initial shut in pressure was taken, then the tool open one hour and a 30 minute final shut in pressure. It had a good blow through out the test period (bottom of bucket of water). Gas failed to reach the surface but was noted 1500 feet off bottom. The test recovered 240 feet of slightly oil gas and water cut mud and 330 feet of slightly oil and gas cut water. Although the bottom packer failed it did give a partial shut off between 600 and 900 pounds during the test periods.

Initial Flow Pressure was	20	pounds	per	square	inch
Final " " "	290	"	"	"	"
Initial Shut in Pressure was	1170	"	"	"	"
Final " " " "	1170	"	"	"	"
Initial Hydrostatic Pressure was	2530	"	"	"	"
Final " " " "	2560	"	"	"	"

DRILLING TIME RECORD



<u>From - To</u>	<u>Minutes per 5-foot intervals</u>	<u>Remarks</u>
3800-50	3-3-3-3-3-3-3-3-3-3	
3850-3900	3-3-3-3-3-3-3-3-3-3	
3900-50	3-4-4-4-4-4-4-4-4-4	
3950-4000	4-4-4-4-4-4-4-4-4-4	
4000-50	3-3-3-6-3-4-3-3-4-5	
4050-4100	5-5-5-4-4-4-5-5-5-5	
4100-50	4-4-4-4-4-4-4-4-5-4-4	
4150-4200	4-4-4-4-4-4-4-4-4-4	
4200-50	4-4-4-4-4-4-4-5-7-7-9	
4250-4300	6-7-6-7-10-9-9-7-6-7	
4300-50	7-7-7-5-6-7-7-8-6-6	
4350-4400	6-6-5-6-8-4-4-8-8-7	
4400-50	8-9-8-7-8-6-7-7-7-7	
4450-4500	5-5-5-5-5-5-5-5-5-5	
4500-50	6-6-6-7-7-6-6-6-7-8	
4550-4600	8-6-7-7-7-6-7-8-9-15	
4600-50	12-12-11-15-15-8-7-9-8-8	

BEST IMAGE
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	<u>Minutes per 1-foot intervals</u>	
4650-60	1-1-2-2-2-2-1-2-1-1	
4660-70	2-1-1-2-1-1-2-1-1-1	
4670-80	1-2-1-2-1-1-1-2-1-2	
4680-90	1-1-2-2-2-2-1-2-2-1	
4690-4700	1-2-1-2-1-1-1-2-1-1	
4700-10	1-1-2-1-1-1-2-3-3-2*	
4710-20	21-11-15-15-12-15-15-19-23-15	Core #1
4720-30	19-15-17-13-20-15-14-25-17-13	Core #1
4730-39	10-14-11-22-11-18-20-21-31*	Core #1
4739-50	3-2-3-4-2-3-3-2-2-2-2	
4750-60	1-1-1-1-1-2-1-1-1-2	
4760-70	1-1-2-2-2-2-3-4-4-5	
4770-80	5-5-6-7-4-3-4-3-2-5	
4780-90	26-25-7-5-8-2-11-8-5-7	Core #2
4790-4800	13-12-19-10-4-6-5-6-10-9	Core #2
4800-10	18-20-13-13-15-9-12-10-11-2	Core #2
4810-20	5-6-6-13-11-15-16-12-14-15*	Core #2
4820-30	4-6-5-8-4-2-3-3-4-8	
4830-40	4-4-2-3-3-4-5-2-3-3	
4840-50	4-3-3-3-2-3-3-3-3-2	
4850-60	4-3-3-3-2-4-3-3-3-4	
4860-70	3-3-2-3-2-2-2-2-2-2	
4870-80	3-3-3-3-3-3-3-3-4-3	
4880-90	3-3-3-4-4-7-6-4-5-3	
4890-4900	5-5-5-3-3-3-3-3-3-3	
4900-10	3-4-4-4-6-4-4-4-5-3	
4910-20	4-3-4-4-6-4-3-4-5-4	
4920-30	5-5-4-4-5-3-2-2-3-7	

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BIT RECORD

<u>No.</u>	<u>Make</u>	<u>Size</u>	<u>Type</u>	<u>From - To</u>	<u>Footage Dilled</u>	<u>Hours Run</u>	<u>Condition</u>	<u>Remarks</u>
1	Hughes	7 7/8	OSC-3J	130 - 3224	3094	15	Dull	
2	"	"	OSC-3	3224 - 4380	1156	16	"	
3	"	"	"	4380 - 4710	330	10	"	
*	Diamond	6 5/8	Core	4710 - 4729	29	8	Not Hurt	
4	Hughes	7 7/8	OWV	4710 - 4780	74	4	Green	Pulled to Core
*	Diamond	6 5/8	Core	4780 - 4820	40	8	Not Hurt	
4	Hughes	7 7/8	OWV	4780 - 4930	150	9	WO	Rerun

MUD RECORD

<u>Date</u>	<u>Depth</u>	<u>wt</u>	<u>vis</u>	<u>St</u>	<u>Gel. Strength</u>		<u>pH</u>	<u>Water</u>	<u>Wall</u>	<u>Tester</u>
				<u>vis</u>	<u>Initial</u>	<u>Final</u>		<u>loss</u>	<u>cake</u>	
								<u>in cc.</u>	<u>in 32nds</u>	
11/27/58	4786	10	70	38	0	12	9.5	5.6	2	Magcobur
11/28/58	4789	10	57	28	0	10	9.5	5.6	2	"
11/29/58	4891	10	53	25	0	10	9.5	5.6	2	"