



00054514

## DATA SHEET AND DISCUSSION

**LOCATION:** SW SE (661 feet North of South line and 1987 feet West of East line), Section 28, Township 2 N, Range 54 W, Washington County, Colorado

**COMMENCED:** January 8, 1960

**COMPLETED:** January 14, 1960 set 4½" Casing

**CONTRACTOR:** Exeler Drilling Company, Denver, Colorado

**CASING:** Set 3 joints, 94 feet of 35/8", 24 pound 8 round thread new casing at 106 feet with 90 sacks of cement, 2% Calcium Chloride, 4% Gel. Set 156 joints, 4952.15 feet of 4½" 9.5 pound 8 round thread J-55 casing at 4960 feet with 125 sacks of 90-50 pozmix, 2% Gel, Centralizers, 4948, 4893, 4840, and 4811. Twelve sections of Halliburton Rotol Well scratchers 4959 to 4888 and 8 sections from 4857 to 4812. Plug at 4935.

**MEASUREMENTS:** All measurements are taken from the Kelly bushing approximately 9 feet above the ground. The ground elevation was lowered approximately 5 feet leveling location. 24 feet of hole was drilled after logging to allow testing J Sand zone through casing. The Kelly bushing was 11 feet above the Casing Head.

**ELEVATION:** 4551 Ground (Powers) (4846 Corrected) 4559 Kelly Bushing

<u>Formation</u>	<u>Sample Tops</u>	<u>Log Tops</u>	<u>Datums</u>
Niobrara	3954	3954	≠ 601
Timpas	4392	4349	≠ 205
Carlile	4405	4402	≠ 153
Greenhorn	4485	4483	≠ 67
Mowry	4726	4726	- 171
Brown Limestone	4734	4731	- 176
"D" Sand	4811	4810	- 255
"J" Sand	4890	4883	- 333
Total Depth	4964 (Drilled 24 feet 4939 after log)		- 405

**DISCUSSION:** The "D" Sand, 4810 (-255) was cored 4819 to 61. Good gas sand was recovered from 4820 to 4830 and oil sand from 4830 to 4857. The drill stem test 4839 to bottom of core hole at 4861, proved this to be all oil due to the small amount of gas and water recovered on the test. Due to the transition to water the bottom foot of sand should not be perforated. The more permeable sand zones should be perforated starting at 4855 and going up until sufficient fluid is obtained, but I would hesitate perforating above 4845 to avoid gas coming into the oil zone, even though there are tight streaks near the gas oil contact. This should make one of the best wells in the field.

The "J" Sand, 4888 (-333) was drilled and the samples checked for shows. Slight shows were noted in the 4935 and 4940 samples and the log indicated a possible zone from 4916 to 22 in the top 4 feet of a sand continuing to 4824. This zone was easier to test through the casing so the hole was deepened 24 feet after logging to get the plug below this sand. The top foot of this sand should be perforated and the fluid checked, with a maximum of the top 2 feet recommended at this time.

Submitted by,

*George D. Volk*

GEORGE D. VOLK  
Petroleum Geologist

GDV:gh

# SAMPLE LOG

3800-10	Shale dark gray
20	Same
30	Same
40	Same
50	Same
60	Same
70	Same
80	Same
90	Same
3900	Same
3900-10	Same
20	Same
30	Same
40	Same
50	Same
60	Same
Niobrara	3954
70	Same
80	Same
90	Same
4000	Same; little shale gray to dark gray mottled white to brown calcareous
4000-10	Same; little ditto
20	Shale gray to dark gray mottled white to brown calcareous and shale dark gray
30	Ditto and ditto
40	Ditto; little ditto
50	Same
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
20	Same
30	Same
40	Same
50	Same
60	Same
70	Same
80	Same
90	Same
4300	Same
4300-10	Same
20	Same
30	Same; trace limestone gray shaley dense



Sample Log (Continued)

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4330-40	Shale dark gray
50	Same
4352	<u>Timpas</u>
60	Same
70	Same; trace limestone white dense
80	Limestone white to buff dense and shale dark gray; little calcareous shale as above
90	Same
4400	Same
4405	<u>Carilla</u>
4400-10	Same
20	Same
30	Same; more shale
40	Shale dark gray; little limestone as above
50	Ditto; little ditto
60	Ditto; little ditto
70	Ditto; trace ditto
80	Ditto; trace ditto
4485	<u>Greenhorn</u>
90	Ditto; trace ditto
4568	Ditto; partly calcareous; trace ditto
4500-10	Ditto; partly calcareous; trace ditto; little siltstone gray
20	Ditto; partly calcareous; trace ditto; little ditto
30	Ditto; partly calcareous; little ditto
40	Ditto; partly calcareous; little ditto
50	Ditto; partly calcareous; little ditto
60	Ditto; partly calcareous; little ditto
70	Ditto; partly calcareous; trace ditto
80	Ditto; partly calcareous; trace ditto; trace limestone white dense
90	Ditto; partly calcareous; trace ditto; trace ditto
4600	Ditto; partly calcareous; trace ditto; trace ditto
4600-10	Ditto; partly calcareous
20	Ditto
30	Ditto
40	Ditto
50	Ditto
60	Ditto; trace limestone light brown dense
70	Ditto
80	Ditto
90	Ditto; trace limestone buff crystalline
4700	Ditto; trace siltstone gray
4700-10	Ditto
20	Ditto
4726	<u>Mary</u>
30	Ditto
4734	<u>Brown Limestone</u>
40	Ditto
50	Ditto
60	Ditto; trace limestone buff to brown crystalline
70	Ditto; trace ditto
80	Ditto
90	Ditto
4800	Ditto

## Sample Log (Continued)

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4800-05	Shale dark gray
10	Ditto
15	Ditto
20	Ditto; little sand gray fine partly silty fine, no show
4820 Circ. 15	
Min.	Ditto; little ditto; 1 cluster weak fluorescence
4820 Circ. 30	
Min.	Ditto; little ditto; 2 clusters weak fluorescence
4820 Circ. 45	
Min.	Ditto; little ditto; some clusters fair fluorescence; trace siltstone gray
4820 Circ. 60	
Min.	Ditto; little ditto; some clusters fair fluorescence; trace ditto
4820-62	See Core Description
4862-65	Shale dark gray to black; little sand gray fine porous, partly fluorescence
70	Ditto; trace ditto
75	Ditto; trace ditto
80	Ditto; trace ditto
85	Ditto
90	Ditto; trace siltstone dark gray
4890	<u>"J" sand</u>
95	Ditto; trace ditto
4900	Ditto; little ditto; trace sand gray fine silty tight, no show
4900-05	Ditto; little ditto; little ditto, some porous
10	Ditto; trace ditto; little ditto some porous
15	Ditto; little sand gray fine hard tight, trace weak mineral fluorescence
20	Ditto; little ditto, no show
25	Ditto; trace ditto, no show
30	Ditto; trace ditto, no show
35	Ditto; little sand gray fine partly silty questionable weak fluorescence trace siltstone gray
4935-40	Shale dark gray to black; little sand gray fine partly silty; trace weak fluorescence; trace siltstone gray
4940 Circ. 30	
Min.	Ditto; little ditto, no show; trace siltstone gray
4940 Circ. 60	
Min.	Ditto; trace ditto, no show
4940-45	Ditto; trace ditto
50	Ditto; trace ditto
55	Ditto; trace sand gray fine soft porous, no show; trace argillite white
60	Ditto; trace ditto some unconsolidated; little ditto
64	Ditto; trace ditto, some unconsolidated; little ditto
4940 Circ. 30	
Min.	Ditto; trace ditto; trace ditto
4964 Circ. 60	
Min.	Ditto; trace ditto



CORE DESCRIPTION AND CORE ANALYSIS RECORD

Core #1	4820 - 62 - Recovery 38' - 3"
	4819 - 61 - Log Measurements
1' - 0'	Shale dark gray carbonaceous slightly reworked with sand gray fine silty hard tight, no show, and siltstone gray.
18' - 0'	Sand gray fine porous (gas) trace of fluorescence increasing towards bottom scattered thin shale laminations little vertical fracturing 4" of brown chert between 27 and 28.
19' - 3"	Sand gray fine porous saturated good odor and fluorescence streaks silty scattered streaks thinly laminated few vertical fractures. Laminated tight streaks between (38-39), (45-46), (48-49), (50-52), (55-56).
4' - 0'	Core Loss probably shale

## DRILL STEM TEST RECORD

Drill Stem Test #1

4840 to 4862

4839 to 61 - Log Measurement

The tool was open for 2 minutes, shut in for 30 minutes, open 50 minutes, then shut in for 30 minutes. It had a good blow during the initial 2 minute open period continuing during the initial 30 minute shut in period. Gas reached the surface in 14 minutes gauged at 8220 cubic feet per day after 10 minute build up, (8" with 48 inch orifice). The test recovered 3525 feet of fluid (50 bbls.), 3345 feet of oil and 180 feet of water, in drill collars. The oil was 31° gravity at 70°.

Initial Shut in pressure	1104	pounds per square inch
Final Shut in pressure	1104	" " " "
Initial Flow pressure (2 minute open)	200	" " " "
Initial Flow pressure	290	" " " "
Final Flow pressure	845	" " " "
Initial Hydrostatic pressure	2755	" " " "
Final Hydrostatic pressure	2668	" " " "
Temperature was	104°	

# BIT RECORD

No.	Make	Size	Type	From - To	Footage Drilled	Hours Run	Condition	Remarks
1	Hughes	7 7/8	OSC-3J	115 - 2815	2700	17	Dull	
2	CP	"	ESIC	2815 - 4070	1255	12	Dull	
3	CP	"	ESIC	4070 - 4563	497	9	Dull	
4	Hughes	"	OSC-3	4563 - 4820	257	8	Dull	
5	Diamond	6 5/8	Core	4820 - 4862	42	10	Washing	
5	CP	7 7/8	ENIV	4820 - 4940	120	7	WO	
6	CP	"	ENIVS	4940 - 4964	24	1	Dull	Rerun

# MUD RECORD

Date	Depth	wt	vis	St. Vis	Gel. Initial	Strength Final	Water Loss pH	in cc	Well Cake in 32nds	Tester
1/8/60	2452									Plains Mud Co.
1/10/60	4070	--	47	23	0	0	9.5	5.6	2	" " "
1/11/60	4814	9.9	60	27	0	10	9.5	5.2	2	" " "



## Minutes per 5-foot intervals

### References

Minutes per 1-foot intervals

Core #1  
Core #1  
Core #1  
Core #1  
Core #1

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# CASING SUPPLEMENT

Set	4960	(12 Sections Roto Wall Scratchers 4959 to 4988)
1	<u>22.80</u>	Centralizer 4948 3 Sec. Roto Wall scratchers
	4937.20	Plug 4935
2	<u>32.13</u>	6 Sections Halliburton Roto Wall scratchers
	4905.07	Centralizer 4893
3	<u>32.00</u>	3 Sections Halliburton Roto Wall scratchers
	4873.07	
4	<u>32.52</u>	
	4840.45	Centralizer 3 Sections Roto Wall scratchers
5	<u>29.37</u>	
	4811.08	Centralizer 5 Sections Roto Wall scratchers
6	<u>29.35</u>	(8 Sections Roto Wall scratchers 4857-4812)
	4781.72	
7	<u>31.90</u>	
	4749.82	
8	<u>30.85</u>	
	4718.97	
9	<u>25.32</u>	
	4693.65	
10	<u>30.60</u>	
	4663.05	
11	<u>27.83</u>	
	4635.22	
12	<u>30.71</u>	
	4604.51	
13	<u>32.00</u>	
	4572.51	
14	<u>32.28</u>	
	4540.23	
15	<u>32.79</u>	
	4507.44	