



DATA SHEET AND DISCUSSION

LOCATION: C SE NW Sec. 25-8N-54W, Logan County, Colorado.

COMMENCED: November 5, 1957.

COMPLETED: 3:45 P.M., November 22, 1957.

CASING: Set 160 ft. 8-5/8" with 125 sacks, 2% calcium chloride. Plug down 10 P.M., November 5, 1957.

ELECTRIC LOGS: E.S. to 5066; Microlog to 5066.

ELEVATION: 4230 K.B.; 4222 Ground.

MEASUREMENTS: All from top of Kelly Bushing. Subtract 2 1/2 feet from Driller's depths to agree with electric survey.

BEST IMAGE AVAILABLE

<u>FORMATION TOPS:</u>	<u>Sample</u>	<u>Schlumberger</u>
Niobrara shale	- - - -	4105
Ft. Hays limestone	4415	4417
Carlile shale	4478	4467
Greenhorn limestone	4671	4669
Bentonite Marker	4837	4833
"D" Sand	4931	4928 (-698)
"J" Sand	5026	5025 (-795)
Top "J" Sand Pay	5060.4	5058
Bottom "J" Sand Pay	5063.2	5061
Total Depth	5067	5066

DISCUSSION: The primary objective of this operation was to core and test the "J" sand reservoir which is productive in the Pawnee Creek field located south and west of the Hoxie lease. This was accomplished by coring the entire "J" zone above and including the "pay". Two cores were necessary. Approximately three feet of the objective reservoir was recovered in Core #2, and excellent sand characteristics were noted. (See Core Description and Core Analysis).

Lewis Bros., Inc.
#1 Hoxie
Discussion - Con't.
Page 2.

A drill stem test was run on this interval (5058-61) by Electric Survey and 5064.4-63.2 by driller) and 1020 feet of free oil was recovered. However, the pipe was allowed to "unload" during the early morning hours or a much greater footage of oil would have been recovered. Oil was at the surface at the end of the test. (See D.S.T. record).

Based on the above information it was recommended that a production string be run and completion attempted from 5058-61.

Samples and core chips from this test have been delivered to The American Stratigraphic Company, Denver, Colorado.

Respectfully submitted,

William L. Barksdale
William L. Barksdale.

JK

WLB:ik

BEST IMAGE
AVAILABLE

DRILL STEM TEST RECORD

- DST #1. 5056-67 - Misrun
- DST.#2. 5056-67 - Misrun
- DST #3. 5056-67 - Tool open 2½ hours. Gas to surface in 10 minutes. Gas gauged as follows:

<u>Time</u>	<u>Orifice Size</u>	<u>Pressure</u>
12:15	1"	4 oz.
12:30	½"	3 "
12:45	½"	6 "
1:00	½"	4½ "
1:15	½"	4½ "
1:30	½"	6 "
1:45	½"	5 "
2:00	½"	0-4 "

BEST IMAGE AVAILABLE

Oil to surface during shut-in period.
 Shut-in 30 minutes.
 Recovered 1500 ft. fluid - 1020ft.
 free oil, 300 ft. heavily oil-cut mud,
 180 ft. muddy water.

IFP 285#
 FFP 755#
 SIP 1183#
 Hydrostatic Pressure 2665#

SAMPLE DESCRIPTION

FROM-TO

4400-40	Gray to tan, calcareous, speckled Niobrara shale.
40-90	Soft, white, chalky, fossiliferous limestone.
90-4510	Ditto with trace extremely fine-grained, glauconitic sandstone.
4510-20	Marked decrease in percentage of limestone.
20-4690	Gray, silty shale and gray siltstones.
4690-4700	Light tan, granular to slightly crystalline, fossiliferous limestone.
4700-4800	Gray shale.
4800-70	Ditto with streaks of light tan, crystalline limestone and siltstone.
70-75	Ditto with light brown, granular limestone.
75-4940	Gray shale.
4940 20 min.	cir. - Sandstone, white, fine-grained, fair to low porosity and permeability - no stain or odor, glauconitic, friable
40 min.	cir. - Ditto.
4940-50	Sandstone as above.
50-55	Gray shale.
55-65	Ditto with interbedded fine-grained, white, porous sandstone.
65-5020	Gray shale.
5020-31	Ditto with gray siltstone and pyrite.
5031 20 min.	cir. - Gray shale and siltstone - trace fine-grained, friable, lightly stained sandstone.
40 min.	cir. - Sandstone, very fine-grained, light tan, fair to low permeability, slightly carbonaceous, light spotted stain and fluorescence.
5031-67	See Core Description.

BEST IMAGE
AVAILABLE

CORE DESCRIPTION

Core #1. 5031-59 - Recovered 28 feet.

- 5031-32 - Interbedded gray shale, siltstone and extremely fine-grained sandstone.
- 32-36 - Sandstone, extremely fine-grained, gray, argillaceous, vertical fracture, light stain and odor - low permeability.
- 36-39 - Shale, hard, silty.
- 39-42 - Laminated, very fine-grained impermeable sandstone with gray shale.
- 42-54 - Sandstone, fine-grained, white, massive, fair porosity and permeability, vertical fracture - water bearing.
- 54-57 - Interlaminated siltstone, gray, and shale.
- 57-59 - Black shale with 6 inches gray bentonite layer.

BEST IMAGE
AVAILABLE

* Core #2. 5059-67. Recovered 8 feet.

- 5059-60.4 - Sandstone, very fine-grained, non-permeable, light stain, laminated with gray shale.
- 60.4-63.2 - Sandstone, medium-grained, well sorted, sub-rounded, good to excellent porosity and permeability, friable, massive, vertical fractures, dull yellow-brown fluorescence, oil saturated.
- 63.2-64.7 - Gray shale.
- 64.7-67.0 - Laminated, very fine-grained, silty sandstone grading to siltstone and gray shale - no fractures.

* Subtract $2\frac{1}{2}$ feet to agree with Schlumberger log.

25-8N-S4W

CORE ANALYSIS

Sample No.	Depth	Permeability		Porosity	Residual Saturation	
		Hor.	Vert.		Oil	Wtr.
1	5033-34	5.8	0.0	19.1	9.4	52.4
2	36-37	27	12	6.1	6.1	61.6
* 3	60.5-61	840	708	14.3	14.3	46.0
4	61-62	492	416	17.0	17.0	34.0
5	62-63	534	534	14.6	14.6	49.3

$$\frac{1866}{3} = 622$$

$$\frac{45.9}{3} = 15.3$$

$$\frac{129.3}{3} = 43.1$$

*Subtract $2\frac{1}{2}$ feet to agree with Schlumberger Survey.

BEST IMAGE
AVAILABLE

DRILLING AND CORING TIME LOG

<u>FROM-TO</u>	<u>Minutes per 1 foot intervals.</u>
4900-10	1-1-1-1-1-1-1-1-1-1
10-20	1-1-1-1-1-1-1-1-1-1
20-30	1-1-1-1-1-1-1-1-1-1
30-40	1-3-5-3-2-2-2-2-2-2
40-50	3-3-5-2-4-3-4-3-3-2
50-60	4-2-2-2-2-2-3-2-3-4
60-70	3-1-1-2-2-2-3-1-1-3
70-80	2-2-2-2-3-2-2-3-2-1
80-90	2-1-1-1-2-1-1-1-1-1
90-5000	1-1-1-1-1-1-1-1-1-1
5000-10	1-1-1-1-1-1-1-1-3-2
10-20	4-5-3-3-2-3-3-2-4-2
20-30	4-5-2-3-5-3-4-3-3-2
30-40	1-?-?-?-?-?-?-?-?-?-?
40-50	?-?-?-?-?-?-?-?-?-?-?
50-60	?-?-?-?-?-?-?-?-?-?-15
60-70	28-32-31-13-14-7-10

BEST IMAGE
AVAILABLE

Total depth 5067

B I T R E C O R D

<u>Run</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>From-To</u>
1	7-7/8"	Hughes	OSC-3J	160-3179
2	"	"	OSC-3	3179-4384
3	"	"	OSC-3	4384-5031
4	"	"	OWV	5031-5067