

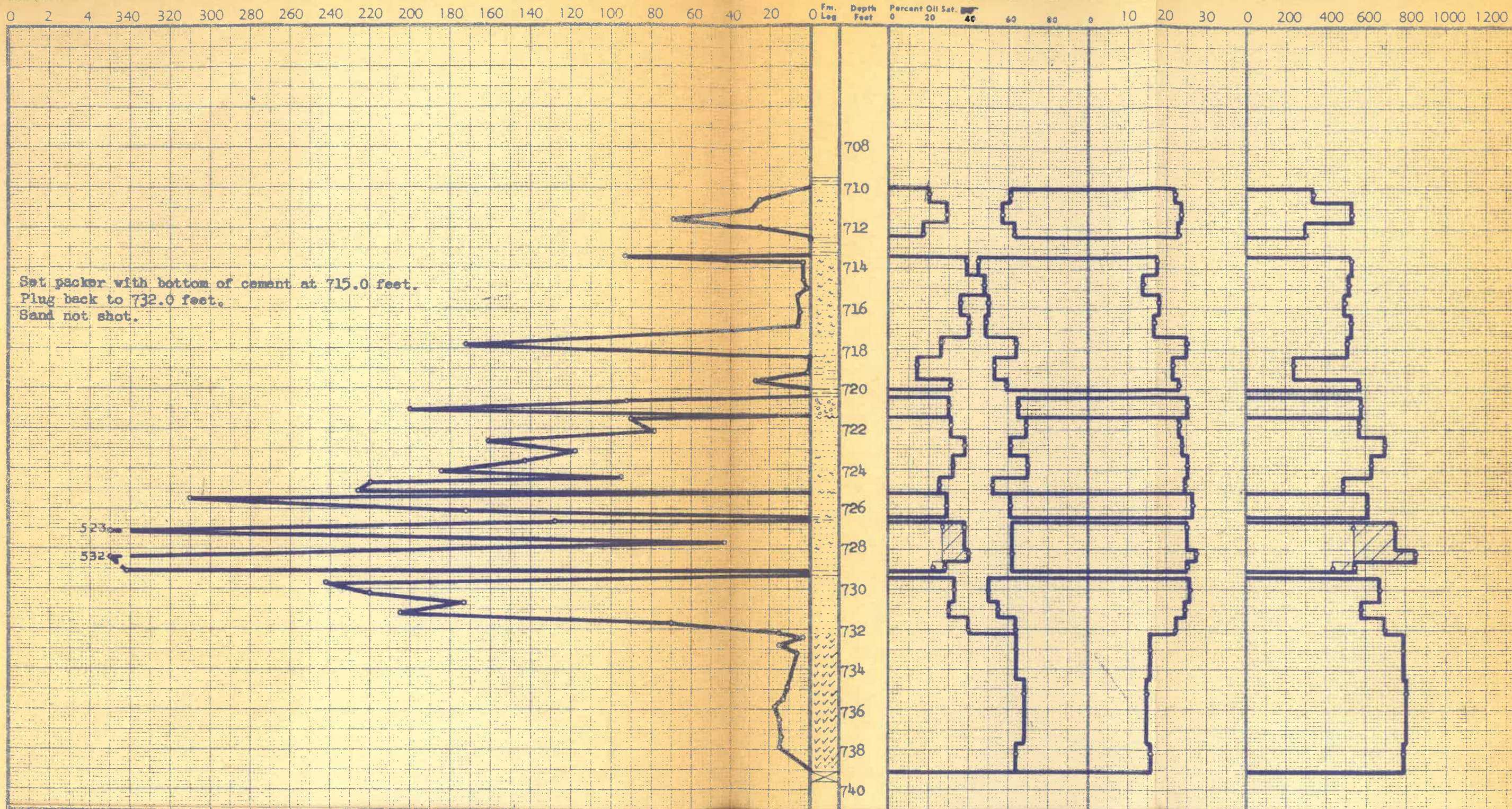
Recommended Shot Qts. Ft.

Permeability, Millidarcys

Percent Water Sat.

Percent Porosity

Oil Content, Bbls./A. Fr.



Sec.	Sand	Depth, Feet		Net Ft. of Sand	Avg. Por.	Average Core Sat.		Core Oil Content		Permeability		Flood Pot Residuals			
		From	To			Oil	Water	Avg. B / A Ft.	Total Bbl. / Ac.	Avg. Mds.	Capacity Ft. x Md.	Saturation		Oil Content	
												Oil	Water	B / A Ft.	Bbl. / Ac.
1	<u>BARTLESVILLE</u> Depleted Oil Sd.	710.0	712.4	2.4	23.3	23.	40.	408.	980.	34.	81.	--	--	--	--
2	Micaceous Sd.	713.4	717.4	4.0	16.6	40.	52.	520.	2,080.	6.5	26.	--	--	--	--
3	Oil Pay Sand	717.4	732.2	12.6	25.1	32.	39.	631.	7,950.	193.	2,428.	25.	66.	487.	6,140.
4	Black Sand	732.2	739.1	6.9	15.4	67.	33.	796.	5,490.	12.	84.	--	--	--	--

COMPANY SCHERMERHORN OIL CORPORATION  
 LEASE NORTH UNIT WELL NO. W-10  
 LOCATION 1700 ft. N. of S.L., 560 ft. W. of E.L.  
 SEC. 4 T. 21-S R. 21-E COUNTY Anderson  
 STATE Kansas DATE 7-3-52  
 EARLOUGHER ENGINEERING TULSA, OKLAHOMA

EARLOUGHER ENGINEERING

PETROLEUM CONSULTANTS - CORE ANALYSES

3316 EAST 21ST STREET

TULSA, OKLAHOMA

July 3, 1952

Schermerhorn Oil Corporation  
714 First National Building  
Tulsa, Oklahoma

Attention - Mr. H. A. Sherman

Re - Core Analysis  
North Unit Well No. W-10  
Sec. 4, T.21-S., R.21-E.  
Anderson County, Kansas

Gentlemen:

Attached are results of analysis, together with profile and summary,  
covering core received from your above well.

Yours very truly

EARLOUGHER ENGINEERING



R. C. Earlougher, Engineer

JMR 1  
Encl 1  
cc - Garnett Office

**EARLOUGHER ENGINEERING**  
CORE SUMMARY

Company Schermerhorn Oil Corporation Lease North Unit Well No. W-10  
 Location 1700 feet North of South Line, 560 feet West of East Line  
 Section 4 Twp. 21-S Rge. 21-E County Anderson State Kansas  
 Formation Cored Bartlesville Sand Type Core No. 6 Baker Barrel  
 Date Cored 6-28-52 Date Shot 6-30-52 Coring Fluid Water

Depths: Elevation, ground	984.0 feet
Started coring, shale	709.5 "
Top of depleted oil sand	710.0 "
Top of oil pay	717.4 "
Bottom of oil pay	732.2 "
Bottom of core, black sand	739.1 "
Corrected total depth, SLM	739.6 "
Net feet of depleted oil sand	2.4 "
Net feet of oil pay	12.6 "
Net feet of black sand cored	6.9 "
Total feet cored	29.6 "
Feet analyzed	23.1 "

Shot Record:

Set Packer \_\_\_\_\_ Feet

<u>Depth, Feet</u>	<u>Shell</u>	<u>Quarts</u>	<u>Quarts</u>
<u>From</u> <u>To</u>	<u>Diameter</u>	<u>Per Foot</u>	<u>Total</u>

Set packer with bottom of cement at 715.0 feet.  
 Plug back to 732.0 feet.  
 Sand not shot.

Completion Data:

Hrs. well stood after coring \_\_\_\_\_; Feet Fluid in Hole \_\_\_\_\_ (Oil \_\_\_\_\_ Water \_\_\_\_\_)  
 Clean-out time, hrs. \_\_\_\_\_; Initial production, bbls. day \_\_\_\_\_ (Oil \_\_\_\_\_ Water \_\_\_\_\_)

Remarks: The Bartlesville section was cored with No. 6 Baker barrel from 709.5 to 739.1 feet and core sampled by Earlougher Engineering. Coring was commenced in shale and stopped in black sand. The core from this well indicated well consolidated sand which is in contrast to the very friable sand in cores from Wells No. W-7, W-8 and W-9.

Results of analysis are summarized in 4 sections with depleted oil sand in section  
 (Continued following page)

1, micaceous probably non-floodable sand in section 2, oil pay sand in section 3 and black non-floodable sand in section 4.

The 12.6 net feet of oil pay sand is located between depths 717.4 and 732.3 feet and has a relatively low average oil saturation of 32 per cent and average core water saturation of 39 per cent. The core bled oil when pulled, which together with the relatively low total core saturation may indicate excessive loss of oil while coring. Average permeability of the oil pay sand is 193 millidarcys and average porosity 25.1 per cent. Laboratory water flooding tests on 2 samples indicated a relatively high average residual oil saturation of 25 per cent and average oil recovery was 159 barrels per acre-foot.

Estimated oil recovery by water flooding in the field is 2500 barrels per acre from the area of which this core is representative.

JMR 1

**EARLOUGHER ENGINEERING**  
SUMMARY OF CORE ANALYSES DATA

OMPANY Schermerhorn Oil Corporation

LEASE North Unit

WELL NO. W-10

Sec.	Formation	Depth, Ft.		Net Ft. of Sand	Avg. Por.	Avg. Core Saturation		Core Oil Content		Permeability		Flood Pot Residuals				Oil Recovery Bbl./Acre	
		From	To			Oil	Water	Avg. B/A. Ft.	Total B/Ac.	Avg. Md.	Capacity Ft. x Md.	Saturation		Oil Content		Diff.	Flood Pot
												Oil	Water	B/A. Ft.	B/Ac.		
	<u>BARTLESVILLE</u>																
1	Depl. Oil Sd.	710.0	712.4	2.4	23.3	23.	40.	408.	980.	34.	81.	--	--	--	--	--	--
2	Micaceous Sd.	713.4	717.4	4.0	16.6	40.	52.	520.	2,080.	6.5	26.	--	--	--	--	--	--
3	Oil Pay Sand	717.4	732.2	12.6	25.1	32.	39.	631.	7,950.	193.	2,428.	25.	66.	487.	6,140.	1,810.	2,000.
4	Black Sand	732.2	739.1	6.9	15.4	67.	33.	796.	5,490.	12.	84.	--	--	--	--	--	--

**EARLOUGHER ENGINEERING**  
RESULTS OF SATURATION TESTS

COMPANY Schermerhorn Oil Corporation

WELL North Unit No. W-10

Sat. No.	Depth Feet	Porosity Per Cent	Per Cent Saturation			Avg. Oil Content Bbl./A. Ft.	Feet of Sand		Total Oil Content Bbl./Acre
			Oil	Water	Total		Ft.	Cum.	
1	710.3	22.4	20.	39.	59.	340.	0.7	0.7	240.
2	711.3	23.8	29.	43.	72.	530.	1.0	1.7	530.
3	712.3	23.4	17.	37.	54.	300.	0.7	2.4	210.
4	713.6	17.6	39.	55.	94.	530.	0.9	3.3	480.
5	714.8	14.0	48.	52.	100.	520.	1.0	4.3	520.
6	715.7	18.0	36.	50.	86.	500.	1.0	5.3	500.
7	716.7	16.8	40.	51.	91.	530.	1.1	6.4	580.
8	717.7	25.1	26.	36.	62.	510.	1.0	7.4	510.
9	718.8	21.8	14.	47.	61.	240.	1.1*		
10	719.8	23.4	31.	41.	72.	570.	0.5	7.9	290.
11	720.8	25.4	30.	35.	65.	580.	1.0	8.9	580.
12	721.8	23.4	31.	31.	62.	570.	0.9	9.8	510.
13	722.8	24.0	38.	39.	77.	700.	0.9	10.7	630.
14	723.8	25.4	32.	30.	62.	630.	1.1	11.8	690.
15	724.8	24.8	25.	48.	73.	490.	0.7	12.5	340.
16	725.8	26.8	29.	39.	68.	610.	1.2	13.7	730.
F-17	726.9	25.4	38.	--	--	750.	1.4	15.1	1,050.
18	728.2	27.5	40.	38.	78.	860.	0.6	15.7	520.
F-19	728.9	25.4	28.	--	--	550.	0.5	16.2	280.
20	730.0	26.0	33.	50.	83.	670.	1.2	17.4	800.
21	731.0	24.6	30.	45.	75.	580.	0.8	18.2	460.
22	732.0	22.4	40.	36.	76.	700.	0.8	19.0	560.
23	733.0	15.8	64.	36.	100.	790.	2.3	21.3	1,820.
25	735.2	15.0	68.	32.	100.	800.	3.2	24.5	2,560.

\*Not included in cumulative feet of sand.

**EARLOUGHER ENGINEERING**  
RESULTS OF LABORATORY FLOODING TESTS

COMPANY Schermerhorn Oil Corporation

LEASE North Unit

WELL NO. W-10

Sample No.	Depth	Porosity	Perm. Approx.	Before Flooding <u>1/</u>			Max. Press. Psi.	Water Through C.C.	Time Min.	Flood Pot Residual			Flood Pot Oil Recovery Bbl./A. Ft.
				Oil Sat.	Water Sat.	Oil Content Bbl./A. Ft.				Oil Sat.	Water Sat.	Oil Content Bbl./A. Ft.	
F-17	726.9	25.4	330.	38.	--	750.	40.	8,309.	490.	27.	62.	540.	211.
F-19	728.9	25.4	532.	28.	--	550.	40.	6,922.	490.	22.	69.	440.	107.

1/ Unless otherwise noted, oil content and saturation before flooding equals flood pot oil recovery plus flood pot residual.

**EARLOUGHER ENGINEERING**  
RESULTS OF PERMEABILITY TESTS

COMPANY Schermerhorn Oil Corporation

WELL North Unit No. W-10

Sample No.	Depth Feet	Permeability Millidarcys	Feet of Sand		Capacity Ft. X Md.	Sample No.	Depth Feet	Permeability Millidarcys	Feet of Sand		Capacity Ft. X Md.
			Ft.	Cum. Ft.					Ft.	Cum. Ft.	
1	710.6	25.	0.7	0.7	18.	26	724.7	220.	0.3	12.1	66.
2	711.1	29.	0.6	1.3	17.	27	725.1	226.	0.4	12.5	90.
3	711.6	69.	0.4	1.7	28.	28	725.5	310.	0.5	13.0	155.
4	712.0	25.	0.7	2.4	18.	29	726.1	172.	0.7	13.7	120.
5	712.6	-0-	1.0*			30	726.6	128.	0.4	14.1	51.
6	713.4	93.	0.1	2.5	9.3	31	727.1	523.	0.5	14.6	262.
7	713.7	2.5	0.8	3.3	2.0	32	727.7	43.	0.5	15.1	21.
8	714.6	3.0	0.6	3.9	1.8	33	728.4	532.	0.6	15.7	319.
9	715.0	1.0	0.4	4.3	0.4	34	729.1	342.	0.5	16.2	171.
10	715.4	6.1	0.5	4.8	3.1	35	729.7	242.	0.7	16.9	169.
11	716.2	5.3	0.5	5.3	2.7	36	730.2	220.	0.5	17.4	110.
12	716.9	5.8	1.1	6.4	6.4	37	730.7	173.	0.5	17.9	87.
13	717.8	172.	1.0	7.4	172.	38	731.2	205.	0.3	18.2	62.
14	718.4	0.1	0.5*			39	731.7	67.	0.8	19.0	54.
15	719.1	2.1	0.6*			40	732.2	15.	0.1	19.1	1.5
16	719.6	27.	0.5	7.9	14.	41	732.4	2.8	0.2	19.3	0.6
17	720.6	93.	0.6	8.5	56.	42	732.8	15.	0.5	19.8	7.5
18	721.0	200.	0.4	8.9	80.	43	733.2	5.8	1.5	21.3	8.7
19	721.5	90.	0.5	9.4	45.	46	734.9	11.	0.5	21.8	5.5
20	722.1	79.	0.4	9.8	32.	47	735.5	13.	0.5	22.3	6.5
21	722.6	161.	0.6	10.4	97.	48	735.9	17.	0.5	22.8	8.5
22	723.1	118.	0.3	10.7	35.	49	736.5	15.	0.6	23.4	9.0
23	723.6	143.	0.4	11.1	57.	50	737.4	14.	1.1	24.5	15.
24	724.1	184.	0.4	11.5	74.	51	737.9	15.	1.4	25.9	21.
25	724.4	95.	0.3	11.8	29.						

\*Not included in cumulative feet of sand.

# NORTH UNIT W-10

