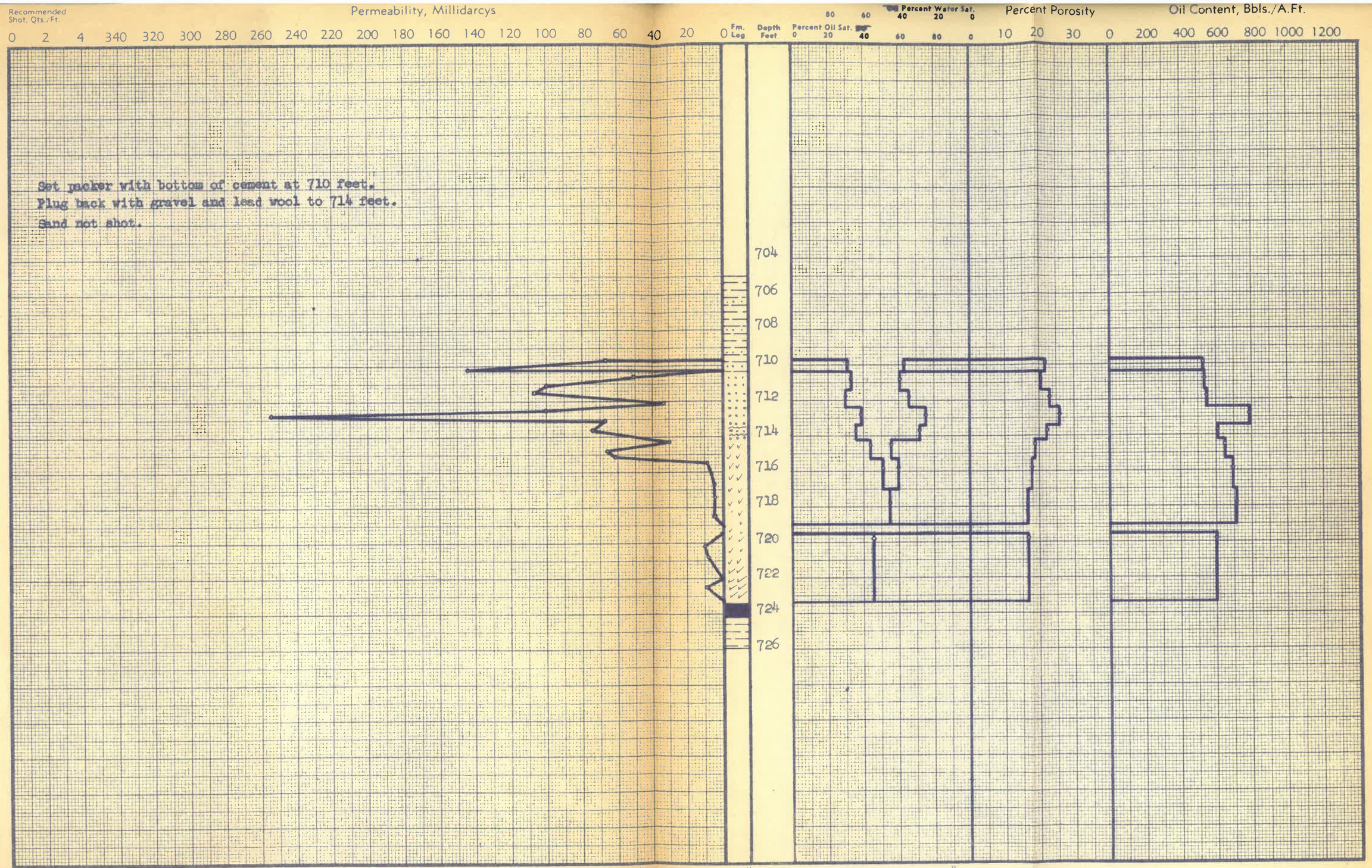


Sec.	Sand	Depth, Feet From	Depth, Feet To	Net Ft. of Sand	Avg. Por.	Average Core Sat. Oil	Average Core Sat. Water	Core Oil Content Avg. B./A.Ft	Core Oil Content Total Bbl./Ac.	Permeability Avg. Mds.	Permeability Capacity Ft. x Md.	Flood Pot Residuals Saturation Oil	Flood Pot Residuals Saturation Water	Flood Pot Residuals Oil Content B./A.Ft.	Flood Pot Residuals Oil Content Bbl./Ac.
1	Bartlesville Oil	Sd.709.7	712.4	2.6	22.0	32.	37.	543.	1,410.	81.	210.				
2	Bartlesville Oil	Sd.712.4	714.2	1.8	24.3	36.	26.	684.	1,230.	117.	211.				
3	Bartlesville Blk.	Sd.714.2	723.4	8.7	17.3	49.	46.	652.	5,670.	10.	87.				

COMPANY SCHERMERHORN OIL CORPORATION
LEASE WASHBURN COLLEGE WELL NO. W-1
LOCATION 660' N., of S.W. Corner of Lease
SEC. 4 T 21-S R 21-E COUNTY Anderson
STATE Kansas DATE 6-16-49

EARLOUGHER ENGINEERING TULSA, OKLAHOMA

EARLOUGHER ENGINEERING
PETROLEUM CONSULTANTS - CORE ANALYSES
319 EAST FOURTH STREET
TULSA 3, OKLAHOMA

June 16, 1949

Schermerhorn Oil Corporation
Kennedy Building
Tulsa, Oklahoma

Attention - Mr. H. A. Sherman

Re - Core Analysis
Washburn College Well No. W-1
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

R. C. Earlougher, Engineer

JRR v
Encl 1
cc to Mr. Ray Williams

EARLOUGHER ENGINEERING

CORE SUMMARY

Company Schermerhorn Oil Corporation Lease Washburn College Well No. W-1

Location 660 feet North of Southwest Corner of Lease

Section 4 Twp. 21-S Rge. 21-E County Anderson State Kansas

Formation Cored Bartlesville Sand Type Core No. 6 Baker Barrel

Date Cored 6-6-49 Date Shot Date Completed

Depths:

Started coring, shale		705.0 ft.
Top of oil sand		709.7 "
Bottom of oil sand		714.2 "
Net feet of oil sand		4.4 "
Black sand	714.2 -	723.4 "
Coal	723.4 -	724.2 "
Bottom of core, shale		725.9 "
Total cored		20.9 "
Feet analyzed		9.0 "

Shot Record: Set Packer Feet

Depth, Feet From	To	Feet	Shell Diameter	Quarts Per Foot	Quarts Total

Set packer with bottom of cement at 710.0 feet.
Plug back with gravel and lead wool to 714.0 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:

This core shows 4.4 net feet of good brown oil sand between 709.7 and 714.2 feet. Immediately below the oil sand there are 8.7 net feet of black sand from 714.2 to 723.4 feet. Results of analysis are summarized in three sections with the oil sand in Sections 1 and 2 and black sand in Section 3.

(Continued following page)

PERMEABILITY Average permeability of the 4.4 net feet of oil sand is 96 millidarcys and values range from 33 to 254 millidarcys. Permeability capacity of the oil sand is 421 foot-millidarcys. Average permeability of the black sand is 10 millidarcys.

POROSITY The oil sand has an average porosity of 22.9 percent and individual values range from 20.7 to 26.0 percent.

PERCENT SATURATION The oil sand has an average oil saturation of 34 percent with values ranging from 30 to 39 percent. The relatively low total average core saturation of 67 percent may indicate that oil was lost from the core during coring due to gas expansion. Also, it was reported that the core bled some oil when pulled. Therefore, it is possible that the oil saturation herein reported may be somewhat low.

OIL CONTENT Average oil content of the oil sand is 612 barrels per acre-foot and individual values range from 530 to 790 barrels per acre-foot.

CONCLUSIONS

1. Net feet of oil sand is only 4.4 feet located from 709.7 to 714.2 feet.

2. An extensive black, non-floodable sand section was cored between 714.2 and 723.4 feet.

3. Estimated oil recovery by water flooding is 200 barrels per acre-foot or 880 barrels per acre from the area of which this core is representative.

Respectfully submitted

EARLOUGHER ENGINEERING

J M Robinson

J. M. Robinson, Engineer

JMR w

EARLOUGHER ENGINEERING

RESULTS OF SATURATION TESTS

COMPANY Schermerhorn Oil Corporation WELL Washburn College No. W-1

Sat. No.	Depth Feet	Porosity Per Cent	PER CENT SAT. Oil	Water	Total	Avg. Oil Content Bbls./A. Ft.	FT. OF SAND Ft.	Cum.	Total Oil Content Bbls./Acre
1	709.9	21.8	31.	37.	68.	530.	0.6	0.6	320.
2	710.8	20.7	33.	39.	72.	540.	1.0	1.6	540.
3	711.8	23.3	30.	34.	64.	550.	1.0	2.6	550.
4	712.8	26.0	39.	24.	63.	790.	1.0	3.6	790.
5	713.7	22.3	36.	28.	64.	610.	0.8	4.4	490.
6	714.5	19.0	44.	44.	88.	650.	1.1	5.5	720.
7	715.8	17.9	51.	40.	91.	200.	1.7	7.2	1,190.
8	717.8	16.6	55.	45.	100.	710.	2.0	9.2	1,420.
9	719.8	16.8	46.	54.	100.	600.	3.9	13.1	2,340.

SUMMARY

	DEPTH FEET FROM	TO	FEET OF SAND	AVG. POROSITY	AVG. OIL SAT.	AVG. WATER SAT.	AVG. OIL CONTENT BBLS./A. FT.	TOTAL OIL CONTENT BBLS./ACRE
1	709.7	712.4	2.6	22.0	32.	37.	543.	1,410.
2	712.4	714.2	1.8	24.3	36.	26.	684.	1,230.
3	714.2	723.4	8.7	17.3	49.	46.	672.	5,670.
1&2	709.7	714.2	4.4	22.9	34.	33.	612.	2,690.

EARLOUGHER ENGINEERING

RESULTS OF PERMEABILITY TESTS

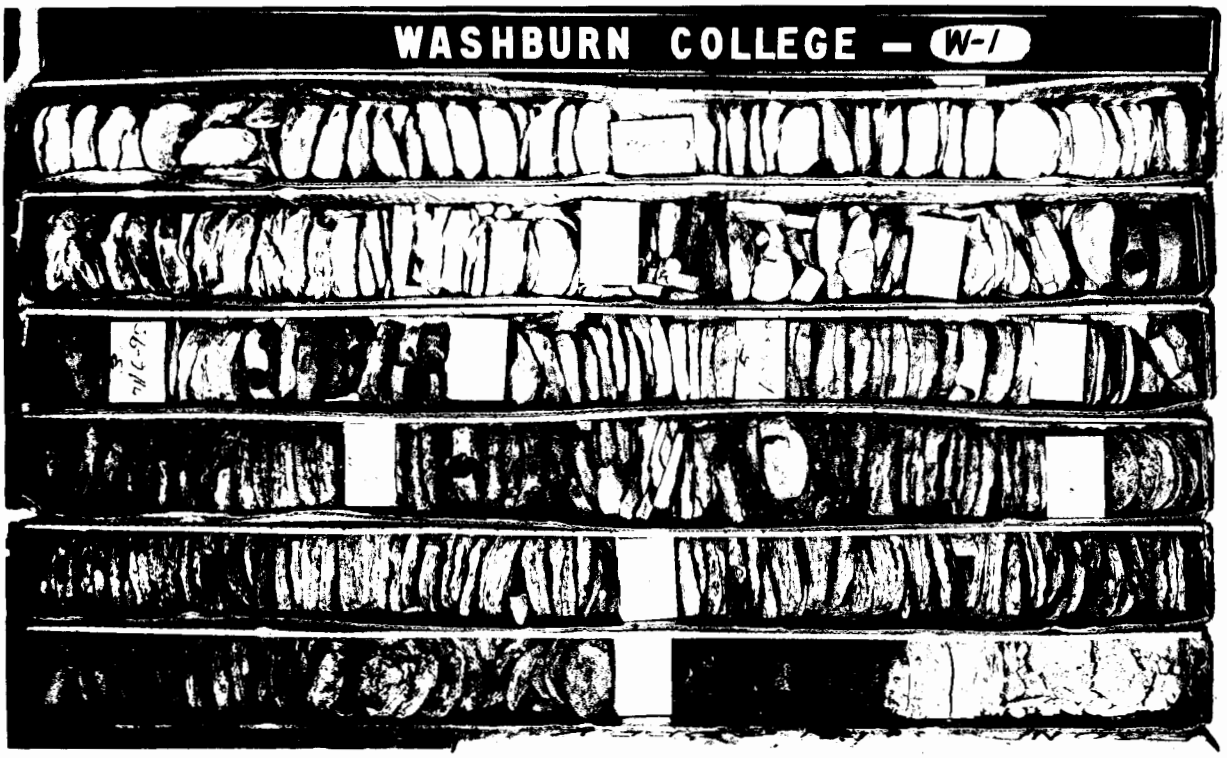
COMPANY Schermerhorn Oil Corporation WELL Washburn College No. V-1

Sample No.	Depth Feet	Permeability Millidarcys	FEET OF SAND Ft.	FEET OF SAND Cum. Ft.	Capacity Ft. X Md.	Sample No.	Depth Feet	Permeability Millidarcys	FEET OF SAND Ft.	FEET OF SAND Cum. Ft.	Capacity Ft. X Md.
1	709.7	67.	0.3	0.3	20.	13	715.1	61.	0.4	5.5	2.4
2	710.2	144.	0.3	0.6	43.	14	715.5	8.1	0.7	6.2	5.7
3	710.6	51.	0.5	1.1	26.	15	716.1	6.0	0.5	6.7	3.0
4	711.1	100.	0.5	1.6	50.	16	716.7	4.2	0.5	7.2	2.1
5	711.5	197.	0.5	2.1	54.	17	717.4	3.9	1.0	8.2	3.9
6	712.1	33.	0.5	2.6	17.	18	718.5	4.0	1.0	9.2	4.0
7	712.5	100.	0.3	2.9	30.	19	719.5	-0-	0.5*		-0-
8	712.8	254.	0.4	3.3	102.	20	720.2	9.8	1.0	10.2	9.8
9	713.1	67.	0.3	3.6	20.	21	720.8	7.7	1.5	11.7	12.
10	713.6	74.	0.8	4.4	59.	22	721.4	Cracked	--		
11	714.3	30.	0.4	4.8	12.	23	722.5	8.7	1.4	13.1	12.
12	714.8	66.	0.3	5.1	20.						

* Not included in cumulative feet of sand.

SUMMARY

	DEPTH FEET FROM	DEPTH FEET TO	FEET OF SAND	AVERAGE PERMEABILITY	CAPACITY FT. X MD.
1	709.7	712.4	2.6	81.	210.
2	712.4	714.2	1.8	117.	211.
3	714.2	723.4	8.7	10.	87.
1&2	709.7	714.2	4.4	96.	421.


WASHBURN COLLEGE – W-1