

# OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

700 NORTH MISSION - OKMULGEE, OKLAHOMA - PHONE SK6-4444

Chanute, Kansas

May 5, 1965

33-30-16E

Fred E. Wood & Associates  
Suite 204, 200 Sixteenth Street  
Denver, Colorado

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the Wolfe Lease, Well No. 41-Z, Wilson County, Kansas, and submitted to our laboratory on April 27, 1965.

This core was sampled and the samples sealed in plastic bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

*Benjamin R. Pearman*  
Benjamin R. Pearman

BRP:rf

4 c. - Denver, Colorado  
1 c. - A.W. Bailey

Wife 41-Z

# Oilfield Research Laboratories

## GENERAL INFORMATION & SUMMARY

Company Fred E. Wood & Assoc. Lease Wolfe Well No. 41-Z

Location \_\_\_\_\_

Section \_\_\_\_\_ Twp \_\_\_\_\_ Rge \_\_\_\_\_ County Wilson State Kansas

Name of Sand - - - - - Bartlesville

Top of Core - - - - - 767.0

Bottom of Core - - - - - 785.2

Top of Sand - - - - - (Tested) 767.0

Bottom of Sand - - - - - (Tested) 784.0

Total Feet of Permeable Sand - - - - - 13.0

Total Feet of Floodable Sand - - - - -

**Distribution of Permeable Sand:**  
Permeability Range  
Millidarcys

	Feet	Cum. Ft.
0 - 1	4.0	4.0
1 - 5	5.0	9.0
5 - 10	1.0	10.0
14 - 26	3.0	13.0

Average Permeability Millidarcys - - - - - 6.3

Average Percent Porosity - - - - - 14.5

Average Percent Oil Saturation - - - - - 40.4

Average Percent Water Saturation - - - - - 34.8

Average Oil Content, Bbls./A. Ft. - - - - - 455.

Total Oil Content, Bbls./Acre - - - - - 7,741.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - -

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - -

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - -

Total Calculated Oil Recovery, Bbls./Acre - - - - -

Packer Setting, Feet - - - - -

Viscosity, Centipoises @ - - - - -

A. P. I. Gravity, degrees @ 60 °F - - - - -

Elevation, Feet - - - - -

-LOG-Company Fred E. Wood & Assoc. Lease Wolfe Well No. 41-ZDepth Interval, Description  
Feet

767.0 - 773.6 - Grayish light brown, shaly sandstone.

773.6 - 779.4 - Brown, slightly shaly sandstone.

779.4 - 782.6 - Brown to dark, carbonaceous sandstone.

782.6 - 785.0 - Grayish light brown, sandy shale.

785.0 - 785.2 - Coal.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Fred E. Wood & Associates

Lease Wolfe

Well No. 41-Z

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation		Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water			Ft.	Cum. Ft.		
1	767.1	13.6	42	39	442	Imp.	0.6	0.6	265	0.00
2	768.1	13.4	35	37	364	Imp.	1.0	1.6	364	0.00
3	769.1	13.4	32	41	332	0.24	1.0	2.6	332	0.24
4	770.1	9.4	45	52	328	Imp.	1.0	3.6	328	0.00
5	771.1	13.3	32	44	330	4.2	1.0	4.6	330	4.20
6	772.1	14.3	43	33	476	0.37	1.0	5.6	476	0.37
7	773.1	14.4	33	41	368	1.3	1.0	6.6	368	1.30
8	774.1	15.9	39	28	480	6.3	1.0	7.6	480	6.30
9	775.1	17.4	35	32	472	26.	1.0	8.6	472	26.00
10	776.1	18.6	37	27	533	17.	1.0	9.6	533	17.00
11	777.1	17.8	37	30	510	14.	1.0	10.6	510	14.00
12	778.1	14.0	28	35	304	2.5	1.0	11.6	304	2.50
13	779.1	17.0	45	29	592	5.0	0.8	12.4	474	4.00
14	780.1	15.9	54	21	665	3.2	1.2	13.6	798	3.84
15	781.1	15.3	62	28	735	1.0	1.0	14.6	735	1.00
16	782.1	14.0	39	32	423	0.99	1.0	15.6	423	0.99
17	783.1	11.0	46	42	392	Imp.	1.4	17.0	549	0.00
Total							Total		7,741	

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

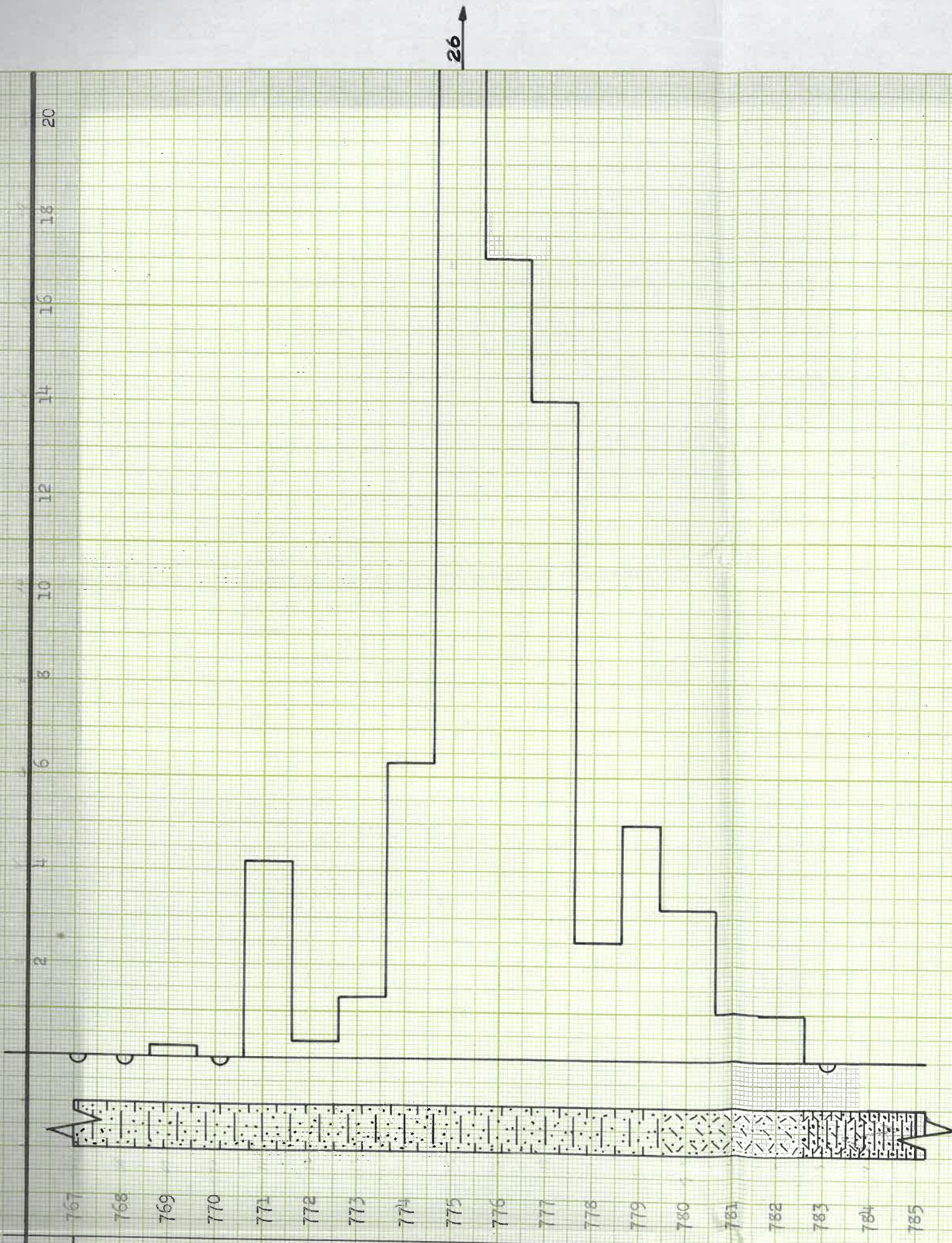
Company Fred E. Wood & Associates Lease Wolfe Well No. 41-Z

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
767.0 - 779.4	9.8	7.8	75.91
779.4 - 784.0	3.2	1.8	5.83
767.0 - 784.0	13.0	6.3	81.74

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
767.0 - 779.4	12.4	14.8	36.8	36.0	421	5,236
779.4 - 784.0	4.6	13.9	50.1	31.3	545	2,505
767.0 - 784.0	17.0	14.5	40.4	34.8	455	7,741

AIR PERMEABILITY, IN MILLIDARCYS



 SANDY SHALE  
 COAL

○ IMPERMEABLE TO AIR

**& ASSOCIATES**

WELL NO. 41-2

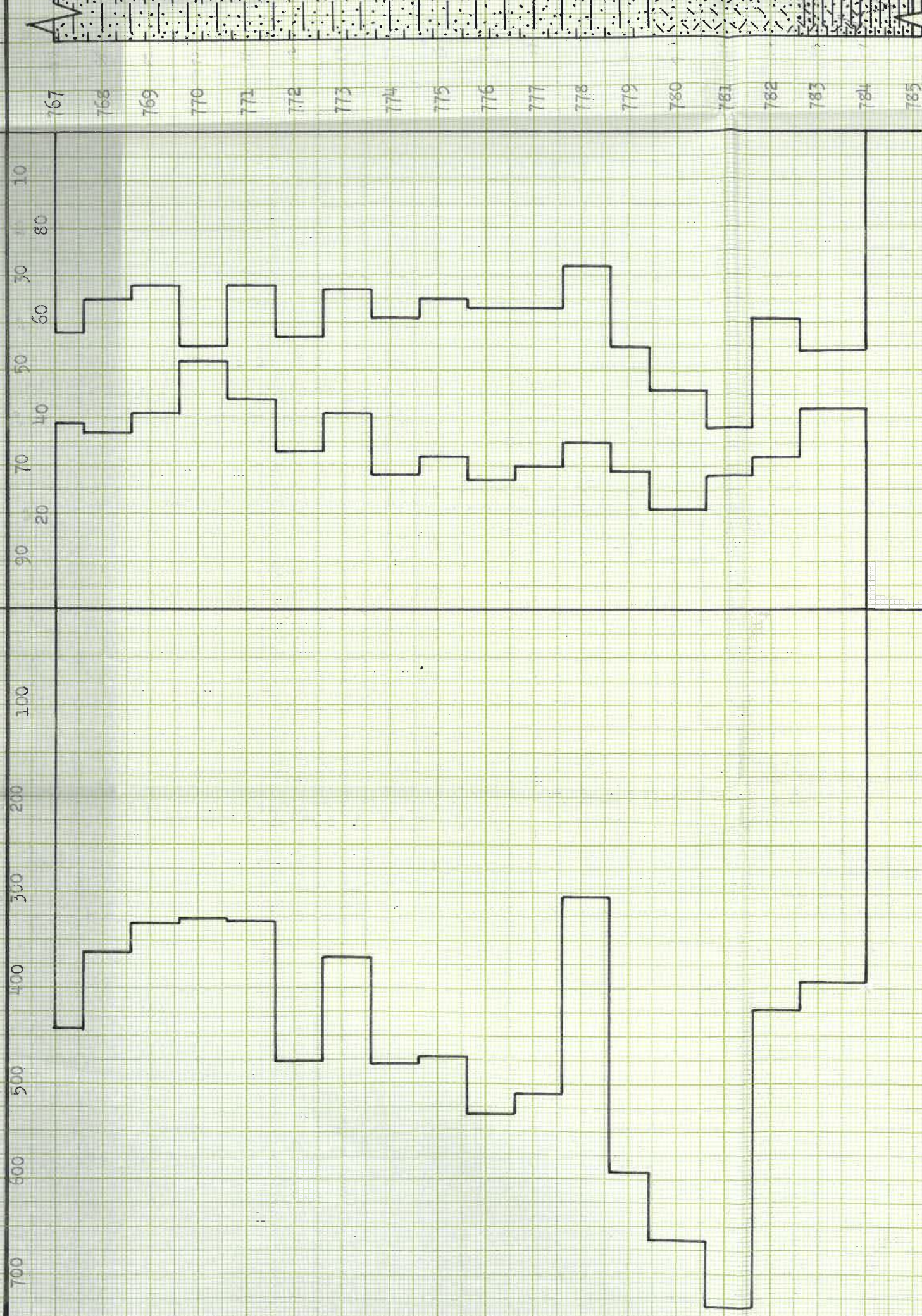
KANSAS

AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A. FT.	TOTAL OIL CONTENT BBLs./AC.	AVG. AIR PERMEABILITY, MILLIDARCYS
36.0	421	5,236	7.8
31.3	545	2,505	1.8
34.8	455	7,741	6.3

OIL CONTENT,  
BBL./A. FT.

WATER SAT.,  
PERCENT

OIL S.T.,  
PERCENT



SHALY SANDSTONE

CARBONACEOUS SANDSTONE

SANDY S

00L

# FRED E. WOOD & ASSOCIATES

WOLFE LEASE

WILSON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY, PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT
767.0 - 779.4	12.4	41.8	36.8	36.0
779.4 - 784.0	4.6	13.9	50.1	31.3
767.0 - 784.0	17.0	14.5	40.4	34.8