



# OILFIELD RESEARCH LABORATORIES

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

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

Chanute, Kansas

April 23, 1965

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 Sutherland Lease, Well No. 35-ZJ, Wilson County, Kansas, and submitted to our laboratory on April 20, 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

# Oilfield Research Laboratories

## GENERAL INFORMATION & SUMMARY

Company Fred E. Wood & Assoc. Lease Sutherland Well No. 35-ZJ

Location \_\_\_\_\_

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

Name of Sand - - - - - Bartlesville

Top of Core - - - - - 775.0

Bottom of Core - - - - - 787.4

Top of Sand - - - - - (Tested) 775.0

Bottom of Sand - - - - - (Tested) 786.6

Total Feet of Permeable Sand - - - - - 6.6

Total Feet of Floodable Sand - - - - - \_\_\_\_\_

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

	Feet	Cum. Ft.
0 - 1	1.0	1.0
1 - 5	3.6	4.6
5 & above	2.0	6.6

Average Permeability Millidarcys - - - - - 2.8

Average Percent Porosity - - - - - 13.5

Average Percent Oil Saturation - - - - - 45.6

Average Percent Water Saturation - - - - - 34.6

Average Oil Content, Bbls./A. Ft. - - - - - 492.

Total Oil Content, Bbls./Acre - - - - - 5,703.

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 - - - - - \_\_\_\_\_

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Company Fred E. Wood & Assoc. Lease Sutherland Well No. 35-ZJ

Depth Interval, Description  
Feet

775.0 - 778.6 - Laminated sandstone and shale.

778.6 - 783.6 - Brown shaly sandstone.

783.6 - 787.4 - Dark carbonaceous sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Fred E. Wood & Associates Lease Sutherland Well No. 35-ZJ

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	775.1	11.8	32	56	293	1.6	0.6	0.6	176	0.96
2	776.1	11.4	45	31	398	Imp.	1.0	1.6	398	0.00
3	777.1	8.3	39	57	251	Imp.	1.0	2.6	251	0.00
4	778.1	7.8	39	56	236	Imp.	1.0	3.6	236	0.00
5	779.1	13.7	30	34	319	1.1	1.0	4.6	319	1.10
6	780.1	14.6	44	32	498	1.2	1.0	5.6	498	1.20
7	781.1	18.7	55	32	800	6.6	1.0	6.6	800	6.60
8	782.1	15.4	57	27	682	0.90	1.0	7.6	682	0.90
9	783.1	14.0	41	33	446	Imp.	1.0	8.6	446	0.00
10	784.1	15.7	50	18	610	5.2	1.0	9.6	610	5.20
11	785.1	14.8	49	25	563	Imp.	1.0	10.6	563	0.00
12	786.1	15.3	61	22	724	2.7	1.0	11.6	724	2.70
							Total		5,703	

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Fred E. Wood & Associates Lease Sutherland Well No. 35-ZJ

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Total Oil Content Bbls./Acre
775.0 - 778.6	0.6	9.4	39.5	49.3	1.6	0.96	1,061
778.6 - 786.6	6.0	15.3	48.4	27.9	3.0	17.70	4,642
775.0 - 786.6	6.6	13.5	45.6	34.6	2.8	18.66	5,703