OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS 66720 - PHONE (316) 431-2650

February 8, 1978

9-24-18E
West Riggs 42

Carmel Energy, Inc.
Suite 400
9235 Katy Freeway
Houston, Texas 77024

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the West Riggs Lease, Well No. 42, Allen County, Kansas, and submitted to our laboratory on February 1, 1978.

The core is from virgin territory and was sampled by a representative of Oilfield Research Laboratories.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman

Benjamin R. Pearman

BRP:vm
1 c to Iola, Kansas
10 c to Houston, Texas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Carmel Energy, Inc. Lease West Riggs Well No. 42

Location 907.4' NSL & 1402.4' WEL, NE¼

Section 9 Twp. 24S Rge. 18E County Allen State Kansas

Name of Sand	Bartlesville
Top of Core	903.3
Bottom of Core	932.3
Top of Sand	903.3
Bottom of Sand	932.3
Total Feet of Permeable Sand	19.0
Total Feet of Floodable Sand	

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 100	1.8	1.8
100 - 400	3.9	5.7
400 - 800	1.9	7.6
800 - 1000	5.2	12.8
1000 & above	6.2	19.0

Average Permeability Millidarcys	769.0
Average Percent Porosity	23.8
Average Percent Oil Saturation	53.7
Average Percent Water Saturation	14.4
Average Oil Content, Bbls./A. Ft.	994.
Total Oil Content, Bbls./Acre	18,881.
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	23.
Elevation, Feet (Ground Level)	999.3

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- LOG -

Company Carmel Energy, Inc. Lease West Riggs Well No. 42

Depth Interval, Feet	Description
	Core measurements are from Flange -- approximately 1 foot above ground level.
903.3 - 905.9	Brown slightly shaly sandstone.
905.9 - 906.8	Grayish light brown shaly sandstone.
906.8 - 909.8	Light gray slightly sandy shale.
909.8 - 910.1	Brown slightly shaly sandstone.
910.1 - 910.8	Light gray slightly sandy shale.
910.8 - 920.3	Brown sandstone.
920.3 - 926.3	Loss.
926.3 - 932.3	Brown sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Carmel Energy, Inc. Lease West Riggs Well No. 42

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	Total			Ft.	Cum. Ft.		
1	903.5	22.3	27	27	54	468	346.	0.7	0.7	328	242.20
2	904.5	23.0	42	17	59	751	263.	1.0	1.7	751	263.00
3	905.5	17.4	51	16	67	690	92.	0.9	2.6	621	82.80
4	906.5	19.6	29	38	67	442	6.7	0.9	3.5	398	6.03
5	911.5	24.7	47	20	67	903	371.	1.2	4.7	1084	445.20
6	912.5	25.0	41	22	63	797	1019.	1.0	5.7	797	1019.00
7	913.5	27.2	64	5	69	1354	1363.	1.0	6.7	1354	1363.00
8	914.5	21.2	64	9	73	1055	1202.	1.0	7.7	1055	1202.00
9	915.5	22.4	61	5	66	1063	396.	1.0	8.7	1063	396.00
10	916.5	26.0	58	7	65	1173	940.	1.0	9.7	1173	940.00
11	917.5	25.3	61	3	64	1200	1175.	1.0	10.7	1200	1175.00
12	918.5	28.5	59	5	64	1308	986.	1.0	11.7	1308	986.00
13	919.5	19.4	83	12	95	1252	873.	1.3	13.0	1628	1134.00
14	926.4	24.6	52	17	69	995	1199.	0.6	13.6	597	719.40
15	927.4	26.4	59	11	70	1211	815.	1.0	14.6	1211	815.00
16	928.5	24.2	47	17	64	884	643.	1.0	15.6	884	643.00
17	929.4	22.8	52	14	66	922	745.	0.9	16.5	830	670.50
18	930.2	23.4	56	13	69	1019	970.	0.9	17.4	917	873.00
19	931.3	26.5	51	19	70	1051	1022.	1.6	19.0	1682	1635.20

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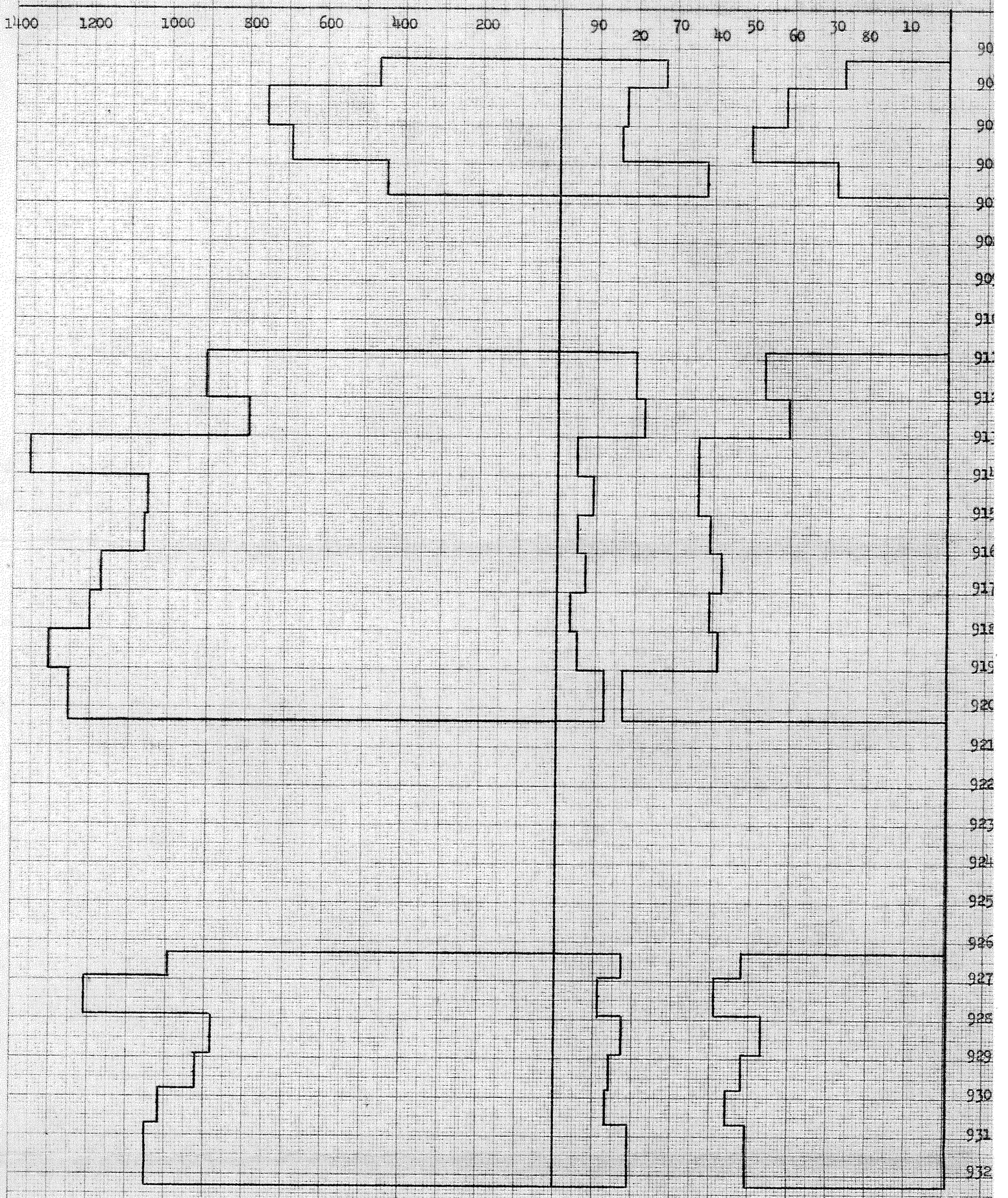
SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Carmel Energy, Inc. Lease West Riggs Well No. 42

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
903.3 - 920.3	13.0	711.9	9,254.23
926.3 - 932.3	6.0	892.7	5,356.10
903.3 - 932.3	19.0	769.0	14,610.33

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
903.3 - 920.3	13.0	23.3	54.2	13.9	982	12,760
926.3 - 932.3	6.0	24.9	52.7	15.5	1,020	6,121
903.3 - 932.3	19.0	23.8	53.7	14.4	994	18,881



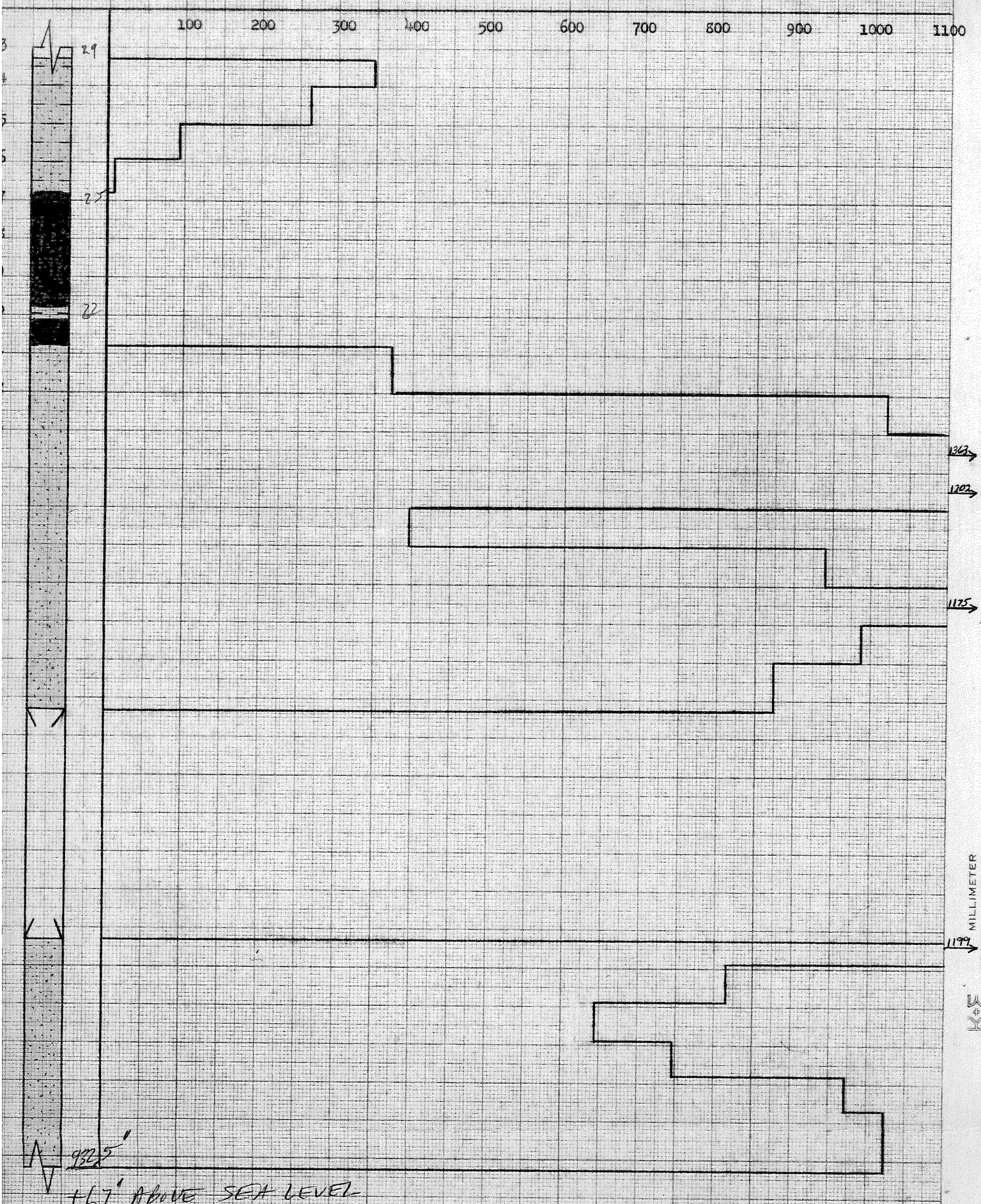
CARMEL ENERGY, I

WEST RIGGS LEASE

ALLEN COUNTY,

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION, PERCENT
903.3 - 920.3	13.0	23.3	54.2
926.3 - 932.3	6.0	24.9	52.7
903.3 - 932.3	19.0	23.8	53.7

AIR PERMEABILITY, IN MILLIDARCYS



NCORPORATED

WELL NO. 42

KANSAS

AVG. WATER SATURATION, PERCENT	AVG. OIL CONTENT, BBLS./A. FT.	TOTAL OIL CONTENT, BBLS./ACRE	AVG. AIR PERMEABILITY, MILLIDARCYS
13.9	982	12,760	711.9
15.5	1,020	6,121	892.7
14.4	994	18,881	769.0

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
FEBRUARY, 1978