



OILFIELD RESEARCH LABORATORIES

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

January 17, 1967

Speller & Moore
788 Petroleum Building
Tyler, Texas

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the Whitaker "B" Lease, Well No. 5, Allen County, Kansas, and submitted to our laboratory on January 11, 1967.

This core was sampled and the samples sealed in cans by a representative of Oilfield Research Laboratories.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman

BRP:rf

4 c. - Tyler, Texas
1 c. - Mr. White

19-210-19E
WHITAKER

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Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Speller & Moore Lease Whiraker "B" Well No. 5

Location 700' NSL & 660' WEL

Section 19 Twp. 26S Rge. 19E County Allen State Kansas

Name of Sand	Bartlesville
Top of Core	823.0
Bottom of Core	842.0
Top of Sand (Tested)	823.0
Bottom of Sand (Tested)	842.0
Total Feet of Permeable Sand	8.2
Total Feet of Floodable Sand (Tested)	1.5

Distribution of Permeable Sand:
Permeability Range
Millidarcys

	Feet	Cum. Ft.
0 - 1	1.6	1.6
1 - 7	4.0	5.6
12 - 27	2.6	8.2

Average Permeability Millidarcys	7.0
Average Percent Porosity	15.8
Average Percent Oil Saturation	54.6
Average Percent Water Saturation	33.6
Average Oil Content, Bbls./A. Ft.	670
Total Oil Content, Bbls./Acre	7,167
Average Percent Oil Recovery by Laboratory Flooding Tests	15.4
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	187.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	280.
Total Calculated Oil Recovery, Bbls./Acre	
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	
Elevation, Feet	

-LOG-

Company Speller & Moore Lease Whitaker "B" Well No. 5

<u>Depth Interval,</u>	<u>Description</u>
<u>Feet</u>	

823.0 - 824.8 - Brown, slightly shaly sandstone.

824.8 - 826.0 - Dark brown, carbonaceous sandstone.

826.0 - 830.6 - Brown and gray, slightly shaly, slightly carbonaceous sandstone.

830.6 - 837.5 - Gray sandy shale.

837.5 - 839.3 - Brown, slightly shaly sandstone.

839.3 - 839.7 - Black, laminated, sandy shale.

839.7 - 840.5 - Dark brown shaly sandstone.

840.5 - 842.0 - Dark, laminated, carbonaceous, shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Speller & Moore Lease Whitaker "B" Well No. 5

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	823.1	14.1	45	51	96	492	0.50	0.6	0.6	296	0.30
2	824.1	17.3	47	38	85	630	6.2	1.2	1.8	756	7.44
3	825.1	18.4	62	36	98	885	1.8	1.2	3.0	1,062	2.16
4	826.3	13.1	68	29	97	690	2.2	0.7	3.7	483	1.54
5	827.1	19.1	63	32	95	932	1.6	0.9	4.6	839	1.44
6	828.1	16.3	53	45	98	670	Imp.	1.0	5.6	670	0.00
7	829.1	17.1	60	37	97	795	0.47	1.0	6.6	795	0.47
8	838.2	14.9	44	30	74	508	12.	1.1	7.7	559	13.20
9	839.1	16.4	41	31	72	521	27.	0.7	8.4	364	18.90
10	840.1	15.1	57	26	83	666	15.	0.8	9.2	534	12.00
11	841.1	12.0	58	22	80	539	Imp.	1.5	10.7	809	0.00
								Total	-----	7,167	

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Speller & Moore Lease Whitaker "B" Well No. 5

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
823.0 - 829.6	5.6	2.3	13.35
837.5 - 842.0	2.6	17.0	44.10
823.0 - 842.0	8.2	7.0	57.45

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
823.0 - 829.6	6.6	16.9	56.9	38.0	744	4,901
837.5 - 842.0	4.1	14.2	51.0	26.4	554	2,266
823.0 - 842.0	10.7	15.8	54.6	33.6	670	7,167

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Speller & Moore Lease Whitaker "B" Well No. 5

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure Lbs./Sq./In.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
2	824.1	17.2	46	613	0	0	46	40	613	0	Imp.	-
3	825.1	18.5	63	904	0	0	63	36	904	0	Imp.	-
8	838.2	15.1	44	514	0	0	44	32	514	0	Imp.	-
9	839.1	15.9	41	505	9	111	32	49	394	1	0.083	50
10	840.1	15.5	57	684	21	252	36	58	432	15	0.333	20

Notes: cc—cubic centimeter.

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.

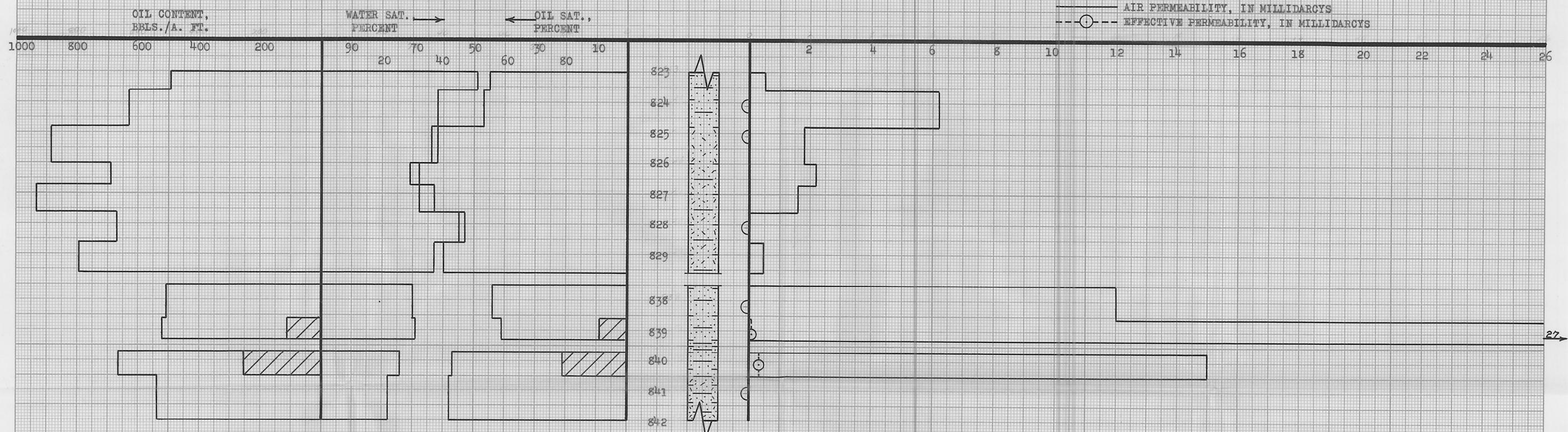
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SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company	Speller & Moore	Lease	Whitaker "B"	Well No.	5
Depth Interval, Feet	838.6 - 840.5				
Feet of Core Analyzed	1.5				
Average Percent Porosity	15.7				
Average Percent Original Oil Saturation	49.6				
Average Percent Oil Recovery	15.4				
Average Percent Residual Oil Saturation	34.2				
Average Percent Residual Water Saturation	53.8				
Average Percent Total Residual Fluid Saturation	88.0				
Average Original Oil Content, Bbls./A. Ft.	602.				
Average Oil Recovery, Bbls./A. Ft.	187.				
Average Residual Oil Content, Bbls./A. Ft.	415.				
Total Original Oil Content, Bbls./Acre	903.				
Total Oil Recovery, Bbls./Acre	280.				
Total Residual Oil Content, Bbls./Acre	622.				
Average Effective Permeability, Millidarcys	0.218				
Average Initial Fluid Production Pressure, p.s.i.	35.0				

NOTE: Only those samples which recovered oil were used in calculating the above averages.



- SHALY SANDSTONE
- CARBONACEOUS SHALY SANDSTONE
- SANDY SHALE
- IMPERMEABLE TO AIR
- CARBONACEOUS SANDSTONE
- FLOOD POT RECOVERY
- IMPERMEABLE TO WATER

SPELLER & MOORE

WHITAKER "B" LEASE WELL NO. 5
ALLEN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY, PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BLS./A. FT.	TOTAL OIL CONTENT BLS./ACRE	AVG. AIR PERMEABILITY, MILLIDARCS
823.0 - 829.6	6.6	16.9	56.9	38.0	744	4,901	2.3
837.5 - 842.0	4.1	14.2	51.0	26.4	554	2,266	17.0
823.0 - 842.0	10.7	15.8	54.6	33.6	670	7,167	7.0

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CHANUTE, KANSAS
JANUARY, 1967

KEUFFEL & ESSER CO.
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