

OILFIELD RESEARCH LABORATORIES

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

June 23, 1980.

James E. Russell Petroleum, Inc.
P.O. Box 2618
Abilene, Texas 79604

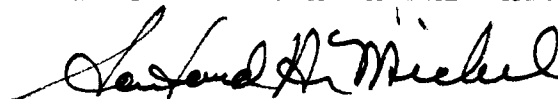
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Minckley B-Section 3 Lease, Well No. 34, Anderson County, Kansas, and submitted to our laboratory on May 9, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Sanford A. Michel

SAM/tem

3 c to Abilene, Texas
2 c to Chanute, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

James E. Russell

Company Petroleum, Incorporated Lease Minckley B-Sec. 3 Well No. 34

Location 1100' EWL & 1100' SNL SE $\frac{1}{4}$

Section 3 Twp. 23S Rge. 19E County Anderson State Kansas

Elevation, Feet Datum: Mean Sea Level (G.L.) 1083.9

Name of Sand	Squirrel
Top of Core	718.0
Bottom of Core	738.8
Top of Sand	725.0
Bottom of Sand	730.9
Total Feet of Permeable Sand	4.7
Total Feet of Floodable Sand	0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
1 - 2	3.0	3.0
2 - 3	0.7	3.7
3 - 4	1.0	4.7

Average Permeability Millidarcys	1.9
Average Percent Porosity	14.4
Average Percent Oil Saturation	24.0
Average Percent Water Saturation	53.1
Average Oil Content, Bbls./A. Ft.	277.
Total Oil Content, Bbls./Acre	1,637.
Average Percent Oil Recovery by Laboratory Flooding Tests	0
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	0
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	0
Total Calculated Oil Recovery, Bbls./Acre	0

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The core was sampled by a representative of Oilfield Research Laboratories. Fresh water mud was used as a drilling fluid. The core was from a non-virgin area.

Since the core did not respond to flooding susceptibility tests, no calculated recovery is given.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
718.0 - 719.4	Shale, gray, sandy.
719.4 - 719.9	Coal.
719.9 - 725.0	Shale, gray, sandy. First oil show.
725.0 - 729.7	Sandstone, brown, shaly, slightly calcareous.
729.7 - 730.9	Sandstone, grayish brown, very shaly.
730.9 - 732.0	Shale, grayish brown, sandy.
732.0 - 738.8	Shale, gray, sandy.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Minckely B-Section 3 Well No. 34

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	725.6	11.9	27	43	70	249	1.5	1.0	1.0	249	1.50
2	726.6	15.2	42	32	74	495	3.1	1.0	2.0	495	3.10
3	727.5	16.5	34	40	74	435	1.6	1.0	3.0	435	1.60
4	728.6	12.5	1	85	86	10	1.2	1.0	4.0	10	1.20
5	729.5	16.5	26	47	73	333	2.4	0.7	4.7	233	1.68
6	730.5	14.4	16	67	83	179	Imp.	1.2	5.9	215	0.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company James E. Russell Petroleum, Inc. Lease Minckley B-Section 3 Well No. 34

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
725.0 - 730.9	4.7	1.9	9.08				
725.0 - 730.9	5.9			14.4	53.1	277	1,637

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Minckley B-Section 3 Well No. 34

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.			
1	725.6	12.3	26	248	0	0	26	45	248	0	Imp.	-
2	726.6	15.0	42	489	0	0	42	32	489	0	Imp.	-
3	727.5	16.1	35	437	0	0	35	42	437	0	Imp.	-
4	728.6	12.1	2	19	0	0	2	86	19	0	Imp.	-
5	729.5	17.0	25	330	0	0	25	48	230	0	Imp.	-
6	730.5	14.5	16	180	0	0	16	69	180	0	Imp.	-

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.