

OILFIELD RESEARCH LABORATORIES

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

November 10, 1980

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

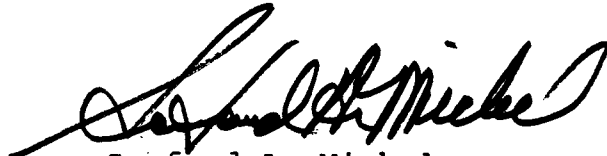
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Minckley A Lease, Well No. W-9, located in Anderson County, Kansas and submitted to our laboratory on September 2, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Sanford A. Michel

SAM/kas

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

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GENERAL INFORMATION & SUMMARY

Company James E. Russell Petroleum, Inc Lease Minckley A Well No. W-9

Location 25' EWL & 2200' SNL - SW $\frac{1}{4}$

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

Elevation, Feet Datum: Mean Sea Level (G. L.) 1028.1

Name of Sand	Upper Squirrel	
Top of Core		691.0
Bottom of Core		711.0
Top of Sand		695.1
Bottom of Sand		699.3
Total Feet of Permeable Sand		2.6
Total Feet of Floodable Sand		0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
1.3 - 2.0	2.6	2.6

Average Permeability Millidarcys		1.6
Average Percent Porosity		13.9
Average Percent Oil Saturation		52.7
Average Percent Water Saturation		29.0
Average Oil Content, Bbls./A. Ft.		567.
Total Oil Content, Bbls./Acre		1986.
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		-

-2-

This core was sampled by a representative of Oilfield Research Laboratories. The well was drilled in non-virgin territory using fresh water mud as the circulating fluid.

In as much as the core samples shows no effective permeability to water on laboratory flooding tests, no oil recovery value is presented.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
691.0 - 692.3	Shale, black.
692.3 - 692.8	Coal.
692.8 - 695.1	Shale, slightly calcareous, gray sandy.
695.1 - 696.0	Sandstone and shale, brown and gray laminated.
696.0 - 697.6	Sandstone, brown shaly, slightly calcareous.
697.6 - 698.3	Shale, grayish brown, sandy.
698.3 - 699.3	Sandstone, brown, shaly, slightly calcareous.
699.3 - 711.0	Shale, gray, sandy.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Minckley A Well No. W-9

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	695.5	13.8	60	25	642	Imp.	0.9	0.9	579	0.00
2	696.5	15.0	44	33	512	1.9	1.0	1.9	512	1.90
3	697.5	12.6	56	37	547	1.6	0.6	2.5	328	0.96
4	698.5	13.8	53	24	567	1.3	1.0	3.5	567	1.30

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company James E. Russell Petroleum, Inc. Lease Minckley A Well No. W-9

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
695.1 - 699.3	2.6	1.6	4.16

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
695.1 - 699.3	3.5	13.9	52.7	29.0	567	1,986

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Minckley A Well No. W-9

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	695.5	14.0	62	673	0	0	62	28	673	0	Imp.	-
2	696.5	15.1	44	515	0	0	44	34	515	0	Imp.	-
3	697.5	12.5	55	533	0	0	55	40	533	0	Imp.	-
4	698.5	13.6	55	580	0	0	55	26	580	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.