

OILFIELD RESEARCH LABORATORIES

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May 5, 1980

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

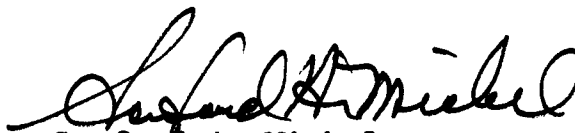
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Minckley B Section 10 Lease, Well No. 114, Anderson County, Kansas, and submitted to our laboratory on March 31, 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

GENERAL INFORMATION & SUMMARY

Inc.

Company	James E. Russell Petroleum.			Lease	Minckley B Sec. 10	Well No.	114
Location	1100' EWL & 1540' SNL NW $\frac{1}{4}$						
Section	10	Twp.	23S 29S	Rge.	19E	County	Anderson
						State	Kansas
Elevation, Feet	Datum: Mean Sea Level (G.S.L.)					1059.0	
Name of Sand						Squirrel	
Top of Core						725.0	
Bottom of Core						761.0	
Top of Sand						726.3	
Bottom of Sand						753.9	
Total Feet of Permeable Sand						7.2	
Total Feet of Floodable Sand						0.0	
Distribution of Permeable Sand:			Feet			Cum. Ft.	
Permeability Range							
Millidarcys							
0 - 0.50			5.3			5.3	
0.50 - 1.00			1.9			7.2	
Average Permeability Millidarcys						0.40	
Average Percent Porosity						12.7	
Average Percent Oil Saturation						24.0	
Average Percent Water Saturation						59.3	
Average Oil Content, Bbls./A. Ft.						240.	
Total Oil Content, Bbls./Acre						4,143.	
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.

At the request of the client, sample numbers 11 through 17 were subjected to flooding susceptibility testing. Since these samples did not respond, 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>
725.0 - 726.3	Shale, gray, sandy.
726.3 - 727.8	Sandstone and shale, gray, laminated.
727.8 - 729.0	Shale, gray, sandy.
729.0 - 729.8	Sandstone and shale, gray, laminated.
729.8 - 731.7	Shale, gray, sandy.
731.7 - 733.6	Sandstone and shale, brown and gray, laminated.
733.6 - 734.8	Sandstone and shale, gray, laminated.
734.8 - 739.0	Sandstone and shale, brown, gray, laminated.
739.0 - 743.2	Shale, gray, sandy.
743.2 - 746.7	Sandstone and shale, brown and gray, laminated.
746.7 - 747.8	Sandstone, grayish brown, shaly.
747.8 - 751.7	Sandstone, brown, shaly.
751.7 - 753.9	Sandstone, brown, shaly, slightly calcareous.
753.9 - 757.9	Shale, gray, sandy.
757.9 - 761.0	Shale, gray.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Minckley B Section 10

Well No. 114

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	727.5	13.1	9	65	74	92	Imp.	1.5	1.5	138	0.00
2	729.3	12.3	16	67	83	153	Imp.	0.8	2.3	122	0.00
3	732.3	13.9	23	51	74	248	Imp.	1.0	3.3	248	0.00
4	733.5	12.1	28	62	90	263	Imp.	0.9	4.2	237	0.00
5	735.5	12.0	16	75	91	149	Imp.	1.2	5.4	179	0.00
6	736.5	11.3	29	63	92	254	Imp.	1.0	6.4	254	0.00
7	737.5	10.9	13	79	92	110	Imp.	1.0	7.4	110	0.00
8	738.5	12.5	22	63	85	213	Imp.	1.0	8.4	213	0.00
9	745.5	11.5	10	65	75	89	Imp.	1.0	9.4	89	0.00
10	746.5	11.5	23	73	96	205	Imp.	0.7	10.1	144	0.00
11	747.5	12.7	58	36	94	572	0.24	1.1	11.2	629	0.26
12	748.5	13.3	24	54	78	248	0.84	1.2	12.4	298	1.01
13	749.5	13.4	30	61	91	312	0.30	1.0	13.4	312	0.30
14	750.5	14.6	23	54	75	287	0.42	1.0	14.4	287	0.42
15	751.5	13.3	31	47	78	320	0.57	0.7	15.1	224	0.40
16	752.5	13.2	30	46	76	307	0.27	1.3	16.4	399	0.35
17	753.5	13.3	28	50	78	289	0.19	0.9	17.3	260	0.17

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company James E. Russell Petroleum, Inc. Lease Minckley B Section 10 Well No. 114

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
726.3 - 746.7	0.0	0.00	0.00	18.2	66.2	172	1,734
746.7 - 753.9	7.2	0.40	2.91	32.0	49.6	335	2,409.
726.3 - 753.9	7.2	0.40	2.91	24.0	59.3	240	4,143

Oilfield Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Minckley B Section 10 Well No. 114

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.			
11	747.5	13.0	57	575	0	0	57	38	575	0	Imp.	-
12	748.5	13.1	24	244	0	0	24	57	244	0	Imp.	-
13	749.5	13.4	30	312	0	0	30	61	312	0	Imp.	-
14	750.5	14.4	24	268	0	0	24	59	268	0	Imp.	-
15	751.5	13.8	29	310	0	0	29	50	310	0	Imp.	-
16	752.5	13.4	30	312	0	0	30	49	312	0	Imp.	-
17	753.5	13.0	29	292	0	0	29	53	292	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.