OILFIELD RESEARCH LABORATORIES
536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

May 10, 1966

Russell Operating Company
101 Petroleum Building
Abilene, Texas

Attn: Mr. James E. Russell

Gentlemen:

Enclosed herewith are the results of permeability and porosity tests run on the Rotary core taken from the Strain Lease, Well No. DW-2, Anderson County, Kansas, and submitted to our laboratory on May 7, 1966.

This core was brought in to the laboratory by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman

Benjamin R. Pearman

BRP:rf

3 c. - Colony, Kansas
2 c. - Houston, Texas
1 c. - Chanute, Kansas

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GENERAL INFORMATION & SUMMARY

Company Russell Operating Company Lease Strain Well No. DW-2

Location 825' EWL & 660' SNL, NE¼

Section 9 Twp. 22S Rge. 19E County Anderson State Kansas

Name of Sand	Squirrel
Top of Core	796.0
Bottom of Core	839.0
Top of Sand (Tested)	796.0
Bottom of Sand (Tested)	836.0
Total Feet of Permeable Sand	23.0
Total Feet of Floodable Sand	

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	9.0	9.0
1 - 5	8.0	17.0
5 - 10	3.0	20.0
10 & above	3.0	23.0

Average Permeability Millidarcys	5.1
Average Percent Porosity	12.9
Average Percent Oil Saturation	
Average Percent Water Saturation	
Average Oil Content, Bbls./A. Ft.	
Total Oil Content, Bbls./Acre	
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	
Elevation, Feet	

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Company Russell Operating Company Lease Strain Well No. DW-1

Depth Interval, Feet	Description
796.0 - 816.0	Laminated sandstone and shale.
816.0 - 819.0	Light brown, laminated, shaly sandstone.
819.0 - 820.0	Sandy shale.
820.0 - 827.0	Light brown, laminated, shaly sandstone.
827.0 - 828.0	Sandy shale.
828.0 - 830.0	Brown, laminated, slightly shaly sandstone.
830.0 - 836.0	Laminated sandstone and shale.
836.0 - 839.0	Hard calcareous shale.

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RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Russell Operating Company Lease Strain Well No. DW-2

Sample No.	Depth Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
1	796.5	Imp.	1.0	1.0	0.00	11.5
2	797.5	2.3	1.0	2.0	2.30	16.1
3	798.5	Imp.	1.0	3.0	0.00	7.2
4	799.5	Imp.	1.0	4.0	0.00	6.9
5	800.5	Imp.	1.0	5.0	0.00	12.7
6	801.5	Imp.	1.0	6.0	0.00	10.8
7	802.5	Imp.	1.0	7.0	0.00	6.6
8	803.5	Imp.	1.0	8.0	0.00	8.9
9	804.5	Imp.	1.0	9.0	0.00	5.1
10	805.5	0.22	1.0	10.0	0.22	12.8
11	806.5	0.38	1.0	11.0	0.38	13.4
12	807.5	Imp.	1.0	12.0	0.00	13.6
13	808.5	Imp.	1.0	13.0	0.00	12.6
14	809.5	3.9	1.0	14.0	3.90	16.4
15	810.5	Imp.	1.0	15.0	0.00	8.7
16	811.5	0.58	1.0	16.0	0.58	14.9
17	812.5	Imp.	1.0	17.0	0.00	11.5
18	813.5	0.67	1.0	18.0	0.67	12.9
19	814.5	0.44	1.0	19.0	0.44	14.5
20	815.5	1.0	1.0	20.0	1.00	14.4
21	816.5	3.5	1.0	21.0	3.50	14.5
22	817.5	4.8	1.0	22.0	4.80	17.9
23	818.5	2.4	1.0	23.0	2.40	14.8
24	819.5	Imp.	1.0	24.0	0.00	8.6
25	820.5	3.7	1.0	25.0	3.70	15.8
26	821.5	5.8	1.0	26.0	5.80	16.2
27	822.5	6.0	1.0	27.0	6.00	15.7
28	823.5	9.7	1.0	28.0	9.70	18.5
29	824.5	3.9	1.0	29.0	3.90	16.1
30	825.5	0.74	1.0	30.0	0.74	11.5
31	826.5	21.	1.0	31.0	21.00	20.7
32	827.5	Imp.	1.0	32.0	0.00	9.3
33	828.5	17.	1.0	33.0	17.00	21.5
34	829.5	26.	1.0	34.0	26.00	22.1
35	830.5	Imp.	1.0	35.0	0.00	7.1

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RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Russell Operating Company Lease Strain Well No. DW-2

Sample No.	Depth Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
36	831.5	Imp.	1.0	36.0	0.00	10.0
37	832.5	0.53	1.0	37.0	0.53	11.9
38	833.5	1.2	1.0	38.0	1.20	12.0
39	834.5	0.34	1.0	39.0	0.34	11.6
40	835.5	Imp.	1.0	40.0	0.00	9.0

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SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company Russell Operating Company Lease Strain Well No. DW-2

Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity
796.0 - 816.0	20.0	1.2		9.49	11.6
816.0 - 830.0	14.0	8.7		104.54	15.9
830.0 - 836.0	6.0	0.69		2.07	10.3
796.0 - 836.0	40.0	5.1		116.10	12.9