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

December 7, 1979

Hillenburg Oil Company
116th Street & South Lynn Lane Road
Broken Arrow, Oklahoma 74012

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Ermel "B" Lease, Well No. 6, Bourbon County, Kansas, and submitted to our laboratory on November 28, 1979.

The core was sampled and sealed in plastic bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman

Benjamin R. Pearman

BRP/tem
3 c to Broken Arrow , Oklahoma
2 c to Bronson, Kansas

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GENERAL INFORMATION & SUMMARY

Company Hillenburg Oil Company Lease Ermel "B" Well No. 6

Location 320' FNL & 1310' FEL NE¼

Section 18 Twp. 24S Rge. 22E County Bourbon State Kansas

Name of Sand	Bartlesville
Top of Core	638.0
Bottom of Core	655.4
Top of Sand	639.0
Bottom of Sand	654.7
Total Feet of Permeable Sand	14.1
Total Feet of Floodable Sand	

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 20	5.4	5.4
50 - 70	3.7	9.1
125 - 130	1.0	10.1
280 - 290	1.0	11.1
335 - 360	2.0	13.1
570 & Above	1.0	14.1

Average Permeability Millidarcys	138.3
Average Percent Porosity	19.0
Average Percent Oil Saturation	47.6
Average Percent Water Saturation	43.9
Average Oil Content, Bbls./A. Ft.	708.
Total Oil Content, Bbls./Acre	10,410.
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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LOG

Name Hillenburg Oil Company Lease Ermel "B" Well No. 6

Depth Interval, Feet	Description
638.0 - 639.0	Soft gray shale.
639.0 - 647.7	Dark fine grained sandstone.
647.7 - 648.0	Gray and brown shaly sandstone.
648.0 - 648.9	Hard vuglar sandy conglomerate.
648.9 - 650.8	Dark sandstone.
650.8 - 651.1	Brown and gray shaly sandstone.
651.1 - 652.4	Dark sandstone.
652.4 - 653.0	Gray very shaly sandstone.
653.0 - 653.6	Dark sandstone.
653.6 - 654.0	Gray very shaly sandstone.
654.0 - 654.7	Hard dark sandstone.
654.7 - 655.4	Gray shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Hillenburg Oil Company Lease Ermel "B" Well No. 6

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	639.5	22.3	34	53	87	588	571.	1.0	1.0	588	571.00
2	640.5	22.2	38	53	91	655	338.	1.0	2.0	655	338.00
3	641.5	20.7	46	51	97	739	6.1	1.0	3.0	739	6.10
4	642.5	22.2	41	54	95	706	288.	1.0	4.0	706	288.00
5	643.5	17.8	32	65	97	442	56.	1.0	5.0	442	56.00
6	644.5	17.3	46	50	96	617	127.	1.0	6.0	617	127.00
7	645.5	15.8	47	45	92	576	67.	1.0	7.0	576	67.00
8	646.5	21.5	36	58	94	601	358.	1.0	8.0	601	358.00
9	647.5	11.5	45	45	90	401	54.	0.7	8.7	281	37.80
10	648.5	21.1	55	20	75	900	19.	0.9	9.6	810	17.10
11	649.5	22.1	75	20	95	1286	64.	1.0	10.6	1286	64.00
12	650.5	19.6	68	27	95	1034	8.3	0.9	11.5	931	7.47
13	651.5	19.6	58	31	89	882	8.2	1.3	12.8	1147	10.66
14	652.5	11.4	11	77	88	97	Imp.	0.6	13.4	58	0.00
15	653.5	15.9	62	23	85	765	1.7	0.6	14.0	459	1.02
16	654.5	15.5	61	31	92	734	0.25	0.7	14.7	514	0.18

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Hillenburg Oil Company Lease Ermel "B" Well No. 6

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
639.0 - 649.9	10.6	182.1	1930.00
649.9 - 654.7	3.5	5.5	19.33
639.0 - 654.7	14.1	138.3	1949.33

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
639.0 - 649.9	10.6	19.7	44.9	47.0	689	7,301
649.9 - 654.7	4.1	17.1	54.4	35.7	758	3,109
639.0 - 654.7	14.7	19.0	47.6	43.9	708	10,410