



OILFIELD RESEARCH LABORATORIES

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

September 24, 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. 2, Bourbon County, Kansas, and submitted to our laboratory on September 19, 1979.

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

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman

BRP:cgb

3 c to Broken Arrow, Oklahoma
2 c to Bronson, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Hillenburg Oil Company Lease Ermel "B" Well No. 2

Location 320' FNL & 580' FEL NE

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

Name of Sand	Bartlesville
Top of Core	632.0
Bottom of Core	649.0
Top of Sand	632.0
Bottom of Sand	647.8
Total Feet of Permeable Sand	15.8
Total Feet of Floodable Sand	

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 10	2.1	2.1
40 - 50	2.0	4.1
100 - 130	3.0	7.1
200 - 300	4.0	11.1
365 - 400	1.7	12.8
400 & Above	3.0	15.8

Average Permeability Millidarcys	225.8
Average Percent Porosity	21.5
Average Percent Oil Saturation	34.9
Average Percent Water Saturation	53.4
Average Oil Content, Bbls./A. Ft.	561.
Total Oil Content, Bbls./Acre	8,871.
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	

OILFIELD RESEARCH LABORATORIES

- LOG -

Company Hillenburg Oil Company Lease Ermel "B" Well No. 2

<u>Depth Interval, Feet</u>	<u>Description</u>
632.0 - 637.8	Light brown sandstone.
637.8 - 643.7	Brown sandstone.
643.7 - 645.7	Brown slightly shaly sandstone.
645.7 - 647.8	Dark brown slightly carbonaceous shaly sandstone.
647.8 - 649.0	Gray sandy shale.

Oilfield Research Laboratories
RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Hillenburg Oil Company Lease Ernel "B" Well No. 2

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	632.5	23.3	9	71	80	288.	1.0	1.0	163	288.00
2	633.5	22.0	9	77	86	236.	1.0	2.0	154	236.00
3	634.5	22.6	10	83	93	109.	1.0	3.0	175	109.00
4	635.5	23.0	14	79	93	273.	1.0	4.0	250	273.00
5	636.5	21.7	23	68	91	204.	1.0	5.0	387	204.00
6	637.5	22.3	18	69	87	471.	0.8	5.8	249	376.80
7	638.5	23.9	21	69	90	478.	1.2	7.0	467	573.60
8	639.5	23.4	25	56	81	514.	1.0	8.0	454	514.00
9	640.5	21.5	42	45	87	41.	1.0	9.0	701	41.00
10	641.5	20.6	46	43	89	370.	1.0	10.0	735	370.00
11	642.5	21.6	60	32	92	46.	1.0	11.0	1005	46.00
12	643.5	21.6	46	43	89	398.	0.7	11.7	540	278.60
13	644.5	18.1	54	35	89	129.	1.3	13.0	985	167.70
14	645.5	19.3	63	27	90	109.	0.7	13.7	660	76.30
15	646.5	19.7	60	28	88	9.4	1.3	15.0	1192	12.22
16	647.5	19.6	62	26	88	1.0	0.8	15.8	754	0.80

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company <u>Hillenburg Oil Company</u>		Lease <u>Ernel "B"</u>		Well No. <u>2</u>	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
632.0 - 637.8	5.8	256.3	1486.80	238	1,378
637.8 - 647.8	10.0	208.0	2080.22	749	7,493
632.0 - 647.8	15.8	225.8	3567.02	561	8,871

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
632.0 - 637.8	5.8	22.5	13.7	74.7	238	1,378
637.8 - 647.8	10.0	20.9	47.2	41.1	749	7,493
632.0 - 647.8	15.8	21.5	34.9	53.4	561	8,871