

OILFIELD RESEARCH LABORATORIES

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

July 1, 1980

Hillenburg Oil Company
116th Street & South Lynne Lane
Broken Arrow, Oklahoma 74102

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Humphrey Lease, Well No. 46, Bourbon County, Kansas, and submitted to our laboratory on June 23, 1980.

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


Sanford A. Michel

SAM/tem

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

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Hillenburg Oil Company Lease Humphrey Well No. 46
 Location 1875' FSL & 170' FEL SE $\frac{1}{4}$
 Section 36 Twp. 24S Rge. 21E County Bourbon State Kansas

Elevation, Feet

Name of Sand

Bartlesville

Top of Core

680.0

Bottom of Core

688.5

Top of Sand

680.0

Bottom of Sand

688.5

Total Feet of Permeable Sand

7.5

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 5

2.4

2.4

5 - 15

3.9

6.3

250 & Above

1.2

7.5

Average Permeability Millidarcys

47.5

Average Percent Porosity

17.5

Average Percent Oil Saturation

45.2

Average Percent Water Saturation

42.8

Average Oil Content, Bbls./A. Ft.

620.

Total Oil Content, Bbls./Acre

5,273.

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LOG

Name Hillenburg Oil Company Lease Humphrey Well No. 46

<u>Depth Interval, Feet</u>	<u>Description</u>
680.0 - 681.2	Dark brown sandstone.
681.2 - 681.9	Brown sandstone.
681.9 - 683.3	Brown slightly shaly sandstone.
683.3 - 685.1	Dark brown sandstone.
685.1 - 686.8	Dark brown slightly shaly sandstone.
686.8 - 688.5	Brown shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Hillenburg Oil Company Lease Humphrey Well No. 46

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	680.5	18.7	33	36	69	479	253.	1.2	1.2	575	303.60
2	681.7	24.1	47	48	95	879	12.	0.7	1.9	615	8.40
3	682.4	23.3	46	46	92	832	9.4	1.4	3.3	1165	13.16
4	683.5	18.4	65	30	95	928	12.	1.0	4.3	928	12.00
5	684.5	14.0	42	46	88	456	13.	0.8	5.1	365	10.40
6	685.5	12.0	56	38	94	521	4.0	1.0	6.1	521	4.00
7	686.5	17.2	62	32	95	827	4.3	0.7	6.8	579	3.01
8	687.5	13.5	37	60	97	388	Imp.	1.0	7.8	388	0.00
9	688.3	14.0	18	50	68	196	2.4	0.7	8.5	137	1.68

SUMMARY OF PERMEABILITY & SATURATION TESTS

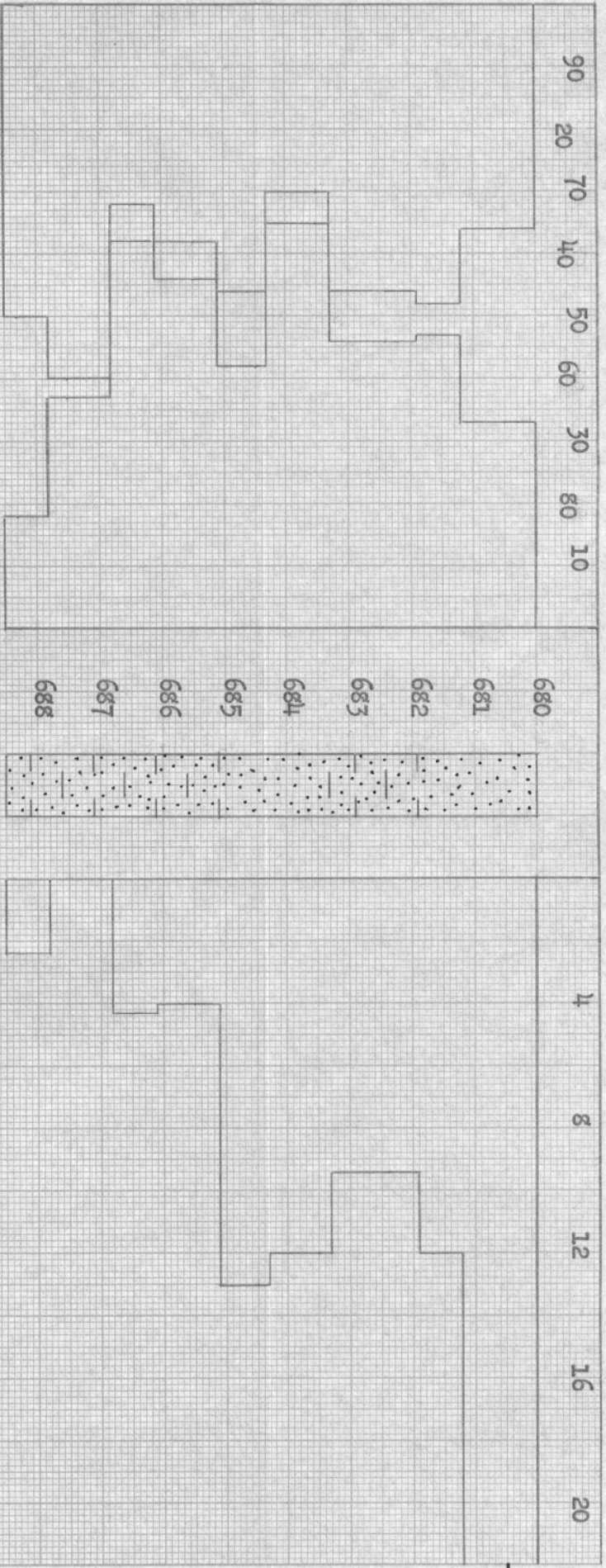
Company	Lease	Well No.
Hillenburg Oil Company	Humphrey	46

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
680.0 - 688.5	7.5	47.5	356.25

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
680.0 - 688.5	8.5	17.5	45.2	42.8	620	5,273

WATER SAT., ———→ OIL SAT.,
PERCENT PERCENT

PERMEABILITY, IN MILLIDARCY



KEY:



SANDSTONE



SHALY SANDSTONE

HILLENBURG OIL COMPANY

HUMPHREY LEASE

BOURBON COUNTY, KANSAS

WELL NO. 46

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCY
680.0 - 688.5	8.5	17.5	45.2	42.8	47.5