

OILFIELD RESEARCH LABORATORIES

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

September 23, 1980

Hillenburg Oil Company
Box 94
Bronson, Kansas 66716

Gentlemen:


Enclosed herewith are the results of tests run on the rotary core taken from the Humphrey Lease, Well No. 51, Bourbon County, Kansas, and submitted to our laboratory on July 29, 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
5 c to Bronson, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Hillenburg Oil Company Lease Humphrey Well No. 51

Location —

Section 36 Twp. 24S Rge. 21E County Bourbon State Kansas

Elevation, Feet	
Name of Sand	Bartlesville
Top of Core	668.0
Bottom of Core	683.0
Top of Sand	668.0
Bottom of Sand	681.1
Total Feet of Permeable Sand	7.7

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 4	1.8	1.8
4 - 10	3.8	5.6
10 & Above	2.1	7.7

Average Permeability Millidarcys	9.5
Average Percent Porosity	15.5
Average Percent Oil Saturation	32.9
Average Percent Water Saturation	51.8
Average Oil Content, Bbls./A. Ft.	396.
Total Oil Content, Bbls./Acre	3,917.

OILFIELD RESEARCH LABORATORIES

LOGName Hillenburg Oil Co. Lease Humphrey Well No. 51

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
668.0 - 670.2	Grayish light brown slightly shaly sandstone.
670.2 - 671.0	Brown very shaly sandstone.
671.0 - 671.7	Brown slightly shaly sandstone.
671.7 - 674.9	Gray sandy shale.
674.9 - 675.8	Brown shaly slightly calcareous sandstone.
675.8 - 677.0	Brown slightly calcareous sandstone.
677.0 - 678.7	Brown very shaly slightly calcareous sandstone.
678.7 - 679.6	Brown slightly calcareous sandstone.
679.6 - 681.1	Light brown very shaly sandstone.
681.1 - 683.0	Gray sandy shale.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company Hillenburg Oil Company Lease Humphrey Well No. 51

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	668.5	9.3	12	72	84	87	8.0	1.0	1.0	87	8.00
2	669.5	17.1	26	54	80	345	8.2	1.2	2.2	414	9.84
3	670.5	15.8	35	58	93	429	2.4	0.8	3.0	343	1.92
4	671.5	16.5	43	39	82	550	8.9	0.7	3.7	385	6.23
5	675.5	16.5	33	40	73	422	4.3	0.9	4.6	380	3.87
6	676.5	14.9	49	29	78	566	23.	1.2	5.8	679	27.60
7	677.5	11.8	42	44	86	385	3.7	1.0	6.8	385	3.70
8	678.5	6.5	32	56	88	161	Imp.	0.7	7.5	113	0.00
9	679.5	17.8	36	61	97	497	13.	0.9	8.4	447	11.70
10	680.6	22.6	26	62	88	456	Imp.	1.5	9.9	634	0.00

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & SATURATION TESTS

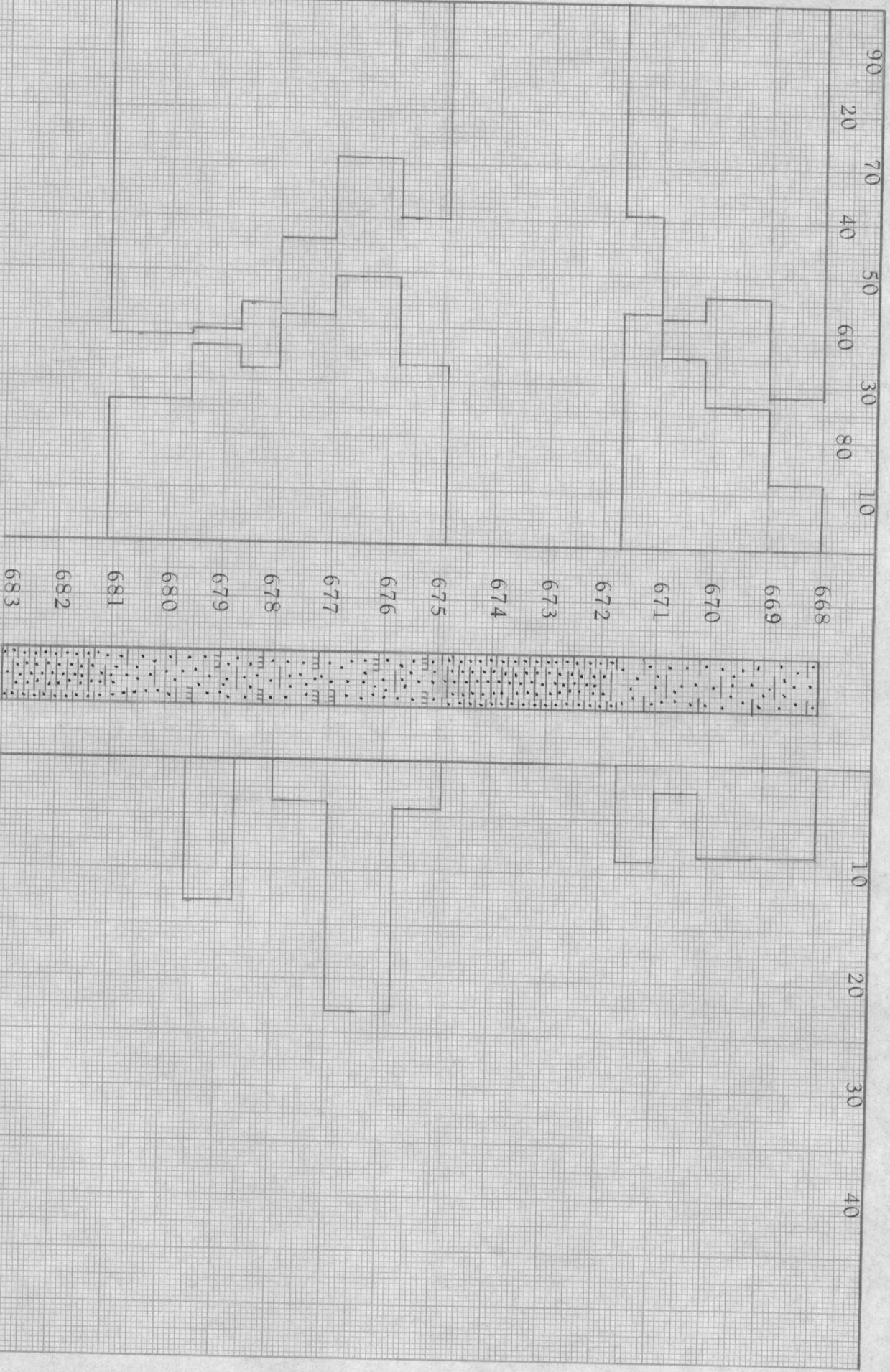
TABLE III

Company	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Lease	Well No.	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
Hillenburg Oil Company	668.0 - 681.1	7.7	9.5	72.86	Humphrey	51	668.0 - 681.1	9.9	15.5	32.9	51.8	396	3,917

WATER SAT., PERCENT

OIL SAT., PERCENT

PERMEABILITY IN MILLIDARCY



KEY:



SHALY SANDSTONE



CALCAREOUS SANDSTONE

CALCAREOUS SHALY SANDSTONE

SANDY SHALE

KEY:

 SHALY SANDSTONE
 CALCAREOUS SANDSTONE

 CALCAREOUS SHALY SANDSTONE
 SANDY SHALE

HILLENBURG OIL COMPANY

HUMPHREY LEASE

WELL NO. 51

BOURBON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY MILLIDARCS
668.0 - 681.1	9.9	15.5	32.9	51.8	9.5

OILFIELD RESEARCH LABORATORIES
 CHANUTE, KANSAS
 SEPTEMBER, 1980