

# OILFIELD RESEARCH LABORATORIES

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

September 22, 1980

Hillenburg Oil Company  
P. O. 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. 49, Bourbon County, Kansas and submitted to our laboratory on July 24, 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/ks

5 c to Bronson, Kansas

**Oilfield Research Laboratories**  
**GENERAL INFORMATION & SUMMARY**

Company Hillenburg Oil Company Lease Humphrey Well No. 49  
 Location 1475' ESL & 425' EEL SE $\frac{1}{4}$   
 Section 36 Twp. 24S Rge. 21E County Bourbon State Kansas

Elevation, Feet . . . . .	-
Name of Sand . . . . .	Bartlesville
Top of Core . . . . .	670.0
Bottom of Core . . . . .	690.0
Top of Sand . . . . .	670.0
Bottom of Sand . . . . .	690.0
Total Feet of Permeable Sand . . . . .	18.4

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	7.5	7.5
5 - 15	5.6	13.1
20 - 40	3.9	17.0
40 & Above	1.4	18.4

Average Permeability Millidarcys . . . . .	14.9
Average Percent Porosity . . . . .	15.3
Average Percent Oil Saturation . . . . .	35.0
Average Percent Water Saturation . . . . .	52.2
Average Oil Content, Bbls./A. Ft. . . . .	440.
Total Oil Content, Bbls./Acre . . . . .	8,790.

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LOGName Hillenburg Oil Company Lease Humphrey Well No. 49

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
670.0 - 672.2	Light brown grayish shaly sandstone.
672.2 - 673.8	Light brown grayish very shaly sandstone.
673.8 - 676.2	Brown sandstone.
676.2 - 677.7	Light brown grayish shaly sandstone.
677.7 - 678.4	Light brown sandstone.
678.4 - 680.4	Light brown grayish shaly sandstone.
680.4 - 683.4	Light brown slightly calcareous sandstone.
683.4 - 686.3	Light brown slightly shaly sandstone.
686.3 - 690.0	Light brown slightly calcareous very shaly sandstone.

**Oilfield Research Laboratories**

**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company Hillenbury Oil Company Lease Humphrey Well No. 49

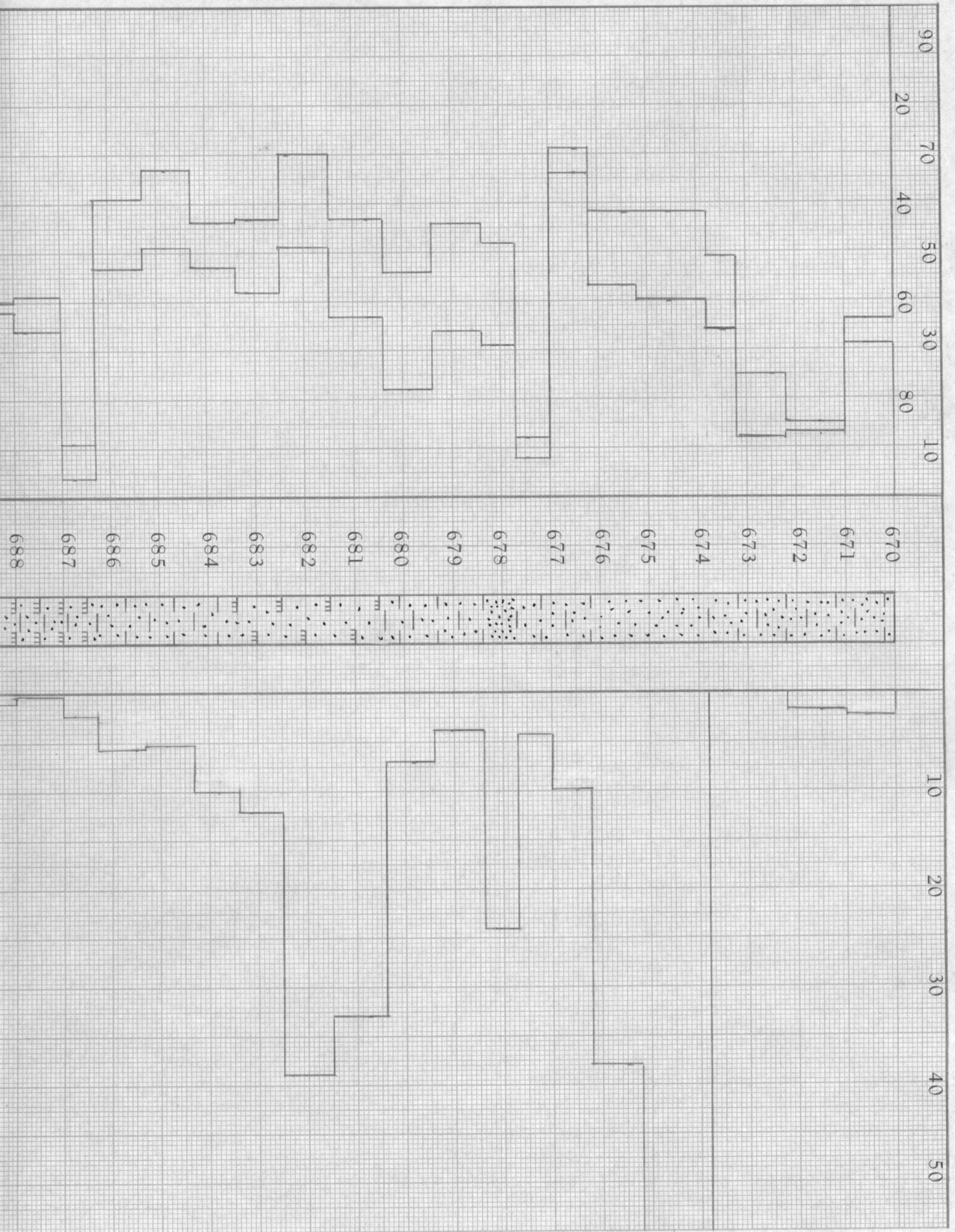
Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	670.6	10.3	31	64	95	248	2.5	1.0	1.0	248	2.50
2	671.5	11.9	13	85	98	120	1.9	1.2	2.2	144	2.28
3	672.5	14.4	12	75	87	134	Imp.	1.0	3.2	134	0.00
4	673.5	17.6	34	51	85	464	Imp.	0.6	3.8	278	0.00
5	674.6	19.5	40	42	82	605	58.	1.4	5.2	847	81.20
6	675.5	17.4	43	42	85	581	38.	1.0	6.2	581	38.00
7	676.5	21.0	66	29	95	1075	9.8	0.8	7.0	860	7.84
8	677.5	9.8	8	88	96	61	4.2	0.6	7.6	37	2.52
9	678.2	18.6	31	48	79	447	24.	0.8	8.4	358	19.20
10	679.1	18.0	34	44	78	475	3.8	1.0	9.4	475	3.80
11	679.9	14.3	22	54	76	244	7.0	1.0	10.4	244	7.00
12	680.8	18.3	37	43	80	525	33.	1.1	11.5	578	36.30
13	682.4	18.0	51	30	81	712	39.	1.0	12.5	712	39.00
14	683.2	17.6	42	43	85	574	12.	0.9	13.4	517	10.80
15	683.8	16.3	47	44	91	594	9.8	0.9	14.3	535	8.82
16	684.9	17.6	51	33	84	696	5.2	1.0	15.3	696	5.20
17	685.5	14.7	47	39	86	536	5.5	1.0	16.3	536	5.50
18	686.8	9.5	4	89	93	29	2.1	0.7	17.0	21	1.47
19	687.8	10.5	34	59	93	277	0.39	1.0	18.0	277	0.39
20	688.6	9.6	37	60	97	276	0.89	1.0	19.0	276	0.89
21	689.5	14.4	39	51	90	436	1.8	1.0	20.0	436	1.80

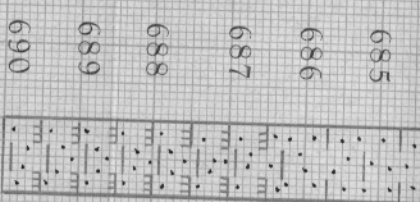
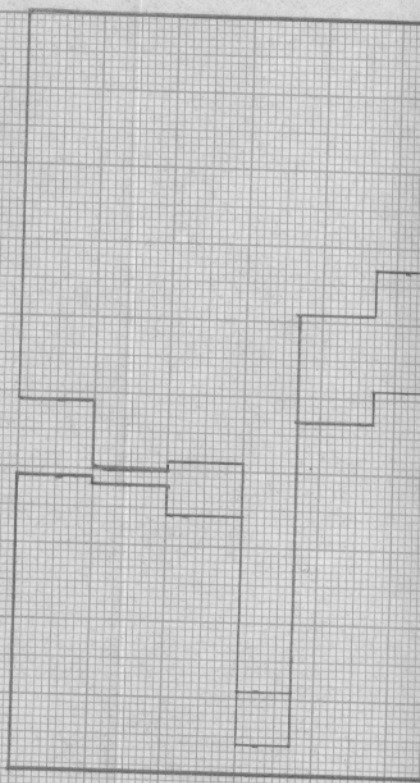


WATER SAT., PERCENT

OIL SAT., PERCENT

PERMEABILITY IN MILLIDARCYS





KEY:



SANDSTONE



SHALY SANDSTONE



CALCAREOUS SANDSTONE



SHALY CALCAREOUS SANDSTONE

# HILLENBURG OIL COMPANY

HUMPHREY LEASE

WELL NO. 49

BOURBON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY MILLIDARCS
670.0 - 690.0	20.0	15.3	35.0	52.2	14.9

OILFIELD RESEARCH LABORATORIES  
 CHANUTE, KANSAS  
 SEPTEMBER, 1980