



# OILFIELD RESEARCH LABORATORIES

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

March 31, 1980

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

Gentlemen:

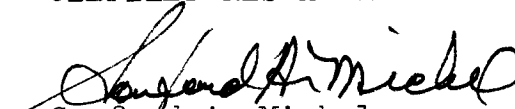
Enclosed herewith are the results of tests run on the rotary core taken from the Woodward "B" Lease, Well No. 9, Bourbon County, Kansas, and submitted to our laboratory on March 18, 1980.

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 Woodward "B" Well No. 9  
 Location 465' NSL & 600' EWL SW $\frac{1}{4}$   
 Section 31 Twp. 24S Rge. 22E County Bourbon State Kansas

Elevation, Feet . . . . .	
Name of Sand . . . . .	Bartlesville
Top of Core . . . . .	686.0
Bottom of Core . . . . .	697.8
Top of Sand . . . . .	686.4
Bottom of Sand . . . . .	696.6
Total Feet of Permeable Sand . . . . .	8.2

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	1.6	1.6
5 - 10	5.4	7.0
40 & Above	1.2	8.2

Average Permeability Millidarcys . . . . .	11.1
Average Percent Porosity . . . . .	16.2
Average Percent Oil Saturation . . . . .	37.9
Average Percent Water Saturation . . . . .	54.0
Average Oil Content, Bbls./A. Ft. . . . .	479.
Total Oil Content, Bbls./Acre . . . . .	4,892.

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LOG

Name Hillenburg Oil Company Lease Woodward "B" Well No. 9

Depth Interval,  
Feet

Description

686.0 - 686.4	Gray sandy shale.
686.4 - 692.6	Light brown shaly sandstone.
692.6 - 693.8	Dark brown sandstone.
693.8 - 695.7	Brown shaly sandstone.
695.7 - 696.6	Dark brown shaly sandstone.
696.6 - 697.8	Gray shale.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Hillenburg Oil Company Lease Woodward "B" Well No. 9

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 ind.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	686.5	15.0	18	78	96	210	0.76	0.6	0.6	126	0.46
2	687.5	16.1	34	61	95	425	4.4	1.0	1.6	425	4.40
3	688.5	18.6	39	47	86	563	6.9	1.0	2.6	563	6.90
4	689.5	8.3	47	50	97	303	Imp.	1.0	3.6	303	0.00
5	690.5	13.8	20	73	93	214	Imp.	1.0	4.6	214	0.00
6	691.5	17.8	35	43	78	483	5.8	1.0	5.6	483	5.80
7	692.5	18.5	41	54	95	588	9.3	0.6	6.2	353	5.58
8	693.5	18.0	55	40	95	767	40.	1.2	7.4	920	48.00
9	694.5	18.1	36	62	98	506	9.1	0.9	8.3	455	8.19
10	695.5	17.6	41	48	89	560	5.3	1.0	9.3	560	5.30
11	696.5	17.1	41	51	92	544	7.1	0.9	10.2	490	6.39

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Hillenburg Oil Company Lease Woodward "B" Well No. 9

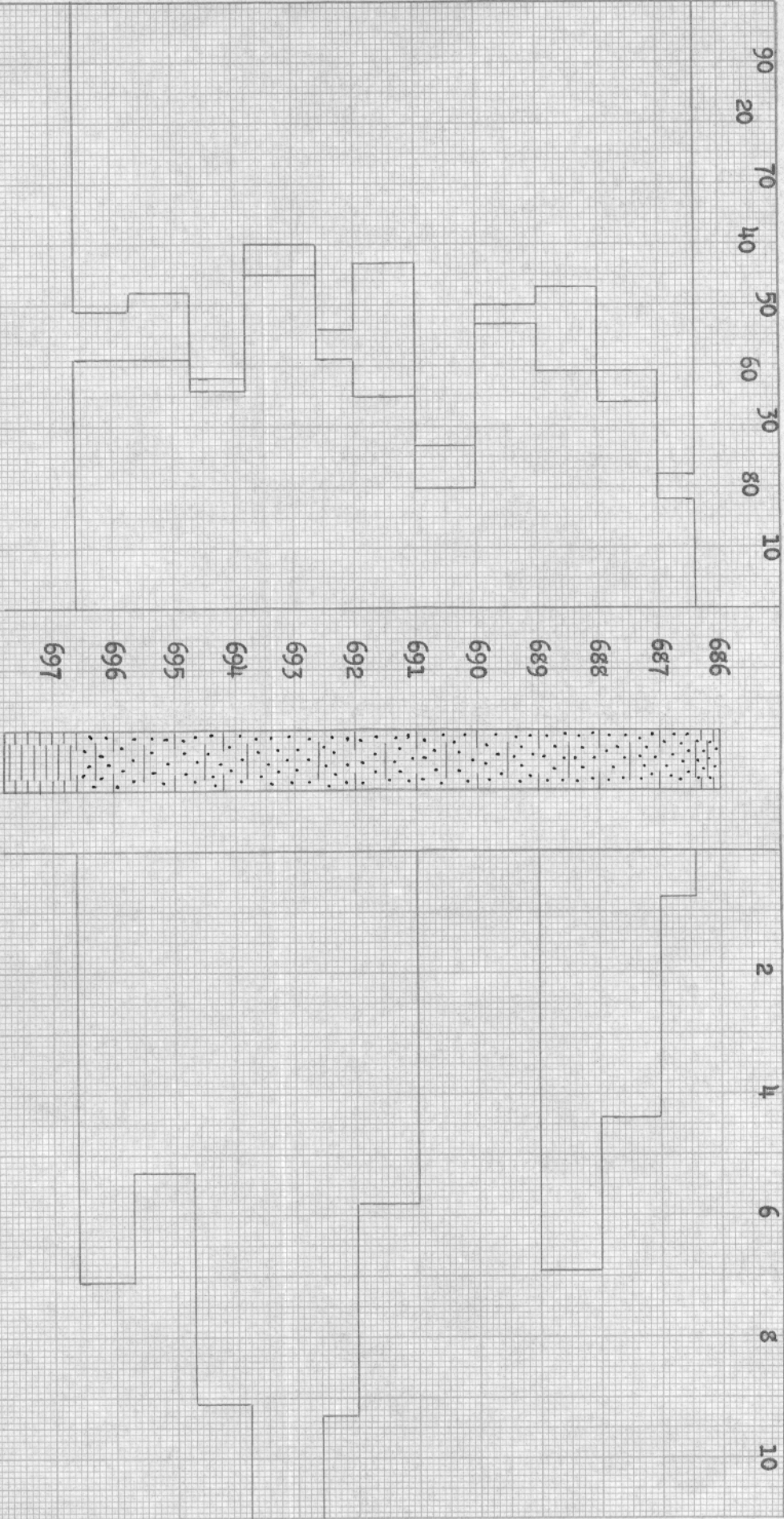
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbl./Acre
686.4 - 696.6	10.2	16.2	37.9	54.0	4.79	4,892

686.4 - 696.6      10.2      16.2      37.9      54.0      4.79      4,892

WATER SAT.,  
PERCENT

OIL SAT.,  
PERCENT

PERMEABILITY, IN MILLIDARCY



KEY:

SANDSTONE

SANDY SHALE

SHALY SANDSTONE

SHALE

# HILLENBURG OIL COMPANY

WOODWARD #B# LEASE

BOURBON COUNTY, KANSAS

WELL NO. 9

# HILL LENBURG OIL COMPANY

WOODWARD #B# LEASE

WELL NO. 9

BOURBON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS
686.4 - 696.6	10.2	16.2	37.9	54.0	11.1

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CHANUTE, KANSAS  
MARCH, 1980. HR