

OILFIELD RESEARCH LABORATORIES

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

April 14, 1980

Global Oil Company
c/o McCune Engineering
P.O. Box 3283
Lawrence, Kansas 66044

Gentlemen:

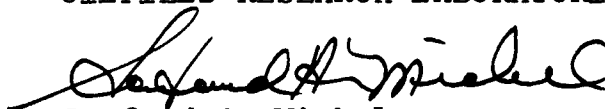
Enclosed herewith are the results of tests run on the rotary core taken from the Hines Lease, Well No. 3, Miami County, Kansas, and submitted to our laboratory on March 31, 1980.

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 Lawrence, Kansas

- REGISTERED ENGINEERS -

CORE ANALYSIS - WATER ANALYSIS - REPRESSURING ENGINEERING - SURVEYING & MAPPING - PROPERTY EVALUATION & OPERATION

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GENERAL INFORMATION & SUMMARY

Company Global Oil Company Lease Hines Well No. 3
 Location NE NW
 Section 29 Twp. 17S Rgs. 22E County Miami State Kansas

Elevation, Feet	
Name of Sand	Wayside
Top of Core	457.0
Bottom of Core	470.0
Top of Sand	457.0
Bottom of Sand	469.6
Total Feet of Permeable Sand	12.6

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 4	1.4	1.4
100 - 200	3.2	4.6
200 - 300	5.0	9.6
300 & Above	3.0	12.6

Average Permeability Millidarcys	231.2
Average Percent Porosity	18.2
Average Percent Oil Saturation	54.0
Average Percent Water Saturation	27.0
Average Oil Content, Bbls./A. Ft.	753.
Total Oil Content, Bbls./Acre	9,490.

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LOG

Name Global Oil Company Lease Hines Well No. 3

Depth Interval,
Feet

Description

457.0 - 459.0

Brown and gray laminated calcareous sandstone and shale.

459.0 - 467.4

Dark brown calcareous sandstone.

467.4 - 468.8

Brown shaly sandstone.

468.8 - 469.6

Brown calcareous sandstone.

469.6 - 470.0

Gray shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

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	457.3	16.0	34	52	86	422	188.	1.0	1.0	422	188.00
2	458.5	23.1	41	43	84	735	288.	1.0	2.0	735	288.00
3	459.5	22.3	60	21	81	1038	273.	1.0	3.0	1038	273.00
4	460.5	21.8	54	24	78	913	125.	1.0	4.0	913	125.00
5	461.5	21.8	47	28	75	795	253.	1.0	5.0	795	253.00
6	462.3	20.6	57	21	78	911	280.	1.0	6.0	911	280.00
7	463.5	19.4	63	17	80	948	259.	1.0	7.0	948	259.00
8	464.5	17.8	59	19	78	815	392.	1.0	8.0	815	392.00
9	465.3	20.2	54	19	73	846	346.	1.0	9.0	846	346.00
10	466.4	19.4	54	14	68	813	358.	1.0	10.0	813	358.00
11	467.3	13.2	43	30	73	440	146.	0.4	10.4	176	58.40
12	468.5	8.5	65	31	96	429	3.5	1.4	11.8	601	4.90
13	469.4	12.6	61	33	94	596	110.	0.8	12.6	477	88.00

Company Global Oil Company Lease Hines Well No. 3

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Hines	Well No.					
Global Oil Company							3	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbl./Acre
457.0 - 469.6	12.6	231.2	2913.30	18.2	54.0	27.0	753	9,490

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RESULTS OF WATER DIFFERENTIATION TESTS
TABLE VI

Company Global Oil Company Lease Hines Well No. 3

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation		Total
			Connate	Drilling & Foreign	
1	457.3	22,878			
2	458.5	16,296			
3	459.5	19,056			
4	460.5	23,963			
5	461.5	16,901			
6	462.3	25,541			
7	463.5	25,420			
8	464.5	23,279			
9	465.3	20,014			
10	466.4	31,360			
11	467.3	29,923			
12	468.5	17,953			
13	469.4	22,103			

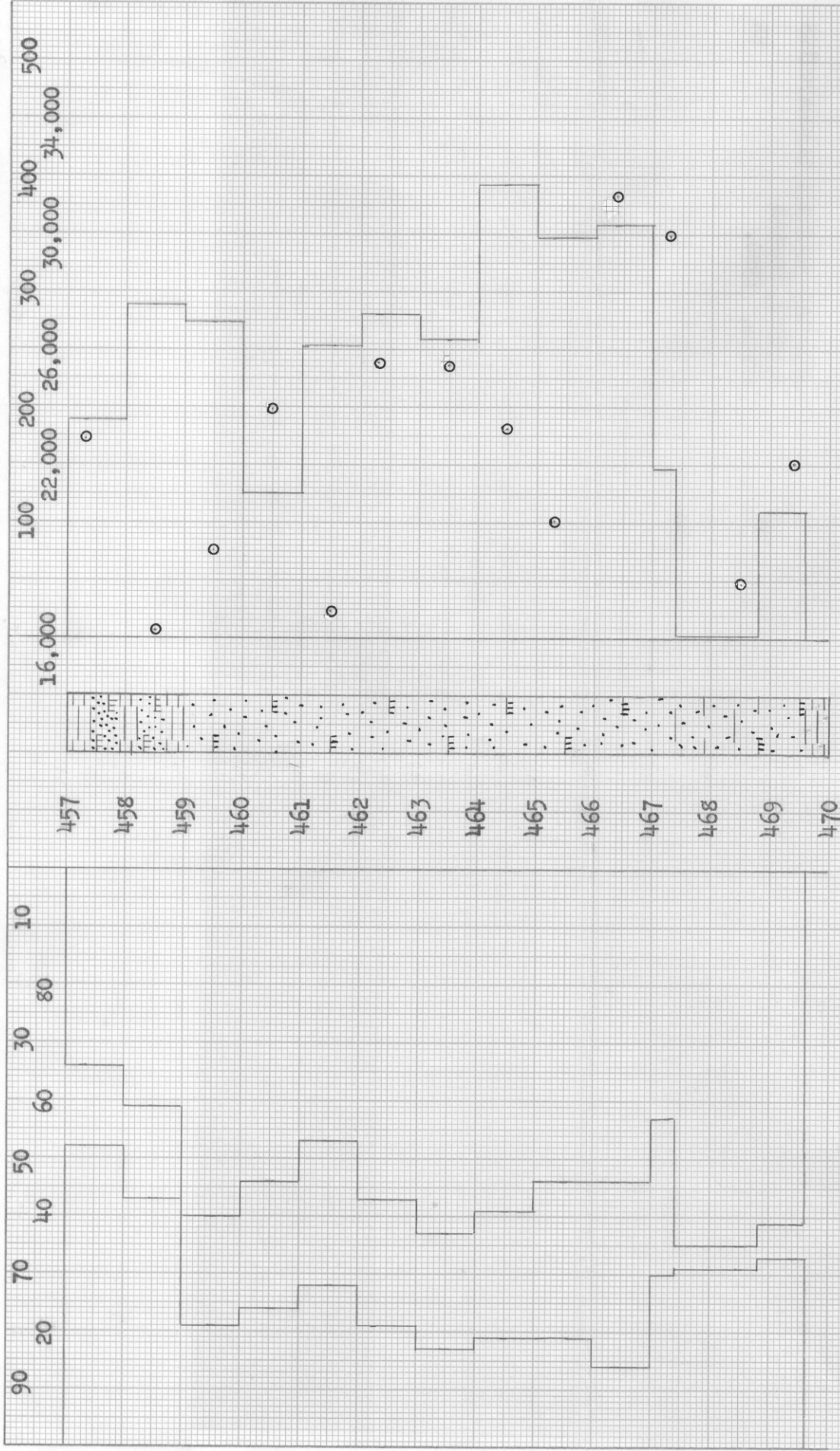
Note: ppm — parts per million

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

PERMEABILITY, IN MILLIDARCS

CHLORIDE CONTENT OF BRINE IN SAND, ppm



KEY:

● CALCAREOUS SANDSTONE

▬ LAMINATED CALCAREOUS SANDSTONE AND SHALE

▬ SHALY SANDSTONE

▬ SHALE

GLOBAL OIL COMPANY

HINES LEASE

WELL NO. 3

MIAMI COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS
457.0 - 469.6	12.6	18.2	54.0	27.0	231.2

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CHANUTE, KANSAS
APRIL, 1980.
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