

OILFIELD RESEARCH LABORATORIES

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

IS-637-20450

February 20, 1980

Hickory Creek Oil Company
P.O. Box 379
Parsons, Kansas 67357

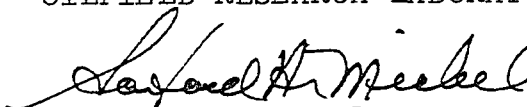
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from Well No. HCO-112, and submitted to our laboratory on January 23, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Sanford A. Michel

SAM/kas
4 c to Parsons, Kansas
1 c to Chanute, Kansas

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GENERAL INFORMATION & SUMMARY

Company Hickory Creek Oil Company Lease - Well No. HCO-112

Location -

Section - Twp - Rge - County - State -

Elevation, Feet -

Name of Sand -

Top of Core - 182.7

Bottom of Core - 191.0

Top of Sand - 183.8

Bottom of Sand - 190.5

Total Feet of Permeable Sand - 4.6

Total Feet of Floodable Sand - 0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	1.1	1.1
1 - 5	0.9	2.0
5 - 10	2.6	4.6

Average Permeability Millidarcys - 5.6

Average Percent Porosity - 15.6

Average Percent Oil Saturation - 42.2

Average Percent Water Saturation - 48.1

Average Oil Content, Bbls./A. Ft. - 523.

Total Oil Content, Bbls./Acre - 2,774.

Average Percent Oil Recovery by Laboratory Flooding Tests - 0

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - 0

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - 0

Total Calculated Oil Recovery, Bbls./Acre - 0

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The core was sampled and the samples sealed in plastic bags by a representative of the client.

Since the core did not respond to floodpot testing, no calculated recovery is given.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
182.7 - 183.8	Gray sandy shale.
183.8 - 184.2	Gray and brown shaly sandstone.
184.2 - 185.6	Gray sandy shale.
185.6 - 188.9	Gray and brown broken very shaly sandstone.
188.9 - 190.5	Brown slightly shaly sandstone.
190.5 - 191.0	Gray shale.

TABLE 1-B

Well No. HCO-112

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	184.0	13.6	14	77	91	148	0.29	0.4	0.4	59	0.12
2	185.8	14.9	40	54	94	462	0.74	0.7	1.1	323	0.52
3	186.7	13.5	20	76	96	210	Imp.	0.7	1.8	147	0.00
4	187.6	16.0	48	48	96	596	✓ 5.8	1.0 ^{1.4}	2.8	596	5.80
5	188.4	17.2	52	35	87	694	✓ 4.1	0.9	3.7	625	3.69
6	189.5	16.5	49	38	87	627	✓ 10.	1.0 ^{4.3}	4.7	627	10.00
7	190.4	15.8	54	26	80	662	✓ 9.0	0.6	5.3	397	5.40
<u>1312.4</u> $\frac{1312.4}{7} = 187.48$ $\frac{107.5}{7} = 15.35$ $\frac{354}{7} = 50.57$ $\frac{50.57}{7} = 7.22$ $\frac{50.57}{7} = 7.22$ $\frac{50.57}{7} = 7.22$ <u>29.93</u>											

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

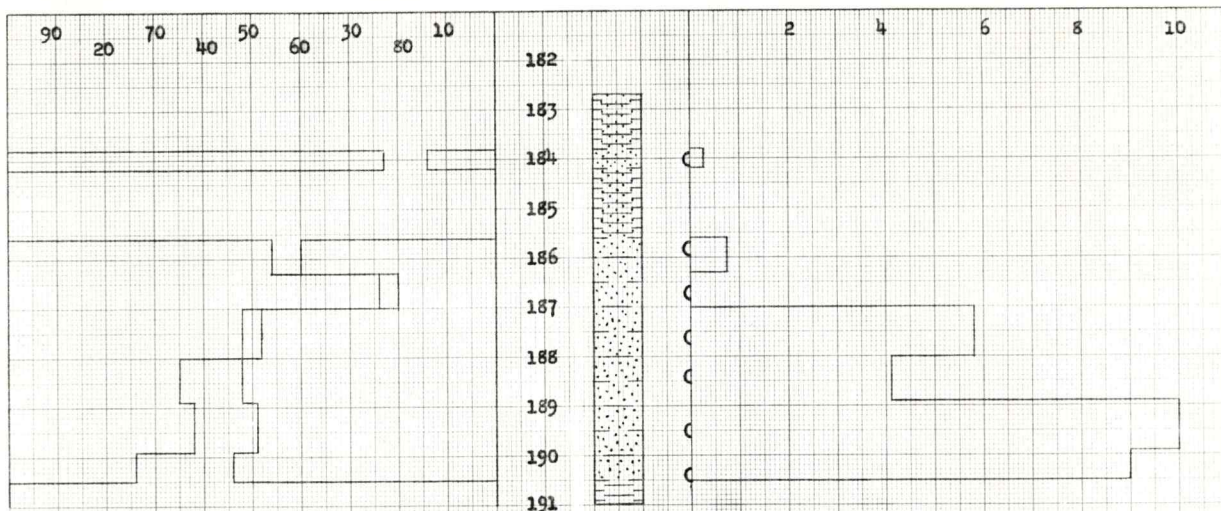
Company Hickory Creek Oil Company Lease — Well No. HCO-112

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
183.8 - 190.5	4.6	5.6	25.53

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
183.8 - 190.5	5.3	15.6	42.2	48.1	523	2,774

WATER SAT.,
PERCENTOIL SAT.,
PERCENT

PERMEABILITY, IN MILLIDARCYs



KEY:

SEALY SANDSTONE

SANDY SHALE

SHALE

O IMPERMEABLE TO WATER

HICKORY CREEK OIL COMPANY

-- LEASE

-- COUNTY, --

WELL NO. HCO - 112

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYs	CALCULATED OIL RECOVERY BHLS./ACRE
183.8 - 190.5	5.3	15.6	42.2	48.1	5.6	- -

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CHANUTE, KANSAS
FEBRUARY, 1980. HR