

OILFIELD RESEARCH LABORATORIES

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

October 22, 1982

W. P. Moore, Incorporated
308 Terrace Trail West
Lake Quivara, Kansas 66106

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Wilson Lease, Well No. 111, located in Miami County, Kansas.

The core was sampled and sealed in plastic bags by a representative of the client and was submitted to our laboratory on October 19, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/rmc

5 c to Lake Quivara, Kansas

Oilfield Research Laboratories
GENERAL INFORMATION & SUMMARY

Company W. P. Moore, Incorporated Lease Wilson Well No. 111
 Location _____
 Section 26 Twp. 16S Rge. 21E County Miami State Kansas

Elevation, Feet

Name of Sand.....	Squirrel
Top of Core	641.0
Bottom of Core	682.6
Top of Sand	641.0
Bottom of Sand	674.4
(Tested)	
Total Feet of Permeable Sand	12.8

Tested 12.8

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 20	3.3	3.3
20 - 44	8.2	11.5
75 - 80	1.3	12.8

Average Permeability Millidarcys	28.4
Average Percent Porosity	24.0
Average Percent Oil Saturation	37.6
Average Percent Water Saturation.....	38.9
Average Oil Content, Bbls./A. Ft.	706.
Total Oil Content, Bbls./Acre.....	9,043.

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LOG

Company W. P. Moore, Incorporated Lease Wilson Well No. 111

<u>Depth Interval, Feet</u>	<u>Description</u>
641.0 - 644.3	Light brown sandstone.
644.3 - 647.0	Brown sandstone.
647.0 - 648.0	Brown slightly calcareous sandstone.
648.0 - 652.0	Light gray limestone.
652.0 - 659.4	Brown sandstone.
659.4 - 662.0	No core.
662.0 - 681.0	Brown sandstone.
681.0 - 682.6	Gray shale (ground up).

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company W. P. Moore, Incorporated Lease Wilson Well No. 111

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	642.2	22.6	29	54	83	509	11.	1.3	1.3	662	14.30
2	645.1	25.6	37	39	76	735	43.	1.0	2.3	735	43.00
3	647.2	19.7	34	31	65	520	15.	1.0	3.3	520	15.00
4	654.3	22.5	26	47	73	454	20.	1.0	4.3	454	20.00
5	657.1	22.6	35	37	72	614	18.	1.0	5.3	614	18.00
6	662.7	25.0	24	47	71	466	23.	1.0	6.3	466	23.00
7	664.7	26.0	47	34	81	948	29.	1.2	7.5	1138	34.80
8	666.1	24.0	49	33	82	912	25.	1.3	8.8	1186	32.50
9	668.4	24.8	42	33	75	808	22.	1.4	10.2	1131	30.80
10	671.9	25.8	40	31	71	801	78.	1.3	11.5	1041	101.40
11	674.3	24.7	44	43	87	843	24.	1.3	12.8	1096	31.20

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company W. P. Moore, Incorporated Lease Wilson Well No. 111

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
641.0 - 663.0	6.3	21.2	133.30
664.6 - 674.4	6.5	35.5	230.70
641.0 - 674.4	12.8	28.4	364.00

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
641.0 - 663.0	6.3	23.0	30.7	43.0	548	3,451
664.6 - 674.4	6.5	25.0	44.3	34.8	860	5,592
641.0 - 674.4	12.8	24.0	37.6	38.9	706	9,043

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RESULTS OF WATER DIFFERENTIATION TESTS
TABLE VI

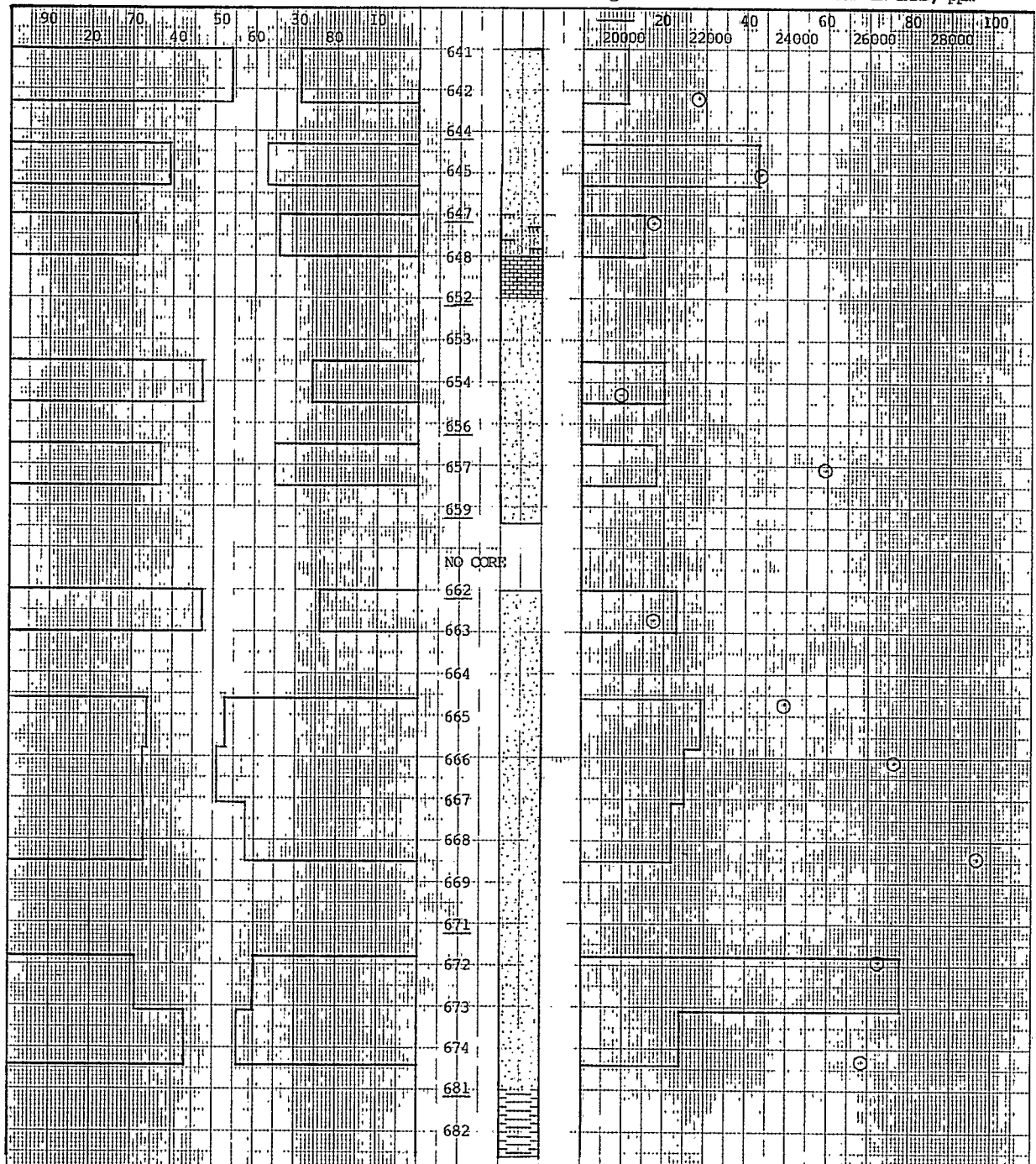
Company W. P. Moore, Incorporated Lease Wilson Well No. 111

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation Connate Drilling & Foreign	Total
1	642.2	21,826		
2	645.1	23,369		
3	647.2	20,736		
4	654.3	19,918		
5	657.1	24,982		
6	662.7	20,738		
7	664.7	23,929		
8	666.1	26,630		
9	668.4	28,606		
10	671.9	26,231		
11	674.3	25,833		
Chloride content of drilling fluid is 13,758 ppm.				

Note: ppm — parts per million

WATER SAT., PERCENT → ← OIL SAT., PERCENT

— PERMEABILITY, IN MILLIDARCYs
○ CHLORIDE CONTENT OF BRINE IN SAND, ppm



KEY:

SANDSTONE

SHALE

LIMESTONE

CALCAREOUS SANDSTONE

W. P. MOORE, INCORPORATED

WILSON LEASE

MIAMI COUNTY, KANSAS

WELL NO. 111

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYs
641.0 - 663.0	6.3	23.0	30.7	43.0	21.2
664.6 - 674.4	6.5	25.0	44.3	34.8	35.5
641.0 - 674.4	12.8	24.0	37.6	38.9	28.4