OSAGE DRILLING, INC.

CORE ANALYSIS REPORT

INDUSTRIAL PARK LEASE WELL NO. 3

NEOSHO COUNTY, KANSAS

OILFIELD RESEARCH LABORATORIES

538 N. HIGHLAND CHANUTE, KANSAS

OILFIELD RESEARCH LABORATORIES

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

March 4, 1982

Osage Drilling, Inc.
Box 812
Chanute, Kansas 66720

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Industrial Park Lease, Well No. 32, located in Neosho County, Kansas and submitted to our laboratory on March 2, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Chanute, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Osage Drilling, Inc. Lease Industrial Park Well No. 2

Location 2,475' FSL & 1155' FEL, SE¼

Section 5 Twp. 28S Rge. 18E County Neosho State Kansas

Elevation, Feet	
Name of Sand	Bartlesville
Top of Core	869.0
Bottom of Core	874.4
Top of Sand	869.0
Bottom of Sand	872.1
Total Feet of Permeable Sand	3.1
Total Feet of Floodable Sand	0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	1.0	1.0
2 - 3	2.1	3.1

Average Permeability Millidarcys	2.1
Average Percent Porosity	18.2
Average Percent Oil Saturation	62.1
Average Percent Water Saturation	20.4
Average Oil Content, Bbls./A. Ft.	865.
Total Oil Content, Bbls./Acre	2,682.
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.

The core was sampled and the samples sealed in plastic bags by a representative of the client. Fresh water mud was used as a drilling fluid. The core was reported to be from a virgin area.

Since the core did not respond to flooding susceptibility tests, no calculated recovery is given.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
869.0 - 872.1	Grayish black slightly carbonaceous shaly sandstone.
872.1 - 873.1	Coal.
873.1 - 874.4	Gray shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Osage Drilling, Inc. Lease Industrial Park Well No. ~~2~~ 3

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	869.6	14.2	68	21	89	749	0.73	1.0	1.0	749	0.73
2	870.7	21.1	53	18	71	868	2.7	1.0	2.0	868	2.70
3	871.5	19.2	65	22	87	968	2.7	1.1	3.1	1065	2.97

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Osage Drilling, Inc. Lease Industrial Park Well No. ~~2~~ 3

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
869.0 - 872.1	3.1	2.1	6.40

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
869.0 - 872.1	3.1	18.2	62.1	20.4	865	2,682

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

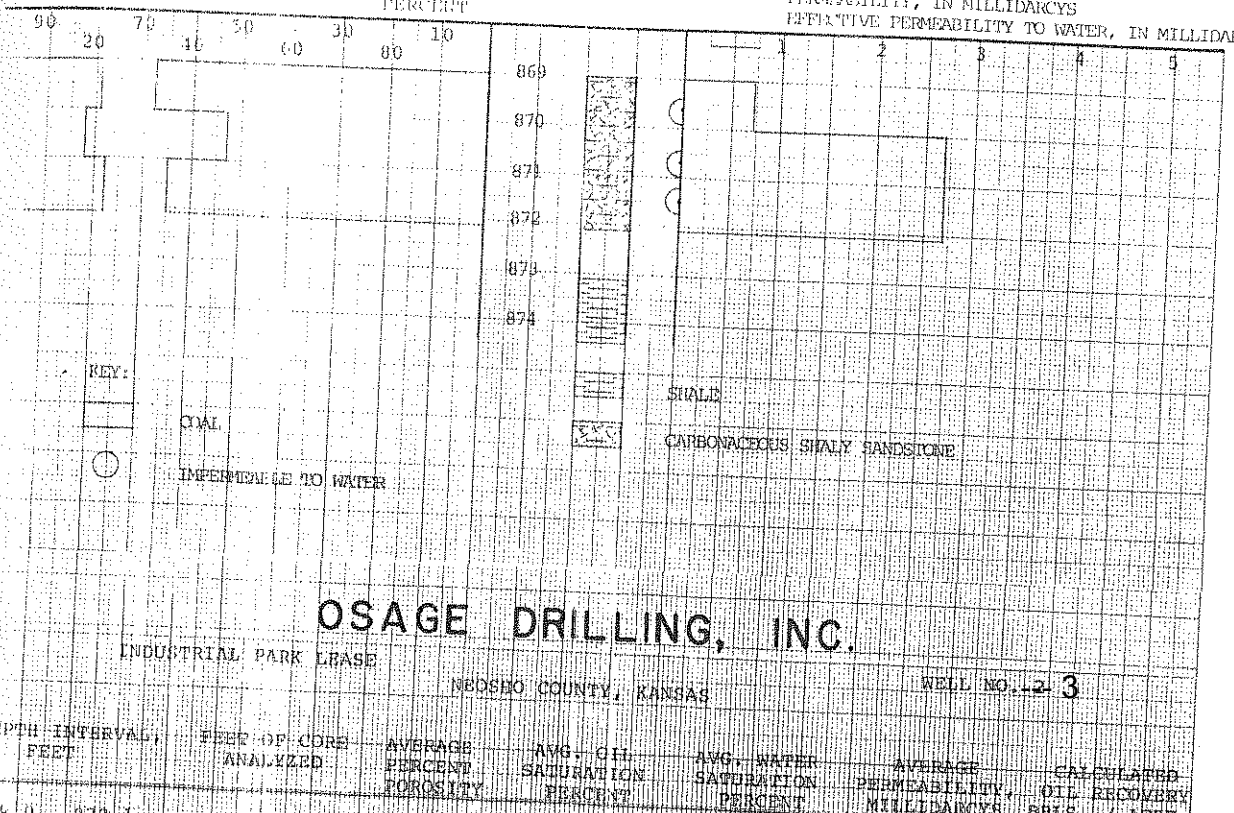
Company Osage Drilling, Inc. Lease Industrial Park Well No. --2- 3

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure Lbs./Sq./In.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
1	869.6	14.3	68	754	0	0	68	22	754	0	Imp.	-
2	870.7	21.0	53	863	0	0	53	18	863	0	Imp.	-
3	871.5	19.4	65	978	0	0	65	23	978	0	Imp.	-

Notes: cc—cubic centimeter.

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.



OSAGE DRILLING, INC.

INDUSTRIAL PARK LEASE

NEOSHO COUNTY, KANSAS

WELL NO. 2-3

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS	CALCULATED OIL RECOVERY BBLS. / ACRE
869.0 - 872.1	3.1	18.2	62.1	20.4	2.1	-

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
MARCH, 1982

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