

OILFIELD RESEARCH LABORATORIES

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

October 20, 1982

Sand Bar Oil Company
Box 143
Canton, Kansas 67428

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Decker Lease, Well No. 4, located in Crawford County, Kansas and submitted to our laboratory on October 14, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/rmc

5 c to Canton, Kansas
2 c to McCune, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company Sand Bar Oil Company Lease Decker Well No. 4
 Location 500' FSL & 165' FWL, SW $\frac{1}{4}$
 Section 31 Twp. 30S Rge. 22E County Crawford State Kansas

Elevation, Feet	
Name of Sand	Bartlesville
Top of Core	222.5
Bottom of Core	226.0
Top of Sand	222.5
Bottom of Sand	226.0
Total Feet of Permeable Sand	2.7
Total Feet of Floodable Sand	-0-

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	0.4	0.4
1 - 2	2.3	2.7

Average Permeability Millidarcys	1.5
Average Percent Porosity	15.2
Average Percent Oil Saturation	31.9
Average Percent Water Saturation	39.0
Average Oil Content, Bbls./A. Ft.	374.
Total Oil Content, Bbls./Acre	1,011.
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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-2-

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 non-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:

<u>Depth Interval, Feet</u>	<u>Description</u>
	<u>BARTLESVILLE SANDSTONE</u>
222.5 - 223.6	Light brown shaly sandstone.
223.6 - 224.1	Light brown and gray laminated sandstone and shale.
224.1 - 224.4	Gray very shaly sandstone.
224.4 - 224.8	Brown very shaly sandstone.
224.8 - 226.0	Light brown shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Sand Bar Oil Company Lease Decker Well No. 4

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation		Oil Content Bbbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water			Ft.	Cum. Ft.		
1	222.7	17.2	33	41	440	2.0	0.5	0.5	220	1.00
2	223.4	17.0	30	42	396	1.9	0.6	1.1	238	1.14
3	224.6	15.5	24	53	289	0.89	0.4	1.5	116	0.35
4	225.5	13.4	35	32	364	1.2	1.2	2.7	437	1.44

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Sand Bar Oil Company	Lease	Decker	Well No.	4
	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	
	222.5 - 226.0	2.7	1.5	3.93	
	Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.
	222.5 - 226.0	2.7	31.9	39.0	374
			15.2		1,011.

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Sand Bar Oil Company Lease Decker Well No. 4

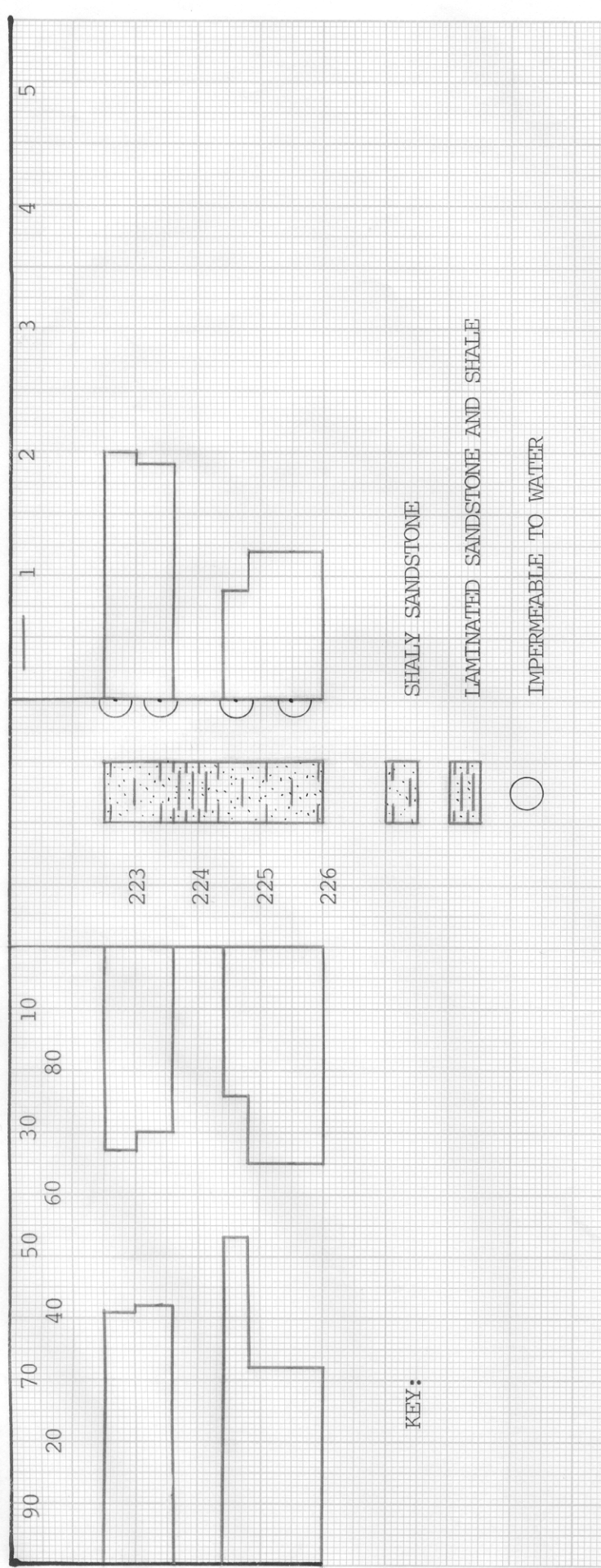
Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure Lbs./Sq./In.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
1	222.7	17.7	32	439	0	0	32	44	439	0	Imp.	-
2	223.4	16.6	31	399	0	0	31	42	399	0	Imp.	-
3	224.6	15.4	24	287	0	0	24	54	287	0	Imp.	-
4	225.5	13.6	34	359	0	0	34	35	359	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.

WATER SAT., PERCENT → ← OIL SAT., PERCENT
 — PERMEABILITY, IN MILLIDARCYS
 EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCYS



SAND BAR OIL COMPANY

WELL NO. 4

CRAWFORD COUNTY, KANSAS

DECKER LEASE

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
222.5 - 226.0	2.7	15.2	31.9	39.0	1.5	-

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 CHANUTE, KANSAS
 OCTOBER, 1982
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