

OILFIELD RESEARCH LABORATORIES

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

February 24, 1981

Oaks Petroleum, Inc.
c/o Calvin T. Oaks, Jr.
R R # 2
Stoystown, PA 15563

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Collins Lease, Well No. C-9, located in Franklin County, Kansas and submitted to our laboratory on January 27, 1981.

Your business is greatly appreciated.

Very truly yours,

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Sanford A. Michel

SAM/kas

2 c to Stoystown, PA
3 c to Paola, KS

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company Oaks Petroleum, Inc. Lease Collins Well No. C-9

Location 165' SNL & 495' WEL - SW $\frac{1}{4}$

Section 16 Twp. 17S Rge. 21E County Franklin State Kansas

Elevation, Feet - - - - -

Name of Sand - - - - - Upper Squirrel

Top of Core - - - - - 493.0

Bottom of Core - - - - - 501.2

Top of Sand - - - - - 493.0

Bottom of Sand - - - - - (Tested) - - - - - 499.0

Total Feet of Permeable Sand - - - - - 3.0

Total Feet of Floodable Sand - - - - - 0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 0.20	1.0	1.0
0.20 & Above	2.0	3.0

Average Permeability Millidarcys - - - - - 0.24

Average Percent Porosity - - - - - 16.1

Average Percent Oil Saturation - - - - - 36.0

Average Percent Water Saturation - - - - - 57.0

Average Oil Content, Bbls./A. Ft. - - - - - 447.

Total Oil Content, Bbls./Acre - - - - - 1,922.

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. Air was used as a drilling fluid.

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>
493.0 - 496.0	Light brown slightly calcareous shaly sandstone.
496.0 - 500.1	Brown and gray laminated slightly calcareous sandstone and shale.
500.1 - 501.2	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Oakes Petroleum, Inc. Lease Collins Well No. C-9

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	493.7	16.8	33	62	95	430	0.18	1.0	1.0	430	0.18
2	494.9	14.9	34	60	94	393	0.33	1.0	2.0	393	0.33
3	496.9	15.0	43	53	96	500	Imp.	1.3	3.3	650	0.00
4	498.8	18.1	32	54	86	449	0.20	1.0	4.3	449	0.20

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SUMMARY OF FERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Collins	Well No.
Oaks Petroleum, Inc.			C-9
	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys
	Permeability Capacity Ft. x Md.		
	493.0 - 499.0	3.0	0.24
			0.71
	Depth Interval, Feet	Average Percent Porosity	Average Percent Water Saturation
	Feet of Core Analyzed	Average Percent Oil Saturation	Average Oil Content Bbl./A. Ft.
	Total Oil Content Bbl./Acre		
	493.0 - 499.0	4.3	16.1
		36.0	57.0
		447	1,922

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Oaks Petroleum, Inc. Lease Collins Well No. C-9

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.
			%	Bbbls./A. Ft.	%	Bbbls./A. Ft.	% Oil	% Water			
1	493.7	16.3	34	430	0	0	34	61	0	Imp.	-
2	494.9	15.0	34	396	0	0	34	60	0	Imp.	-
3	496.9	15.4	42	502	0	0	42	55	0	Imp.	-
4	498.8	18.2	32	452	0	0	32	56	0	Imp.	-

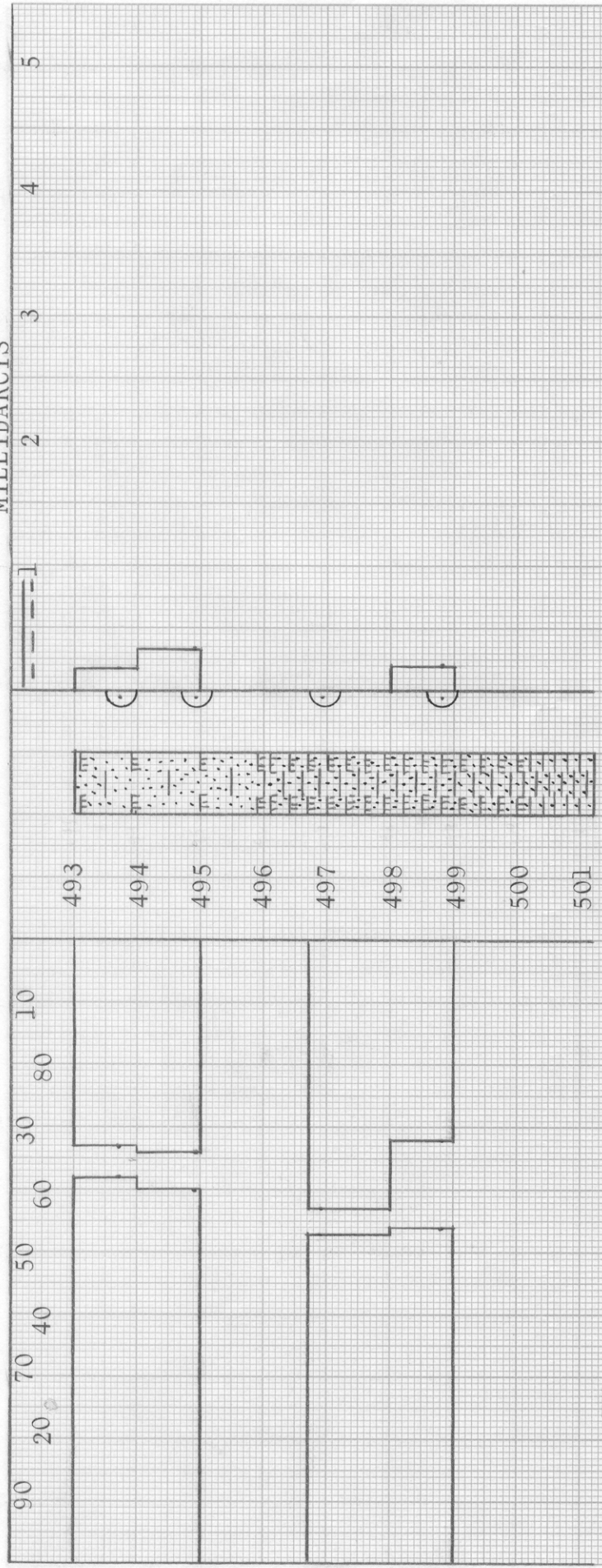
Notes: cc—cubic centimeter.

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

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

PERMEABILITY, IN MILLIDARCYS
EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCYS

WATER SAT., PERCENT
OIL SAT., PERCENT



KEY:

- SHALY CALCAREOUS SANDSTONE
- SANDY SHALE
- LAMINATED CALCAREOUS SANDSTONE AND SHALE
- IMPERMEABLE TO WATER

OAKS PETROLEUM, INC.

COLLINS LEASE

WELL NO. C - 9

FRANKLIN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVERAGE OIL SATURATION PERCENT	AVERAGE WATER SATURATION PERCENT	PERMEABILITY TO WATER, MILLIDARCYS	AVERAGE PERMEABILITY, MILLIDARCYS	CALCULATED OIL RECOVERY BBLs. / ACRE
90 - 50	50	~80	~80	~80	~0.5	~0.5	
50 - 30	30	~80	~80	~80	~0.5	~0.5	
30 - 20	20	~80	~80	~80	~0.5	~0.5	
20 - 10	10	~80	~80	~80	~0.5	~0.5	
10 - 0	0	~80	~80	~80	~0.5	~0.5	
90 - 501	411	~80	~80	~80	~0.5	~0.5	

493.0 - 499.0

4.3

16.1

36.0

57.0

0.24

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CHANUTE, KANSAS
FEBRUARY, 1981

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