OILFIELD RESEARCH LABORATORIES
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May 2, 1981

Oaks Petroleum, Inc.
% Calvin T. Oaks, Jr.
R. R. #2
Stoystown, Pennsylvania 15563

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Collins Lease, Well No. C-5, located in Franklin County, Kansas and submitted to our laboratory on April 11, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/mkf

2 c to Stoystown, Pa.
3 c to Paola, Ks.

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GENERAL INFORMATION & SUMMARY

Company Oaks Petroleum, Inc. Lease Collins Well No. C-5

Location 590' SNL SW¼

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

Elevation, Feet	
Name of Sand	Squirrel
Top of Core	492.0
Bottom of Core	503.5
Top of Sand	495.0
Bottom of Sand (Tested)	501.0
Total Feet of Permeable Sand	6.0
Total Feet of Floodable Sand	3.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 30	2.0	2.0
30 - 40	2.0	4.0
110 - 160	2.0	6.0

Average Permeability Millidarcys	62.7
Average Percent Porosity	20.8
Average Percent Oil Saturation	31.8
Average Percent Water Saturation	40.5
Average Oil Content, Bbls./A. Ft.	509.
Total Oil Content, Bbls./Acre	3,054.
Average Percent Oil Recovery by Laboratory Flooding Tests	5.3
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	83.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	248.
Total Calculated Oil Recovery, Bbls./Acre	See "Calculated Recovery" Section

The core was sampled and the samples sealed in plastic bags by a representative of the client. Air was used as a drilling fluid.

FORMATION CORED

The detailed log of the formation cored as as follows:

Depth Interval, Feet	Description
492.0 - 495.0	Grayish light brown slightly calcareous very shaly sandstone.
495.0 - 503.5	Gray and light brown slightly calcareous laminated sandstone and shale.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 248 barrels of oil per acre was obtained from 3.0 feet of sand. The weighted average percent oil saturation was reduced from 38.6 to 33.3, or represents an average recovery of 5.3 percent. The weighted average effective permeability of the samples is 1.39 millidarcys, while the average initial fluid production pressure is 30.0 pounds per square inch (See Table V).

By observing the data given in Table IV, you will note that of the 6 samples tested, 3 produced water and oil and 1 sample produced water only. This indicates that approximately 50 percent of the sand represented by these samples is floodable pay sand.

CALCULATED RECOVERY

It would appear from a study of the core data, that efficient primary and waterflood operations in the vicinity of this well should recover approximatley 870 barrels of oil per acre. This is an average recovery of 290 barrels per acre foot from 3.0 feet of floodable sand analyzed in this core.

These recovery values were calculated using the following data and assumptions:

Original formation volume factor, estimated	1.04
Reservoir water saturation, percent, estimated	30.0
Average porosity, percent	20.0
Oil saturation after flooding, percent	33.3
Performance factor, percent, estimated	55.0
Net floodable sand, feet	3.0

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Oaks Petroleum, Inc. Lease Collins Well No. C-5

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	495.2	20.8	28	44	72	452	37.	1.0	1.0	452	37.00
2	496.2	21.0	17	42	59	277	26.	1.0	2.0	277	26.00
3	497.2	21.7	40	31	71	673	113.	1.0	3.0	673	113.00
4	498.2	15.9	39	51	90	481	11.	1.0	4.0	481	11.00
5	499.3	22.3	37	31	68	640	158.	1.0	5.0	640	158.00
6	500.4	22.8	30	44	74	531	31.	1.0	6.0	531	31.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Oaks Petroleum, Inc. Lease Collins Well No. C-5

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
495.0 - 501.0	6.0	62.7	376.00

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 Bbls./Acre
495.0 - 501.0	6.0	20.8	31.8	40.5	509	3,054

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Oaks Petroleum, Inc. Lease Collins Well No. C-5

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	495.2	20.3	29	457	0	0	29	43	457	0	Imp.	-
2	496.2	21.3	16	264	0	0	18	46	264	0	Imp.	-
3	497.2	21.6	40	670	7	117	33	59	553	42	1.31	30
4	498.2	16.0	39	484	5	62	34	59	422	56	0.90	30
5	499.3	22.3	37	640	4	69	33	58	571	100	1.95	30
6	500.4	22.7	30	528	0	0	30	62	528	40	0.75	35

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.

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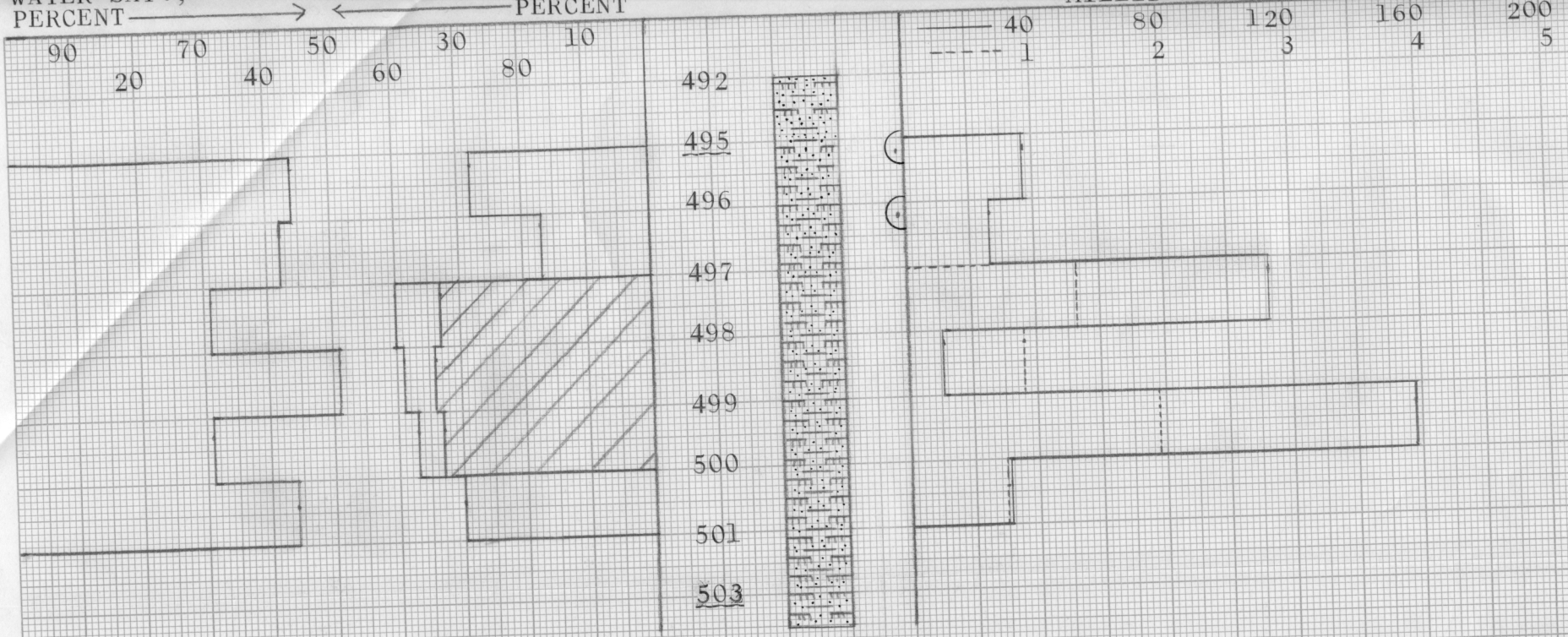
SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company Oaks Petroleum, Inc. Lease Collins Well No. C-5

Depth Interval, Feet	495.0 - 501.0
Feet of Core Analyzed	3.0
Average Percent Porosity	20.0
Average Percent Original Oil Saturation	38.6
Average Percent Oil Recovery	5.3
Average Percent Residual Oil Saturation	33.3
Average Percent Residual Water Saturation	58.7
Average Percent Total Residual Fluid Saturation	92.0
Average Original Oil Content, Bbls./A. Ft.	598.
Average Oil Recovery, Bbls./A. Ft.	83.
Average Residual Oil Content, Bbls./A. Ft.	515.
Total Original Oil Content, Bbls./Acre	1,794.
Total Oil Recovery, Bbls./Acre	248.
Total Residual Oil Content, Bbls./Acre	1,546.
Average Effective Permeability, Millidarcys	1.39
Average Initial Fluid Production Pressure, p.s.i.	30.0

NOTE: Only those samples which recovered oil were used in calculating the above averages.



KEY:

SHALY CALCAREOUS SANDSTONE

LAMINATED CALCAREOUS SANDSTONE AND SHALE

FLOODPOT RESIDUAL OIL SATURATION

IMPERMEABLE TO WATER

OAKS PETROLEUM, INC.

COLLINS LEASE — WELL NO. C-5

FRANKLIN COUNTY, KANSAS

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
495.0 - 501.0	6.0	20.8	31.8	40.5	62.7	870 (PRIMARY AND WATERFLOODING)