

July 3, 1950

24-23-16E

Susnic Oil Company
P. O. Box 1894
Wichita, Kansas

Attention: Mr. O. A. Sutton

Gentlemen:

Enclosed herewith is the report of the partial analysis made on the Keystone barrel core taken from the John Maynard Lease, Well No. 4, Woodson County, Kansas, and submitted to our laboratory on June 24, 1950.

In calculating the recovery for the sand within the vicinity of this well, an allowance was made for oil lost during coring, and it was assumed that the true water saturation of the sand is 20 percent.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:bb
c.c. to Mr. G. M. Smith

John Maynard 4

SUSHIO OIL COMPANY

CORE ANALYSIS REPORT

JOHN MAYNARD LEASE

WELL NO. 4

WOODSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

JULY 3, 1950

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Bussio Oil Company Lease John Maynard Well No. 4
 Location 1100' West of East Line and 220' South of North Line, SW $\frac{1}{4}$,
 Section 24 Twp. 23S Rge. 16E County Woodson State Kansas

Name of Sand	Poru
Top of Core	955.40
Bottom of Core	968.30
Top of Sand	958.55
Bottom of Sand	965.35
Total Feet of Permeable Sand	4.31

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 10	0.70	0.70
10 & above	0.38	1.08

Average Permeability, Millidarcys	15.36
Average Percent Porosity	18.34
Average Percent Oil Saturation	36.71
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	533.
Total Oil Content, Bbls./Acre	4,533.
Average Percent Oil Recovery by Laboratory Flooding Tests	-
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	-
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	-
Total Calculated Oil Recovery, Bbls./Acre	900.
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	

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LOG

<u>Depth Interval, Feet</u>	<u>Description</u>
955.40 - 955.87	- Cuttings.
955.87 - 956.25	- Dark brown fine grained micaceous sandstone.
956.25 - 957.40	- Laminated sandstone and shale.
957.40 - 958.10	- Gray sandy shale.
958.10 - 958.30	- Laminated sandstone and shale.
958.30 - 958.55	- Gray sandy shale.
958.55 - 960.17	- Light brown fine grained micaceous shaley sandstone.
960.17 - 962.48	- Dark brown fine grained micaceous sandstone.
962.48 - 963.90	- Dark fine grained micaceous carbonaceous sandstone.
963.90 - 965.35	- Dark fine grained micaceous carbonaceous slightly shaley sandstone.
965.35 - 967.05	- Laminated micaceous shaley sandstone.
967.05 - 968.30	- Gray sandy shale.

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RESULTS OF PERMEABILITY TESTS
TABLE I

Company Sunco Oil Company Lease Maynard Well No. 4

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.
			Ft.	Cum. Ft.	
1	955.90	23.	0.23	0.23	5.29
2	956.22	37.	0.15	0.38	5.55
3	958.20	10.	0.20	0.58	2.00
4	958.68	Imp.	0.35	0.93	0.00
5	959.10	7.5	0.50	1.43	3.75

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SUMMARY OF PERMEABILITY TESTS

TABLE II

Company	<u>Sunco Oil Company</u>	Lease	<u>John Hayward</u>	Well No.	<u>4</u>
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity, Ft. x Md.		
<hr/>	<hr/>	<hr/>	<hr/>		
955.87 - 959.40	1.08	15.36	16.59		

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RESULTS OF SATURATION TESTS

TABLE III

Company Suamico Oil Company Lease John Haynard Well No. 4

Sat. No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls./A. Ft.	Feet of Core		Total Oil Content Bbls./Acre
			Oil	Water	Total		Ft.	Cum. Ft.	
4	959.52	16.6	33.3	-	-	434	0.62	1.62	703
5	960.41	19.9	39.7	-	-	616	0.73	2.35	450
6	961.32	22.6	42.3	-	-	744	1.58	3.93	1,180
7	962.65	23.7	40.5	-	-	744	0.72	4.65	535
8	963.58	17.4	38.8	-	-	526	0.70	5.35	367
9	964.48	18.1	37.7	-	-	530	1.45	6.80	768
10A	966.12	13.4	30.0	-	-	312	1.70	8.50	530
							Total	- - - -	4,533

Note: "A" sample was drilled out of the core after it was received in the laboratory.

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SUMMARY OF SATURATION TESTS

TABLE IV

Company	Lease	Well No.	Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbls./A. Ft.	Total Oil Content Bbls./Acre
Sunco Oil Company	John Maynard	4	958.55 - 967.05	8.50	18.34	36.71	-	533	4,533

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RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Susmie Oil Company Lease John Maynard 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.
			Percent	Bbls./A. Ft.	Percent	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
4	959.52	16.8	33.3	434	0.0	0	33.3	61.4	434	2	0.216	50
5	960.41	19.9	39.7	616	0.0	0	39.7	54.4	616	26	0.915	35
6	961.32	22.6	42.3	744	3.7	65	38.6	56.1	679	153.6	13.09	15
7	962.65	23.7	40.5	744	0.0	0	40.5	18.4	744	0	Imp.	50+
8	963.58	17.4	38.8	524	0.0	0	38.8	26.5	524	0	Imp.	50+
9	964.48	18.1	37.7	530	0.0	0	37.7	27.6	530	0	Imp.	50+
10A	966.12	13.4	30.0	312	0.0	0	30.0	38.0	312	0	Imp.	50+

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.
 "A" sample was drilled out of the core after it was received in the laboratory.