

24-23-16E

November 11, 1950

Susmie Oil Company
Box 1894
Wichita, Kansas

Attention: Mr. C. A. Sutton

Gentlemen:

Enclosed herewith is the report of the partial analysis made on the Cable Tool core taken from your Maynard Lease, Well No. W-3, Woodson County, Kansas, and submitted to our laboratory on October 23, 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 is assumed that the true water saturation of the sand is 20 percent and that the well was drilled in virgin territory.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

Carl L. Pate

CLP:mm

c.c. to Mr. G. M. Smith

Maynard W-3

BUSHIO OIL COMPANY

CORE ANALYSIS REPORT

MAYNARD LEASE WELL NO. W-3

WOODSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

NOVEMBER 11, 1950

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Susmie Oil Company Lease Maynard Well No. W-3
 Location 400' West of East Line & 900' South of North Line, SW¹
 Section 24 Twp. 23S Rge. 16E County Woodson State Kansas

| | | |
|-----------------------------------------------------------------|------|----------|
| Name of Sand | | Squirrel |
| Top of Core | | 941.00 |
| Bottom of Core | | 955.70 |
| Top of ^{PAY} Sand | | 942.90 |
| Bottom of Sand | | 949.40 |
| Total Feet of Permeable Sand | | 3.15 |
| Distribution of Permeable Sand: | | |
| Permeability Range Millidarcys | Feet | Cum. Ft. |
| <hr/> | | |
| Average ^{Effective} Permeability, Millidarcys | | 6.30 |
| Average Percent Porosity | | 21.37 |
| Average Percent Oil Saturation | | 38.19 |
| Average Percent Water Saturation | | - |
| Average Oil Content, Bbls./A. Ft. | | 632. |
| Total Oil Content, Bbls./Acre | | 1,992. |
| Average Percent Oil Recovery by Laboratory Flooding Tests | | 6.29 |
| Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. | | 103. |
| Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre | | 325. |
| Total Calculated Oil Recovery, Bbls./Acre | | 1,850. |
| Packer Setting, Feet | | - |
| Viscosity, Centipoises @ | | |
| A. P. I. Gravity, degrees @ 60 °F | | |

OIL FIELD RESEARCH LABORATORIES

LOG

Company Susnio Oil Company Lease Maynard Well No. N-3

| <u>Depth Interval, Feet</u> | <u>Description</u> |
|---------------------------------|--------------------------------------------------------------------------|
| 941.00 - 941.35 | - Laminated shaley sandstone. |
| 941.35 - 941.65 | - Laminated sandy shale. |
| 941.65 - 942.15 | - Dark brown fine grained slightly laminated micaceous shaley sandstone. |
| 942.15 - 942.40 | - Laminated shaley sandstone. |
| 942.40 - 942.90 | - Dark brown fine grained slightly laminated micaceous shaley sandstone. |
| 942.90 - 944.35 | - Dark brown fine grained micaceous sandstone. |
| 944.35 - 944.55 | - Laminated shaley sandstone. |
| 944.55 - 945.35 | - Dark brown fine grained micaceous sandstone. |
| 945.35 - 945.60 | - Dark brown fine grained slightly laminated micaceous shaley sandstone. |
| 945.60 - 946.65 | - Dark brown fine grained micaceous sandstone. |
| 946.65 - 946.90 | - Laminated shaley sandstone. |
| 946.90 - 947.90 | - Dark brown fine grained micaceous sandstone. |
| 947.90 - 948.50 | - Gray sandy shale. |
| 948.50 - 949.40 | - Dark brown fine grained micaceous shaley sandstone. |
| 949.40 - 955.70 | - Gray sandy shale. |

Oil Field Research Laboratories
RESULTS OF SATURATION TESTS

TABLE III

Company SUNSHINE OIL COMPANY Lease RAYBARD Well No. W-3

| Sat. No. | Depth, Feet | Effective Porosity Percent | Percent Saturation | | Oil Content, Bbls./A. Ft. | Feet of Core | | Total Oil Content Bbls./Acre |
|---------------------------------------------------------------------------------------|-------------|----------------------------|--------------------|-------|---------------------------|--------------|----------|------------------------------|
| | | | Oil | Water | | Ft. | Cum. Ft. | |
| F-2A | 943.55 | 22.0 | 38.6 | - | 659 | 0.80 | 0.80 | 528 |
| F-4A | 944.70 | 22.0 | 39.2 | - | 668 | 0.30 | 1.10 | 200 |
| F-5 | 946.12 | 22.8 | 38.6 | - | 683 | 1.05 | 2.15 | 716 |
| F-6 | 947.22 | 19.1 | 37.0 | - | 548 | 1.00 | 3.15 | 548 |
| Note: "A" samples were drilled from the core after it was received in the laboratory. | | | | | | Total | - - - - | 1,992 |

Oil Field Research Laboratories
SUMMARY OF SATURATION TESTS

TABLE IV

| Company | Lease | Well No. | | | |
|-------------------------|--------------------------------|--------------------------------------|-------------------------------------------|----------------------------------------|------------------------------------|
| Susmlo Oil Company | Maynard | W-3 | | | |
| Depth Interval, Feet | Average Percent Porosity | Average Percent Oil Saturation | Average Water Percent Saturation | Average Oil Content Bbls./A. Ft. | Total Oil Content Bbls./Acre |
| 942.90-947.90 | 21.37 | 38.19 | - | 632 | 1,992 |

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Susino Oil Company

Lease Maynard

Well No. 5-7

| 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. | | | |
| 2A | 943.55 | 22.0 | 38.6 | 559 | 8.1 | 138 | 30.5 | 60.0 | 521 | 135 | 5.33 | 15 |
| 4A | 944.70 | 22.0 | 39.2 | 668 | 3.6 | 61 | 35.6 | 62.4 | 607 | 83 | 3.73 | 15 |
| 5 | 946.12 | 22.8 | 38.6 | 683 | 5.4 | 96 | 33.2 | 58.2 | 587 | 75.5 | 2.97 | 15 |
| 6 | 947.22 | 19.1 | 37.0 | 548 | 6.8 | 96 | 30.5 | 60.0 | 432 | 171 | 11.35 | 15 |
| <p>Notes: cc - cubic centimeters *Volume of water recovered at the time of maximum oil recovery. **Determined by passing water through sample which still contains residual oil. "A" samples were drilled from the core after it was received in the laboratory.</p> | | | | | | | | | | | | |

Oil Field Research Laboratories

SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

| | | | | | |
|---------------------------------------------------|--------------------|-------|---------|----------|-----------------|
| Company | Susmlo Oil Company | Lease | Maynard | Well No. | M-3 |
| Depth Interval, Feet | | | | | 942.90 - 947.90 |
| Feet of Core Analyzed | | | | | 3.15 |
| Average Percent Porosity | | | | | 21.37 |
| Average Percent Original Oil Saturation | | | | | 78.19 |
| Average Percent Oil Recovery | | | | | 6.29 |
| Average Percent Residual Oil Saturation | | | | | 31.90 |
| Average Percent Residual Water Saturation | | | | | 59.62 |
| Average Percent Total Residual Fluid Saturation | | | | | 91.52 |
| Average Original Oil Content, Bbls./A. Ft. | | | | | 632. |
| Average Oil Recovery, Bbls./A. Ft. | | | | | 103. |
| Average Residual Oil Content, Bbls./A. Ft. | | | | | 529. |
| Total Original Oil Content, Bbls./Acre | | | | | 1,993. |
| Total Oil Recovery, Bbls./Acre | | | | | 325. |
| Total Residual Oil Content, Bbls./Acre | | | | | 1,668. |
| Average Effective Permeability, Millidarcys | | | | | 6.30 |
| Average Initial Fluid Production Pressure, p.s.i. | | | | | 15.0 |

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