

Un
Inc.



PETROLEUM RESERVOIR ENGINEERING
HOUSTON, TEXAS

COMPANY Trigood Oil Company DATE October 23, 1951
WELL No. 9 "J" Pomeroy ANALYST CW
FIELD Atwood
COUNTY Logan STATE Colorado

THE ANALYSES AND INTERPRETATIONS ARE BASED ON MATERIAL BROUGHT TO UNITED CORE, INC., BY THE CLIENT, AND SUCH DATA AND INTERPRETATIONS ARE ACCESSIBLE ONLY TO THAT COMPANY WHICH THE CLIENT REPRESENTS. UNITED CORE, INC., MAKES NO WARRANTY AND MAKES NO GUARANTEE FOR THE INTERPRETATIONS AND OPINIONS OF THE DATA, OUR OPINIONS OF AN ANALYSIS ARE PLACED AT THE DISCRETION OF THE OPERATOR.

PERMEABILITY MILLIDARCYS O—O

400 300 200 100 0

POROSITY — % X—X

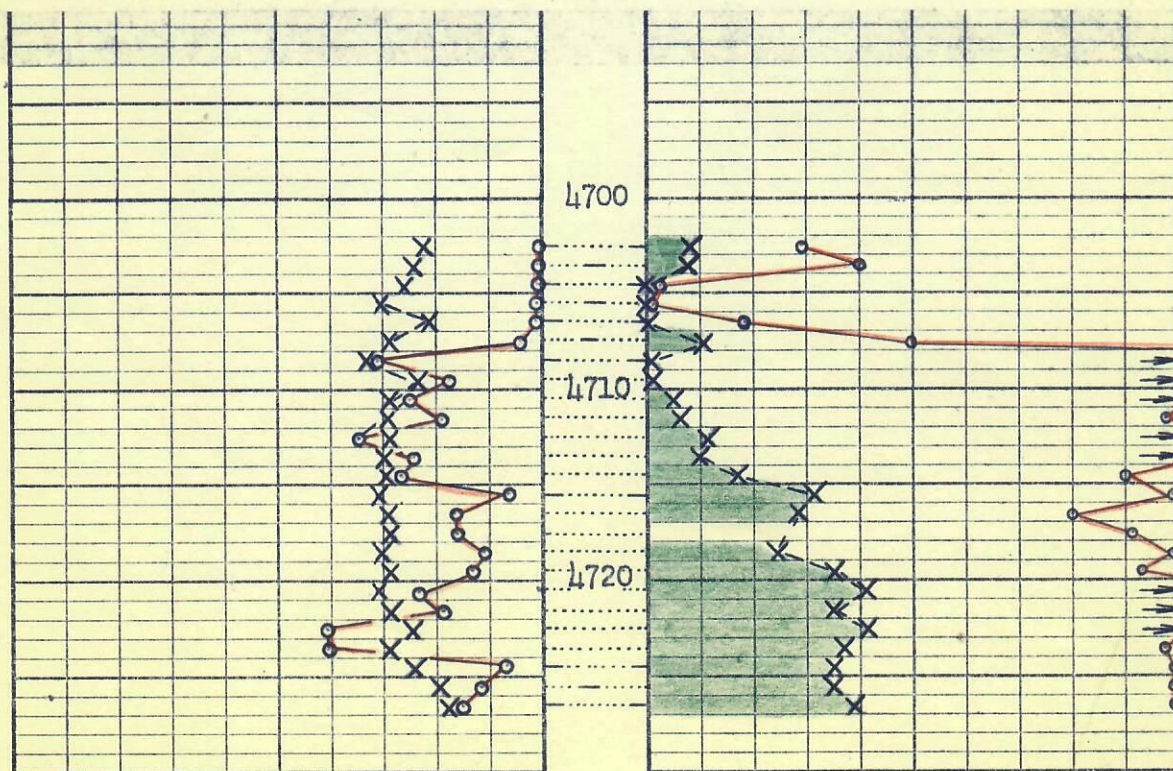
30 15 0

CONNATE WATER % SATURATION

0 70 60 50 40 30

OIL % PORE SATURATION X—X

0 5 10 15 20



UNITED CORE INC.
PETROLEUM RESERVOIR ENGINEERING
HOUSTON, TEXAS

20-7N-53W

WELL No. 9 "J" Pomeroy COUNTY Logan STATE Colorado
 COMPANY Trigood Oil Company DATE October 23, 1951 FILE No. A - 675
 FIELD Atwood TYPE CORES Diamond ANALYST IC - RS

ANALYSIS DATA AND INTERPRETATIONS

| SAM. No. | DEPTH | PERMEABILITY MILLIDARCYS | | POROSITY % | SATURATION WATER % PORE SPACE | SATURATION OIL % PORE SPACE | PROBABLE PRODUCTION | REMARKS |
|-------------|-------|-----------------------------|-------|---------------|-------------------------------------|-----------------------------------|------------------------|---|
| | | Hor. | Vert. | | | | | |
| 1. | 4702 | 0.6 | 0.3 | 17.3 | 65.8 | 3.5 | Low Perm. | Hard, fine grained gray silty, very shaly sand with very slight odor. |
| 2. | 4703 | 1.1 | 0.1 | 18.5 | 60.0 | 3.2 | Low Perm. | Hard, fine grained gray silty, very shaly sand with very slight odor. |
| 3. | 4704 | 3.2 | 0.8 | 19.0 | 78.0 | 0.0 | Low Perm. | Hard, fine grained gray silty, very shaly sand. n/s |
| 4. | 4705 | 3.9 | 2.3 | 22.2 | 78.8 | 0.0 | Low Perm. | Hard, fine grained gray silty, very shaly sand. n/s |
| 5. | 4706 | 4.2 | 0.7 | 16.5 | 71.5 | 0.0 | Low Perm. | Hard, fine grained gray silty, very shaly sand. n/s |
| 6. | 4707 | 20.1 | 0.6 | 20.8 | 61.5 | 5.3 | Gas-Cond. | Hard, fine grained gray slightly shaly sand with odor and stain. |
| 7. | 4708 | 156.6 | 153.5 | 25.2 | 41.3 | 1.2 | Gas-Cond. | Hard, fine grained gray slightly shaly sand with odor and stain. |
| 8. | 4709 | 90.8 | 89.3 | 18.5 | 35.2 | 1.6 | Gas-Cond. | Hard, fine grained gray sand with odor and light stain. |
| 9. | 4710 | 127.6 | 126.9 | 20.6 | 30.6 | 2.4 | Gas-Cond. | Hard, fine grained gray sand with odor and light stain. |
| 10. | 4711 | 96.3 | 103.2 | 21.4 | 43.2 | 2.9 | Gas-Cond. | Hard, fine grained, gray sand with odor and light stain. |
| 11. | 4712 | 171.1 | 210.4 | 20.2 | 35.7 | 5.4 | Gas-Cond. | Hard, fine grained gray sand with odor and light stain. |
| 12. | 4713 | 121.0 | 95.9 | 22.3 | 36.8 | 4.9 | Gas-Cond. | Hard, fine grained gray sand with odor and light stain. |
| 13. | 4714 | 134.5 | 132.9 | 21.1 | 45.0 | 8.1 | Oil | Hard, fine grained gray sand with odor and stain. |
| 14. | 4715 | 32.9 | 54.2 | 23.6 | 40.7 | 15.7 | Oil | Hard fine grained gray shaly laminated sand with odor and stain. |
| 15. | 4716 | 86.2 | 33.9 | 20.5 | 47.8 | 14.2 | Oil | Hard fine grained gray sand with odor and stain. |

20-7N-53W

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HOUSTON, TEXAS

WELL No. 9 "J" Pomeroy COUNTY Logan STATE Texas
 COMPANY Trigood Oil Company DATE October 23, 1951 FILE No. A - 675
 FIELD Atwood TYPE CORES Diamond ANALYST IG - RS

ANALYSIS DATA AND INTERPRETATIONS

| SAM. No. | DEPTH | PERMEABILITY MILLIDARCYS | | POROSITY % | SATURATION WATER % PORE SPACE | SATURATION OIL % PORE SPACE | PROBABLE PRODUCTION | REMARKS |
|-------------|-------|-----------------------------|-------|---------------|-------------------------------------|-----------------------------------|------------------------|--|
| | | Hor. | Vert. | | | | | |
| 16. | 4717 | 82.4 | 19.6 | 20.6 | 31.2 | 19.4 | Oil | Hard fine grained gray sand with odor and stain. |
| 17. | 4718 | 54.4 | 45.7 | 22.4 | 40.2 | 12.5 | Oil | Hard fine grained gray sand with odor and stain. |
| 18. | 4719 | 68.4 | 10.2 | 21.6 | 41.2 | 17.2 | Oil | Hard fine grained gray sand with odor and stain. |
| 19. | 4720 | 118.9 | 112.1 | 23.4 | 31.3 | 20.6 | Oil | Hard fine grained gray sand with odor and stain. |
| 20. | 4721 | 96.0 | 84.3 | 21.3 | 34.3 | 17.4 | Oil | Hard fine grained gray sand with odor and stain. |
| 21. | 4722 | 204.2 | 227.1 | 19.0 | 31.1 | 20.5 | Oil | Hard fine grained gray sand with odor and stain. |
| 22. | 4723 | 202.9 | 226.3 | 21.3 | 40.3 | 18.3 | Oil | Hard fine grained gray sand with odor and stain. |
| 23. | 4724 | 34.9 | 9.0 | 19.0 | 37.4 | 17.9 | Oil | Hard fine grained gray shaly laminated sand with odor and stain. |
| 24. | 4725 | 61.9 | 25.7 | 14.8 | 33.8 | 17.6 | Oil | Hard fine grained gray shaly laminated sand with odor and stain. |
| 25. | 4726 | 77.8 | 6.5 | 13.5 | 32.6 | 19.2 | Oil | Hard fine grained gray shaly laminated sand with odor and stain. |

UNITED CORE INC.
PETROLEUM RESERVOIR ENGINEERING
HOUSTON 4, TEXAS

No. 9 "J" Pomeroy

DATA AVERAGES AND OIL RECOVERY FIGURES

| DEPTH | 4707 - 4714 | 4714 - 4727 | | |
|---|---------------|-------------|--|--|
| FEET OF PRODUCTION FORMATION OF SECTION ANALYZED | 7 | 13 | | |
| AVERAGE PERMEABILITY IN MILLIDARCYS | 111.9 | 96.6 | | |
| AVERAGE POROSITY, PER CENT | 21.3 | 20.2 | | |
| AVERAGE TOTAL WATER % OF PORE SPACE | 40.6 | 37.5 | | |
| AVERAGE RESIDUAL OIL % OF PORE SPACE | 3.4 | 16.8 | | |
| AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE | 31.0 | 32.0 | | |
| GRAVITY OF RESIDUAL OIL A.P.I. | | | | |
| ESTIMATED FORMATION VOLUME FACTOR—USED IN CALCULATING RECOVERABLE OIL | (1) | 1.25 | | |
| PRODUCTIVE CAPACITY—PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS | 783.3 | 1255.8 | | |
| RECOVERABLE OIL BY WATER DRIVE—BBLs. PER ACRE FOOT | | 585 (2) | | |
| RECOVERABLE OIL BY GAS EXPANSION—BBLs. PER ACRE FOOT | | 351 (2) | | |
| CU. FT. OF GAS RECOVERABLE FROM GAS PHASE RESERVOIR FOR ONE ACRE DRAINAGE | 4,799,000 (3) | | | |

- (1) NO ESTIMATE FOR GAS PHASE RESERVOIR.
 (2) FROM ESTIMATED BOTTOM HOLE PRESSURE TO ZERO.
 (3) 80% RECOVERY.

Yours very truly,

UNITED CORE, INC.

B. F. WINBORN, JR.

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UNITED CORE INC.

PETROLEUM RESERVOIR ENGINEERING

3806 SOUTH SHEPHERD
HOUSTON 6, TEXAS

RECEIVED

October 23, 1951

NOV 2 1951

CASPER, WYOMING

Re: Core Analysis Report
No. 9 "J" Pomeroy ✓
Atwood Field
Logan County,
Colorado

Trigood Oil Company
Box 1689
Casper, Wyoming

Gentlemen:

The cores from your well, No. 9 "J" Pomeroy, have been analyzed as requested. The data will be found tabulated on the following page and indicated on the coregraph. The data averages and recovery figures will be found tabulated on the last page of this report.

The sections cored and analyzed will be discussed in the indented paragraphs below.

4702 to 4707 Feet - Non-Productive.

Absence of permeability eliminates the possibility of production of any type.

4707 to 4714 Feet - Gas-Condensate Productive.

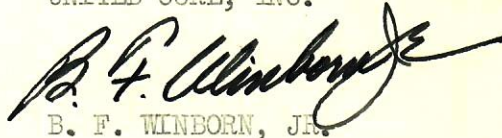
This sand forms a gas cap for the oil section immediately below. The permeability is fairly good, and the water content is well below a critical point.

4714 to 4727 Feet - Oil Productive.

Fairly good permeability and porosity are the characterizing features of this sand. The water content is very low, and the residual oil saturation is both even and substantial.

Yours very truly,

UNITED CORE, INC.


B. F. WINBORN, JR.

BFW:cr
Attachments.