

OILFIELD RESEARCH LABORATORIES

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April 28, 1961

Union Texas Natural Gas Corporation
& Layton Oil Company
P.O. Box 263
Independence, Kansas

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the Mealy Lease, Well No. 5-E, Allen County, Kansas, and submitted to our laboratory on April 24, 1961.

This core was sampled and submitted to our laboratory by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman

BRP:db

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LOG

Company Union Texas Natural Gas Corp.
& Layton Oil Company Lease Mealy Well No. 5-E

Depth Interval, Description
Feet

859.0 - 860.4 - Dark brown sandstone.
860.4 - 860.6 - Calcareous shale.
860.6 - 864.6 - Dark brown slightly laminated shaley sandstone.
864.6 - 865.0 - Shaley limestone.
865.0 - 877.3 - Dark brown sandstone.
877.3 - 880.0 - Loss.
880.0 - 899.4 - Dark brown sandstone.
899.4 - 910.0 - Brown slightly calcareous sandstone.
910.0 - 911.85 - Dark slightly calcareous carbonaceous sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company Union Texas Natural Gas Corp. & Layton Oil Company Lease Mealy Well No. 5-E

| 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 | | | Ft. | Cum. Ft. | | |
| 1 | 859.1 | 23.5 | 29 | 42 | 529 | 1305. | 0.5 | 0.5 | 265 | 652.50 |
| 2 | 861.1 | 25.5 | 51 | 7 | 1009 | 1410. | 1.0 | 1.5 | 1009 | 1410.00 |
| 3 | 863.1 | 20.4 | 43 | 15 | 680 | 1152. | 1.0 | 2.5 | 680 | 1152.00 |
| 4 | 865.1 | 23.7 | 27 | 36 | 496 | 295. | 0.5 | 3.0 | 248 | 147.50 |
| 5 | 867.1 | 26.0 | 45 | 20 | 907 | 2373. | 1.0 | 4.0 | 907 | 2373.00 |
| 6 | 869.1 | 27.7 | 45 | 21 | 966 | 2613. | 1.0 | 5.0 | 966 | 2613.00 |
| 7 | 871.1 | 23.2 | 50 | 16 | 900 | 2746. | 1.0 | 6.0 | 900 | 2746.00 |
| 8 | 873.1 | 24.2 | 58 | 12 | 1089 | 4898. | 1.0 | 7.0 | 1089 | 4898.00 |
| 9 | 875.1 | 22.4 | 61 | 15 | 1060 | 3641. | 1.0 | 8.0 | 1060 | 3641.00 |
| 10 | 880.1 | 26.4 | 49 | 8 | 1002 | 2566. | 0.5 | 8.5 | 501 | 1283.00 |
| 11 | 882.1 | 27.5 | 51 | 7 | 1089 | 2062. | 1.0 | 9.5 | 1089 | 2062.00 |
| 12 | 884.1 | 26.3 | 53 | 5 | 1082 | 3730. | 1.0 | 10.5 | 1082 | 3730.00 |
| 13 | 886.1 | 26.2 | 49 | 14 | 996 | 2176. | 1.0 | 11.5 | 996 | 2176.00 |
| 14 | 888.1 | 25.6 | 46 | 6 | 913 | 1464. | 1.0 | 12.5 | 913 | 1464.00 |
| 15 | 890.1 | 25.8 | 67 | 5 | 1340 | 1843. | 1.0 | 13.5 | 1340 | 1843.00 |
| 16 | 892.1 | 25.5 | 50 | 11 | 989 | 1934. | 1.0 | 14.5 | 989 | 1934.00 |
| 17 | 894.1 | 26.1 | 38 | 17 | 769 | 2176. | 1.0 | 15.5 | 769 | 2176.00 |
| 18 | 896.1 | 24.3 | 46 | 23 | 867 | 1284. | 1.0 | 16.5 | 867 | 1284.00 |
| 19 | 898.1 | 24.1 | 47 | 20 | 879 | 2008. | 1.0 | 17.5 | 879 | 2008.00 |
| 20 | 900.1 | 24.8 | 47 | 25 | 903 | 918. | 1.2 | 18.7 | 1083 | 1101.60 |
| 21 | 902.1 | 26.0 | 34 | 44 | 685 | 1070. | 1.0 | 19.7 | 685 | 1070.00 |
| 22 | 904.1 | 22.0 | 27 | 54 | 460 | 2034. | 1.0 | 20.7 | 460 | 2034.00 |
| 23 | 906.1 | 25.7 | 13 | 62 | 259 | 1780. | 1.0 | 21.7 | 259 | 1780.00 |
| 24 | 908.1 | 24.2 | 16 | 79 | 300 | 1369. | 1.0 | 22.7 | 300 | 1369.00 |
| 25 | 910.1 | 24.7 | 32 | 31 | 613 | 1344. | 0.5 | 23.2 | 307 | 672.00 |

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III - B

Company Union Texas Natural Gas Corp. & Layton Oil Company Lease Mealy Well No. 5-E

| Depth Interval, Feet | Feet of Core Analyzed | Average Permeability, Millidarcys | Permeability Capacity Ft. x Md. | Depth Interval, Feet | Feet of Core Analyzed | Average Permeability, Millidarcys | Permeability Capacity Ft. x Md. | Depth Interval, Feet | Feet of Core Analyzed | Average Porosity | Average Percent Oil Saturation | Average Percent Water Saturation | Average Oil Content Bbl./A. Ft. | Total Oil Content Bbls./Acre |
|----------------------|-----------------------|-----------------------------------|---------------------------------|----------------------|-----------------------|-----------------------------------|---------------------------------|----------------------|-----------------------|------------------|--------------------------------|----------------------------------|---------------------------------|------------------------------|
| 859.0 - 869.6 | 5.0 | 1670. | 8,348.00 | 859.0 - 869.6 | 5.0 | 1670. | 8,348.00 | 859.0 - 869.6 | 5.0 | 24.7 | 42.4 | 20.4 | 815 | 4,075 |
| 870.6 - 898.6 | 13.7 | 2359. | 32,346.60 | 870.6 - 898.6 | 13.7 | 2359. | 32,346.60 | 870.6 - 898.6 | 13.7 | 25.2 | 50.9 | 13.5 | 990 | 13,557 |
| 899.4 - 910.5 | 4.5 | 1540. | 6,925.00 | 899.4 - 910.5 | 4.5 | 1540. | 6,925.00 | 899.4 - 910.5 | 4.5 | 24.6 | 23.6 | 56.6 | 447 | 2,011 |
| 859.0 - 910.5 | 23.2 | 2058. | 47,619.60 | 859.0 - 910.5 | 23.2 | 2058. | 47,619.60 | 859.0 - 910.5 | 23.2 | 24.9 | 43.7 | 23.4 | 846 | 19,643 |