OILFIELD RESEARCH LABORATORIES
536 NORTH HIGHLAND - CHANUTE, KANSAS 66720 - PHONE (316) 431-2650

November 24, 1982

K. C. Energy
c/o Kevin Nunnink
4018 Main Street
Kansas City, Missouri 64111

Gentlemen:

Attached hereto are the results of tests run on the rotary core taken from the Milligan Lease, Well No. 13, located 165' from the South Line and 495' from the East Line in Section 14, T-27S, R-15E, Wilson County, Kansas.

The core was sampled and sealed in plastic bags by a representative of the client and submitted to our laboratory on November 22, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/rmc

5 c to Kansas City, Missouri

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LOG

Company K. C. Energy Lease Milligan Well No. 13

| Depth Interval, Feet | Description |
|---|---|
| | CATTLEMAN SANDSTONE |
| 907.0 - 908.4 | Grayish brown very shaly sandstone. |
| 908.4 - 909.0 | Grayish brown shaly sandstone. |
| 909.0 - 910.1 | Brown sandstone. |
| 910.1 - 912.0 | Grayish light brown very shaly sandstone. |
| 912.0 - 913.0 | Grayish brown shaly sandstone. |
| 913.0 - 916.3 | Brown sandstone. |
| 916.3 - 917.2 | Brown shaly sandstone with scattered fine gray shale and mica partings. |
| 917.2 - 918.0 | Brown slightly shaly sandstone. |
| 918.0 - 919.0 | Brown sandstone. |
| 919.0 - 921.5 | Grayish black very shaly carbonaceous sandstone. |
| 921.5 - 922.1 | Coal. |
| 922.1 - 922.5 | Gray shale. |

# Oilfield Research Laboratories

## RESULTS OF SATURATION & PERMEABILITY TESTS

### TABLE 1

Company K. C. Energy Lease Milligan Well No. 13

| Sample No. | Depth, Feet | Porosity Percent | Percent Saturation | | | Oil Content Bbls. / A. Ft. | Permeability, Millidarcys |
|---|---|---|---|---|---|---|---|
| | | | Oil | Water | Total | | |
| 1 | 907.5 | 12.7 | 27 | 60 | 87 | 266 | Imp. |
| 2 | 908.5 | 13.0 | 32 | 36 | 68 | 323 | 2.3 |
| 3 | 909.5 | 14.1 | 33 | 40 | 73 | 361 | 11. |
| 4 | 910.5 | 10.0 | 15 | 78 | 93 | 116 | Imp. |
| 5 | 911.5 | 12.1 | 14 | 80 | 94 | 131 | 0.98 |
| 6 | 912.6 | 11.9 | 26 | 54 | 80 | 240 | 1.3 |
| 7 | 913.5 | 17.5 | 46 | 32 | 78 | 625 | 22. |
| 8 | 914.5 | 15.8 | 41 | 29 | 70 | 503 | 18. |
| 9 | 915.5 | 17.3 | 49 | 35 | 84 | 658 | 19. |
| 10 | 916.4 | 15.5 | 45 | 38 | 83 | 541 | 5.2 |
| 11 | 917.6 | 15.0 | 25 | 51 | 76 | 291 | 7.2 |
| 12 | 918.5 | 17.8 | 34 | 37 | 71 | 470 | 47. |
| 13 | 919.5 | 14.7 | 50 | 29 | 79 | 570 | 0.17 |
| 14 | 920.4 | 14.4 | 58 | 21 | 79 | 648 | 0.20 |
| 15 | 921.4 | 15.7 | 53 | 34 | 87 | 646 | 0.89 |