# OILFIELD RESEARCH LABORATORIES

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


February 25, 1982

Zoandra Petroleum, Inc.
P. O. Box 931
Chanute, Kansas 66720

Gentlemen:

Attached hereto are the results of tests run on the rotary cores taken from the Horner Lease, Well No. 6, located in Section 3, T-31S, R-15E, in Montgomery County, Kansas.

The cores were sampled and sealed in plastic bags by a representative of the client and were submitted to our laboratory on February 22, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Chanute, Kansas

OILFIELD RESEARCH LABORATORIES

LOG

Name Zoandra Petroleum, Inc. Lease Horner Well No. 6

| Depth Interval, Feet | Description |
|---|---|
| | PERU SAND |
| 701.0 - 705.1 | Grayish light brown shaly sandstone. |
| 705.1 - 705.8 | Light brown sandstone. |
| 705.8 - 706.0 | Grayish brown shaly sandstone. |
| 706.0 - 709.2 | Light brown sandstone. |
| 709.2 - 714.8 | Grayish light brown very shaly sandstone. |
| 714.8 - 719.4 | Gray very shaly sandstone. |
| 719.4 - 721.0 | Grayish light brown very shaly sandstone. |
| | BARTLESVILLE SAND |
| 920.0 - 921.0 | Light brown sandstone with scattered fine shale partings. |
| 921.0 - 921.6 | Light brown slightly shaly sandstone with scattered fine shale partings. |
| 921.6 - 923.0 | Gray and brown finely laminated shale and sandstone. |
| 923.0 - 925.9 | Light brown sandstone. |
| 925.9 - 930.0 | Gray and brown finely laminated shale and sandstone. |
| | LOWER BARTLESVILLE SAND |
| 970.0 - 970.3 | Gray shale. |
| 970.3 - 970.9 | Gray and brown finely laminated shale and sandstone. |
| 970.9 - 972.5 | Grayish brown very shaly sandstone. |
| 972.5 - 973.0 | Gray and brown finely laminated shale and sandstone. |
| 973.0 - 987.0 | No core. |
| 987.0 - 989.8 | Gray and brown finely laminated shale and sandstone. |

## Oilfield Research Laboratories

## RESULTS OF SATURATION & PERMEABILITY TESTS

### TABLE 1

Company Zoandra Petroleum, Inc Lease Horner Well No. 6

| Sample No. | Depth, Feet | Porosity Percent | Percent Saturation | | | Oil Content Bbls. / A Ft. | Perm., Mill. |
|---|---|---|---|---|---|---|---|
| | | | Oil | Water | Total | | |
| | PERU SAND | | | | | | |
| 1 | 701.6 | 14.4 | 16 | 63 | 79 | 179 | 2.4 |
| 2 | 702.5 | 16.8 | 18 | 52 | 70 | 235 | 4.5 |
| 3 | 703.5 | 17.1 | 21 | 54 | 75 | 279 | 6.0 |
| 4 | 704.5 | 14.3 | 14 | 57 | 71 | 155 | 4.5 |
| 5 | 705.4 | 18.2 | 16 | 50 | 66 | 226 | 23. |
| 6 | 706.6 | 16.1 | 19 | 55 | 74 | 237 | 12. |
| 7 | 707.7 | 18.3 | 20 | 67 | 87 | 284 | 12. |
| 8 | 708.7 | 17.7 | 16 | 59 | 75 | 220 | 18. |
| 9 | 709.5 | 15.8 | 4 | 79 | 83 | 49 | 1.9 |
| 10 | 710.6 | 15.8 | 12 | 69 | 81 | 147 | 2.5 |
| 11 | 711.5 | 13.5 | 9 | 88 | 97 | 94 | 0.61 |
| 12 | 712.3 | 15.4 | 17 | 68 | 85 | 203 | 4.2 |
| 13 | 713.3 | 13.5 | 12 | 73 | 85 | 126 | 0.30 |
| 14 | 714.5 | 14.4 | 16 | 73 | 89 | 179 | 0.56 |
| 15 | 715.6 | 12.2 | 5 | 92 | 97 | 47 | Imp. |
| 16 | 716.5 | 11.3 | 9 | 87 | 96 | 79 | 3.0 |
| 17 | 717.4 | 11.4 | 3 | 93 | 96 | 27 | Imp. |
| 18 | 718.5 | 12.4 | 2 | 87 | 89 | 19 | Imp. |
| 19 | 719.5 | 11.9 | 16 | 71 | 87 | 148 | Imp. |
| 20 | 720.5 | 13.3 | 12 | 78 | 90 | 124 | 0.39 |
| | BARTLESVILLE SAND | | | | | | |
| 21 | 920.4 | 14.2 | 31 | 26 | 57 | 342 | 14. |
| 22 | 921.4 | 13.4 | 26 | 31 | 57 | 270 | 3.9 |
| 23 | 922.6 | 11.7 | 30 | 42 | 72 | 272 | 0.38 |
| 24 | 923.4 | 14.5 | 28 | 31 | 59 | 315 | 10. |
| 25 | 924.4 | 15.5 | 19 | 36 | 55 | 229 | 10. |
| 26 | 925.5 | 16.5 | 24 | 40 | 64 | 307 | 23. |
| 27 | 926.5 | 8.8 | 38 | 56 | 94 | 251 | 1.9 |
| 28 | 927.6 | 9.4 | 28 | 67 | 95 | 204 | 0.34 |
| | LOWER BARTLESVILLE SAND | | | | | | |
| 29 | 970.6 | 9.9 | 40 | 31 | 71 | 307 | 1.0 |
| 30 | 971.6 | 10.6 | 23 | 52 | 75 | 189 | 0.32 |
| 31 | 972.6 | 7.0 | 15 | 81 | 96 | 82 | Imp. |
| 32 | 987.6 | 9.6 | 21 | 71 | 96 | 156 | Imp. |
| 33 | 988.4 | 8.5 | 30 | 65 | 95 | 198 | Imp. |
| 34 | 989.5 | 13.3 | 29 | 46 | 75 | 299 | 0.19 |