

# OILFIELD RESEARCH LABORATORIES

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

April 29, 1982

Conti Oil Corporation  
1420 South Santa Fe  
Chanute, Kansas 66720

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Schultz Lease, Well No. 5, located in Section 18, T-27S, R-20E in Neosho County, Kansas.

The core was sampled by a representative of the client and received in our laboratory, unbagged, on April 26, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/CAM

5 c to Chanute, Kansas

**Oilfield Research Laboratories**  
**GENERAL INFORMATION & SUMMARY**

Company Conti Oil Corp. Lease Schultz Well No. 5  
 Location \_\_\_\_\_  
 Section 18 Twp. 27S Rge. 20E County Neosho State Kansas

Elevation, Feet .....

Name of Sand..... Bartlesville

Top of Core ..... 772.0

Bottom of Core ..... 799.0

Top of Sand ..... 773.2

Bottom of Sand ..... 799.0

Total Feet of Permeable Sand ..... 15.7

| Distribution of Permeable Sand:<br>Permeability Range<br>Millidarcys | Feet | Cum. Ft. |
|----------------------------------------------------------------------|------|----------|
| 0 - 5                                                                | 7.5  | 7.5      |
| 5 - 10                                                               | 2.4  | 9.9      |
| 10 - 50                                                              | 3.5  | 13.4     |
| 50 - 100                                                             | 2.3  | 15.7     |

Average Permeability Millidarcys ..... 18.8

Average Percent Porosity ..... 16.8

Average Percent Oil Saturation ..... 21.5

Average Percent Water Saturation..... 49.0

Average Oil Content, Bbls./A. Ft. .... 274.

Total Oil Content, Bbls./Acre..... 5,538.

## OILFIELD RESEARCH LABORATORIES

LOGCompany Conti Oil Corporation Lease Schultz Well No. 5

| <u>Depth Interval,<br/>Feet</u> | <u>Description</u>                                         |
|---------------------------------|------------------------------------------------------------|
|                                 | <u>BARTLESVILLE SAND</u>                                   |
| 772.0 - 773.2                   | Gray shale.                                                |
| 773.2 - 775.0                   | Gray and brown laminated shale and sandstone.              |
| 775.0 - 775.8                   | Light brown sandstone.                                     |
| 775.8 - 778.5                   | Gray and brown laminated shale and sandstone.              |
| 778.5 - 780.3                   | Light brown sandstone with scattered gray shale partings.  |
| 780.3 - 780.8                   | Light brown slightly shaly sandstone.                      |
| 780.8 - 781.2                   | Gray and brown laminated shale and sandstone.              |
| 781.2 - 781.7                   | Light brown shaly sandstone.                               |
| 781.7 - 783.0                   | Light brown and gray finely laminated shale and sandstone. |
| 783.0 - 783.5                   | Light brown sandstone.                                     |
| 783.5 - 784.3                   | Gray and brown laminated shale and sandstone.              |
| 784.3 - 784.5                   | Light brown sandstone.                                     |
| 784.5 - 786.0                   | Light brown slightly shaly sandstone.                      |
| 786.0 - 787.0                   | No core.                                                   |
| 787.0 - 787.7                   | Gray and brown laminated shale and sandstone.              |
| 787.7 - 788.0                   | Light brown sandstone.                                     |
| 788.0 - 788.4                   | Gray and brown laminated shale and sandstone.              |
| 788.4 - 788.7                   | Light brown sandstone.                                     |

## OILFIELD RESEARCH LABORATORIES

| <u>Depth Interval,<br/>Feet</u> | <u>Description</u>                            |
|---------------------------------|-----------------------------------------------|
| 788.7 - 789.0                   | Gray and brown laminated shale and sandstone. |
| 789.0 - 789.7                   | Light brown sandstone.                        |
| 789.7 - 789.9                   | Gray shale.                                   |
| 789.9 - 790.5                   | Light brown sandstone.                        |
| 790.5 - 790.9                   | Gray shale.                                   |
| 790.9 - 791.5                   | Light brown sandstone.                        |
| 791.5 - 792.3                   | Gray and brown laminated shale and sandstone  |
| 792.3 - 792.9                   | Gray shale.                                   |
| 792.9 - 793.9                   | Gray and brown laminated shale and sandstone. |
| 793.9 - 795.0                   | Light brown shaly sandstone.                  |
| 795.0 - 795.7                   | Grayish brown very shaly sandstone.           |
| 795.7 - 798.6                   | Gray and brown laminated shale and sandstone. |
| 798.6 - 799.0                   | Brown shaly sandstone.                        |

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## RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

| 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 | Total |                           |              | Ft.          | Cum. Ft. |                   |                          |
| 1          | 773.4       | 14.8                       | 37                 | 39    | 76    | 425                       | 0.54         | 0.8          | 0.8      | 340               | 0.43                     |
| 2          | 774.5       | 13.6                       | 46                 | 51    | 97    | 485                       | Imp.         | 1.0          | 1.8      | 485               | 0.00                     |
| 3          | 775.4       | 17.9                       | 29                 | 43    | 72    | 403                       | 20.          | 0.8          | 2.6      | 322               | 16.00                    |
| 4          | 776.4       | 19.9                       | 42                 | 39    | 81    | 648                       | 2.4          | 1.2          | 3.8      | 778               | 2.88                     |
| 5          | 777.5       | 11.1                       | 26                 | 68    | 94    | 224                       | Imp.         | 1.5          | 5.3      | 336               | 0.00                     |
| 6          | 778.6       | 17.8                       | 16                 | 36    | 52    | 221                       | 35.          | 0.8          | 6.1      | 177               | 28.00                    |
| 7          | 779.5       | 19.8                       | 12                 | 37    | 49    | 184                       | 56.          | 1.0          | 7.1      | 184               | 56.00                    |
| 8          | 780.6       | 18.1                       | 12                 | 37    | 49    | 169                       | 7.1          | 0.5          | 7.6      | 85                | 3.55                     |
| 9          | 781.4       | 17.6                       | 12                 | 42    | 54    | 164                       | 4.3          | 0.5          | 8.1      | 82                | 2.15                     |
| 10         | 782.5       | 12.1                       | 24                 | 74    | 98    | 225                       | Imp.         | 1.3          | 9.4      | 293               | 0.00                     |
| 11         | 783.4       | 18.9                       | 12                 | 47    | 59    | 176                       | 12.          | 0.5          | 9.9      | 88                | 6.00                     |
| 12         | 784.4       | 17.7                       | 12                 | 43    | 55    | 165                       | 15.          | 0.2          | 10.1     | 33                | 3.00                     |
| 13         | 785.6       | 17.1                       | 14                 | 44    | 58    | 186                       | 7.1          | 1.5          | 11.6     | 279               | 10.65                    |
| 14         | 787.8       | 19.6                       | 16                 | 42    | 58    | 243                       | 25.          | 0.3          | 11.9     | 146               | 15.00                    |
| 15         | 788.5       | 19.8                       | 24                 | 46    | 70    | 369                       | 42.          | 0.3          | 12.2     | 111               | 12.60                    |
| 16         | 789.5       | 20.1                       | 15                 | 45    | 60    | 234                       | 79.          | 0.7          | 12.9     | 164               | 55.30                    |
| 17         | 790.4       | 19.8                       | 7                  | 50    | 57    | 108                       | 50.          | 0.6          | 13.5     | 65                | 30.00                    |
| 18         | 791.3       | 19.5                       | 8                  | 48    | 56    | 121                       | 78.          | 0.6          | 14.1     | 73                | 46.80                    |
| 19         | 793.3       | 15.1                       | 15                 | 54    | 69    | 176                       | 1.6          | 1.0          | 15.1     | 176               | 1.60                     |
| 20         | 794.5       | 16.9                       | 30                 | 34    | 64    | 393                       | 1.8          | 1.1          | 16.2     | 432               | 1.98                     |
| 21         | 795.6       | 16.5                       | 20                 | 42    | 62    | 256                       | Imp.         | 0.7          | 16.9     | 179               | 0.00                     |
| 22         | 796.4       | 19.9                       | 18                 | 33    | 51    | 278                       | 0.20         | 1.3          | 18.2     | 361               | 0.26                     |
| 23         | 797.6       | 11.9                       | 21                 | 69    | 90    | 194                       | 0.47         | 1.6          | 19.8     | 310               | 0.75                     |
| 24         | 798.8       | 15.8                       | 8                  | 55    | 63    | 98                        | 5.2          | 0.4          | 20.2     | 39                | 2.08                     |

Company Conti Oil Corp.

Lease

Schultz

Well No.

5

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

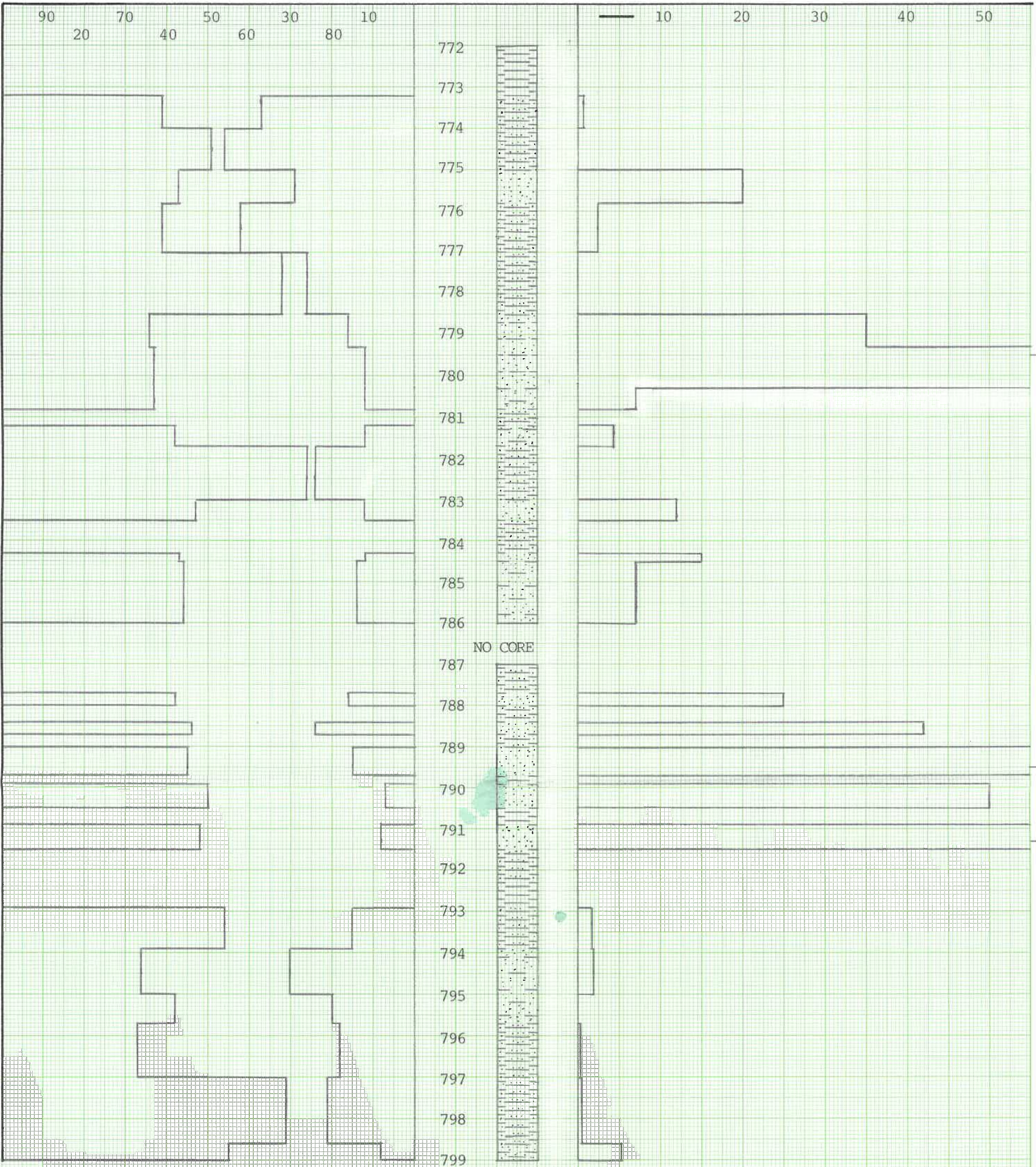
TABLE III

| Company                 |                          | Lease                                   |                                       | Well No. |  |
|-------------------------|--------------------------|-----------------------------------------|---------------------------------------|----------|--|
| Conti Oil Corp.         |                          | Schultz                                 |                                       | 5        |  |
| Depth Interval,<br>Feet | Feet of Core<br>Analyzed | Average<br>Permeability,<br>Millidarcys | Permeability<br>Capacity<br>Ft. x Md. |          |  |
| 773.2 - 777.0           | 2.8                      | 6.9                                     | 19.31                                 |          |  |
| 777.0 - 799.0           | 12.9                     | 21.4                                    | 275.72                                |          |  |
| 773.2 - 799.0           | 15.7                     | 18.8                                    | 295.03                                |          |  |

| Depth Interval,<br>Feet | Feet of Core<br>Analyzed | Average<br>Percent<br>Porosity | Average<br>Percent Oil<br>Saturation | Average<br>Percent Water<br>Saturation | Average<br>Oil Content<br>Bbl./A. Ft. | Total Oil<br>Content<br>Bbls./Acre |
|-------------------------|--------------------------|--------------------------------|--------------------------------------|----------------------------------------|---------------------------------------|------------------------------------|
| 773.2 - 777.0           | 3.8                      | 16.7                           | 39.3                                 | 43.0                                   | 507                                   | 1,925                              |
| 777.0 - 799.0           | 16.4                     | 16.8                           | 17.4                                 | 50.4                                   | 220                                   | 3,613                              |
| 773.2 - 799.0           | 20.2                     | 16.8                           | 21.5                                 | 49.0                                   | 274                                   | 5,538                              |





KEY:



SANDSTONE



SHALE



SHALY SANDSTONE



SANDSTONE WITH SHALE PARTINGS



LAMINATED SANDSTONE AND SHALE

CONTI OIL CORPORATION

SCHULTZ LEASE

NEOSHO COUNTY, KANSAS

WELL NO. 5

| DEPTH INTERVAL,<br>FEET | FEET OF CORE<br>ANALYZED | AVERAGE<br>PERCENT<br>POROSITY | AVG. OIL<br>SATURATION<br>PERCENT | AVG. WATER<br>SATURATION<br>PERCENT | AVERAGE<br>PERMEABILITY,<br>MILLIDARCYs |
|-------------------------|--------------------------|--------------------------------|-----------------------------------|-------------------------------------|-----------------------------------------|
| 773.2 - 777.0           | 3.8                      | 16.7                           | 39.3                              | 43.0                                | 6.9                                     |
| 777.0 - 799.0           | 16.4                     | 16.8                           | 17.4                              | 50.4                                | 21.4                                    |
| 773.2 - 799.0           | 20.2                     | 16.8                           | 21.5                              | 49.0                                | 18.8                                    |