

# TOWN OIL COMPANY

COPY

Route 4  
Paola, Kansas 66071

"Drilling and Production"

913-294-2125

Well #BW-1  
Farm: Elmer  
Lease Owner: Russell Petroleum

## WELL LOG

| Thickness<br>of Strata | Formation     | Total<br>Depth |
|------------------------|---------------|----------------|
| 0-10                   | Soil & clay   | 10             |
| 13                     | Shale         | 23             |
| 12                     | Lime          | 35             |
| 3                      | Shale & slate | 38             |
| 7                      | Lime          | 45             |
| 5                      | Shale         | 50             |
| 25                     | Sand          | 75             |
| 37                     | Shale         | 112            |
| 5                      | Lime          | 117            |
| 2                      | Coal          | 119            |
| 4                      | Shale         | 123            |
| 21                     | Sandy lime    | 144            |
| 1                      | Slate         | 145            |
| 12                     | Lime          | 157            |
| 3                      | Coal          | 160            |
| 27                     | Shale dk.     | 187            |
| 10                     | Shale         | 197            |
| 15                     | Shale dk.     | 212            |
| 19                     | Lime          | 231            |
| 2                      | Shale         | 233            |
| 3                      | Coal          | 236            |
| 3                      | Shale         | 239            |
| 4                      | Lime          | 243            |
| 1                      | Shale         | 244            |
| 3                      | Coal          | 247            |
| 3                      | Shale         | 250            |
| 2                      | Sand          | 252            |
| 4                      | Sand          | 256            |
| 11                     | Sand          | 267            |
| 67                     | Shale         | 334            |
| 3                      | Coal          | 337            |
| 21                     | Shale         | 358            |
| 4                      | Coal          | 362            |
| 17                     | Shale         | 379            |
| 3                      | Slate         | 382            |
| 16                     | Shale         | 398            |
| 4                      | Shale & slate | 402            |
| 13                     | Shale         | 415            |
| 22                     | Sand          | 437            |
| 5                      | Coal & shale  | 442            |
| 15                     | Shale         | 457            |
| 3                      | Coal          | 460            |
| 30                     | Shale         | 490            |
| 1                      | Lime          | 491            |
| 35                     | Shale         | 526            |
| 1                      | Shell         | 527            |

RECEIVED  
MINING COMMISSION

JUL 22 1992

MINING DIVISION  
Wichita, Kansas

COPY

Well #BW-1  
Farm: Elmer  
Lease Owner: Russell Petroleum

WELL LOG (cont'd)

| Thickness<br>of Strata | Formation | Total<br>Depth |
|------------------------|-----------|----------------|
| 13                     | Shale     | 540            |
| 8.5                    | Shale     | 548.5          |
| 1.5                    | Shells    | 550            |
| 20                     | Sand      | 570            |
| 1.5                    | Coal      | 571.5          |
| 5                      | Shale     | 576.5          |
| 1                      | Coal      | 577.5          |
| 2.5                    | shale     | 580            |
| 45                     | Shale     | 625 TD         |

Drilled 11-27-91  
20' of 6 $\frac{1}{4}$ " surface w/3 sacks cement  
Cored: 540-560 & 560-580

RECEIVED  
N COMMISSION

JUL 22 1992

CONSERVATION DIVISION  
WICHITA, KANSAS

## LOG

COPY

Company James E. Russell Petroleum, Inc. Lease Elmer "B" Well No. BW-1TUCKER SANDSTONE

| <u>Depth Interval,<br/>Feet</u> | <u>Description</u>                                                                          |
|---------------------------------|---------------------------------------------------------------------------------------------|
| 540.0 - 540.5                   | Shale, gray with widely scattered light gray sandstone inclusions.                          |
| 540.5 - 545.8                   | Shale, gray.                                                                                |
| 545.8 - 546.5                   | Shale, gray with scattered limestone inclusions.                                            |
| 546.5 - 547.0                   | Shale, gray, calcareous, fossiliferous.                                                     |
| 547.0 - 547.5                   | Shale, gray.                                                                                |
| 547.5 - 548.3                   | Shale, gray, calcareous, fossiliferous.                                                     |
| 548.3 - 548.5                   | Shale, gray.                                                                                |
| 548.5 - 549.8                   | Siltstone, light gray with widely scattered shale inclusions.                               |
| 549.8 - 550.2                   | Sandstone, light brown, shaly with scattered shale and mica partings.                       |
| 550.2 - 551.3                   | Shale and sandstone, gray and light brown, laminated.                                       |
| 551.3 - 551.5                   | Shale, gray with scattered light brown sandstone inclusions.                                |
| 551.5 - 552.2                   | Sandstone, light grayish brown, very shaly with scattered shale and mica partings.          |
| 552.2 - 554.4                   | Sandstone, light brown with widely scattered shale and mica partings and inclusions.        |
| 554.4 - 556.5                   | Sandstone, grayish brown, very shaly with scattered shale and mica partings and inclusions. |
| 556.5 - 557.1                   | Sandstone, brown with scattered shale and mica partings and inclusions.                     |
| 557.1 - 557.7                   | Sandstone, grayish brown, very shaly with scattered shale partings.                         |
| 557.7 - 558.0                   | Shale, gray with scattered grayish brown shaly sandstone partings.                          |

LOG

COPY

Company James E. Russell Petroleum, Inc. Lease Elmer "B" Well No. BW-1

| <u>Depth Interval,<br/>Feet</u> | <u>Description</u>                                                                          |
|---------------------------------|---------------------------------------------------------------------------------------------|
| 558.0 - 559.4                   | Sandstone, grayish brown, very shaly with scattered shale and mica partings.                |
| 559.4 - 560.0                   | Sandstone, brown, slightly calcareous with scattered shale and mica inclusions.             |
| 560.0 - 560.5                   | Sandstone, brownish black, very shaly, carbonaceous with scattered shale and mica partings. |
| 560.5 - 565.3                   | Shale and sandstone, gray and light gray, laminated.                                        |
| 565.3 - 566.2                   | Sandstone, light grayish brown, very shaly with scattered shale and mica partings.          |
| 566.2 - 567.0                   | Sandstone and shale, light gray and gray, laminated.                                        |
| 567.0 - 569.0                   | Shale and sandstone, gray and light gray, laminated.                                        |
| 569.0 - 570.4                   | Shale, gray with widely scattered light gray sandstone partings.                            |
| 570.4 - 571.3                   | Coal.                                                                                       |
| 571.3 - 571.8                   | Shale, gray with scattered coal partings.                                                   |
| 571.8 - 573.5                   | Shale, light gray.                                                                          |
| 573.5 - 577.0                   | Shale, gray.                                                                                |
| 577.0 - 577.5                   | Coal.                                                                                       |
| 577.5 - 580.0                   | Shale, light gray.                                                                          |

Note: Elevation, feet 962.5

CONSERVATION DIVISION  
Wichita, Kansas

MAY 24 1993

RECEIVED  
STATE OF KANSAS  
COMMISSION

# Oilfield Research Laboratories

## RESULTS OF SATURATION & PERMEABILITY TESTS

Company James E. Russell Petroleum, Inc. Lease Elmer "B" Well No. BW-1

| 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          | 551.6       | 14.6                       | 34                 | 57    | 91    | 385                       | 0.41         | 0.7          | 0.7      | 270               | 0.29                     |
| 2          | 552.6       | 15.9                       | 27                 | 44    | 71    | 333                       | 12.          | 1.0          | 1.7      | 333               | 12.00                    |
| 3          | 553.5       | 18.0                       | 32                 | 40    | 72    | 447                       | 23.          | 1.2          | 2.9      | 536               | 27.60                    |
| 4          | 554.5       | 15.5                       | 47                 | 38    | 85    | 565                       | 1.8          | 1.1          | 4.0      | 622               | 1.98                     |
| 5          | 555.7       | 15.3                       | 45                 | 51    | 96    | 534                       | 0.40         | 1.0          | 5.0      | 534               | 0.40                     |
| 6          | 556.6       | 16.3                       | 33                 | 45    | 78    | 417                       | 6.6          | 0.6          | 5.6      | 250               | 3.96                     |
| 7          | 557.5       | 12.5                       | 41                 | 57    | 98    | 398                       | 0.14         | 0.6          | 6.2      | 239               | 0.08                     |
| 8          | 558.5       | 14.3                       | 17                 | 70    | 87    | 189                       | 0.20         | 1.4          | 7.6      | 265               | 0.28                     |
| 9          | 559.6       | 15.3                       | 46                 | 36    | 82    | 546                       | 9.9          | 0.6          | 8.2      | 328               | 5.94                     |
| 10         | 560.3       | 15.6                       | 47                 | 43    | 90    | 569                       | Imp.         | 0.5          | 8.7      | 285               | 0.00                     |
| 11         | 563.5       | 12.2                       | 6                  | 85    | 91    | 57                        | Imp.         | 1.0          | 9.7      | 57                | 0.00                     |
| 12         | 565.5       | 13.0                       | 26                 | 66    | 92    | 262                       | Imp.         | 0.9          | 10.6     | 236               | 0.00                     |

RECEIVED  
STATE CORPORATION COMMISSION  
10-8-88

MAY 24 1993

CONSERVATION DIVISION  
Wichita, Kansas

COPY

**Oilfield Research Laboratories**  
**RESULTS OF LABORATORY FLOODING TESTS**

Company James E. Russell Petroleum, Inc. Lease Elmer "B" Well No. BW-1

| Sample No. | Depth, Feet | Effective Porosity Percent | Original Oil Saturation |              | Oil Recovery |              | Residual Saturation |         |              | Volume of Water Recovered cc* | Effective Permeability Millidarcys** | Initial Fluid Production Pressure Lbs./Sq./In |
|------------|-------------|----------------------------|-------------------------|--------------|--------------|--------------|---------------------|---------|--------------|-------------------------------|--------------------------------------|-----------------------------------------------|
|            |             |                            | %                       | Bbls./A. Ft. | %            | Bbls./A. Ft. | % Oil               | % Water | Bbls./A. Ft. |                               |                                      |                                               |
| 1          | 551.6       | 14.1                       | 34                      | 372          | 0            | 0            | 34                  | 58      | 372          | 0                             | Imp.                                 | -                                             |
| 2          | 552.6       | 15.8                       | 27                      | 331          | 0            | 0            | 27                  | 71      | 331          | 76                            | 1.39                                 | 30                                            |
| 3          | 553.5       | 18.0                       | 32                      | 447          | 0            | 0            | 32                  | 66      | 447          | 57                            | 0.83                                 | 30                                            |
| 4          | 554.5       | 15.7                       | 47                      | 572          | 0            | 0            | 47                  | 50      | 572          | 22                            | 0.28                                 | 35                                            |
| 5          | 555.7       | 15.0                       | 45                      | 524          | 0            | 0            | 45                  | 52      | 524          | 0                             | Imp.                                 | -                                             |
| 6          | 556.6       | 16.5                       | 33                      | 422          | 0            | 0            | 33                  | 58      | 422          | 50                            | 0.67                                 | 30                                            |
| 7          | 557.5       | 12.5                       | 41                      | 398          | 0            | 0            | 41                  | 57      | 398          | 0                             | Imp.                                 | -                                             |
| 8          | 558.5       | 13.9                       | 17                      | 183          | 0            | 0            | 17                  | 71      | 183          | 0                             | Imp.                                 | -                                             |
| 9          | 559.6       | 15.3                       | 46                      | 546          | 0            | 0            | 46                  | 37      | 546          | 0                             | Imp.                                 | -                                             |

RECEIVED  
STATE CORPORATION COMMISSION

MAY 24 1947

CONSERVATION & RECOVERY  
WICHITA, KANSAS