

Pool Eumont Seven Rivers - Queen Lea: 13  
Initial        X        Date of Test 6/18 thru 6/26,  
Company The Ohio Oil Company State Elliott Well No. 4  
Unit P Sec. 30 Trw 19-S 37-E Permian Basin Pipeline Company  
Casing 5" Wt. 15" 4.408 3929 \* To  
O.D. 2-3/8" Wt. 4.7 1.995 3119 3117 To 3119  
Gas Pay: From 3110' 3563' 3117 0.670 2086' Bar.Press. 13.2  
Producing Thru: Casing X Type well Single  
Date of Completion: 5-2-54 3082 Single-Gradenhead-G. G. or G.O. Dual  
Reservoir Temp. —

OBSERVED DATA

Tested Through (Prover) (Choke) (Orifice) None Type Taps Pipe

| No. | Flow Data            |                        |             |           | Casing Data |           | Casing Data |           | Duration of Flow Hr. |
|-----|----------------------|------------------------|-------------|-----------|-------------|-----------|-------------|-----------|----------------------|
|     | (Prover) (Line) Size | (Choke) (Orifice) Size | Press. psia | Temp. °F. | Press. psig | Temp. °F. | Press. psig | Temp. °F. |                      |
| SI  | 4"                   | 1.00"                  | —           | —         | 957.2       | —         | Packer      | —         | 72 hr. S.I.          |
| 1.  | 4"                   | 1.00"                  | 457.2       | 10.3      | 68          | 804.7     | "           | —         | 24-1/4 hr.           |
| 2.  | 4"                   | 1.00"                  | 452.9       | 17.7      | 65          | 773.7     | "           | —         | 23-3/4 hr.           |
| 3.  | 4"                   | 1.00"                  | 455.4       | 40.4      | 67          | 676.7     | "           | —         | 24 hr.               |
| 4.  | 4"                   | 1.00"                  | 457.0       | 50.0      | 70          | 611.5     | "           | —         | 24 hr.               |
| 5.  |                      |                        |             |           |             |           |             |           |                      |

FLOW CALCULATIONS

| No. | Coefficient (24-Hour) |        | Flow Factor | Gravity Factor | Compress. Factor | Rate of Flow Q-MCFPD @ 15.025 psia |
|-----|-----------------------|--------|-------------|----------------|------------------|------------------------------------|
|     |                       |        |             |                |                  |                                    |
| 1.  | 6.375                 | 71.61  | 470.4       | 0.7224         | 0.9463           | 1.050                              |
| 2.  | 6.375                 | 90.33  | 466.1       | 0.9952         | 0.9463           | 1.050                              |
| 3.  | 6.375                 | 137.59 | 468.6       | 0.9933         | 0.9463           | 1.050                              |
| 4.  | 6.375                 | 153.33 | 473.2       | 0.7905         | 0.9463           | 1.048                              |
| 5.  |                       |        |             |                |                  |                                    |

SEPARATOR CALCULATIONS

Gas Liquid Hydrocarbon Dry Gas 0.670 Specific Gravity Separator Gas —  
Gravity of Liquid Hydrocarbon — Specific Gravity Flowing Fluid —  
P<sub>c</sub> 9.936 0.134 270.4 P<sub>c</sub> 941.7

| No. | P <sub>w</sub> P <sub>c</sub> (psia) | P <sub>w</sub> P <sub>c</sub> | P <sub>w</sub> P <sub>c</sub> | P <sub>w</sub> P <sub>c</sub> | P <sub>w</sub> P <sub>c</sub> | P <sub>w</sub> P <sub>c</sub> | Cal. P <sub>w</sub> | P <sub>w</sub> P <sub>c</sub> |
|-----|--------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------|-------------------------------|
| 1.  | 817.9                                | 663.0                         | 4.471                         | 12.99                         | 2.68                          | 671.7                         | 270.0               | 819.6                         |
| 2.  | 786.9                                | 619.2                         | 5.683                         | 32.30                         | 4.33                          | 623.5                         | 312.2               | 789.6                         |
| 3.  | 689.9                                | 476.0                         | 5.525                         | 73.87                         | 9.90                          | 485.9                         | 455.8               | 697.1                         |
| 4.  | 624.7                                | 390.3                         | 2.532                         | 90.99                         | 12.19                         | 402.5                         | 532.2               | 634.4                         |
| 5.  |                                      |                               |                               |                               |                               |                               |                     |                               |

Absolute Potential: 1.670 MCFPD 0.965111  
COMPANY The Ohio Oil Company  
ADDRESS Box 2107, Hobbs, New Mexico  
AGENT and TITLE Thomas G. Lebb - Petroleum Engineer  
WITNESSED Mr. T. G. Lebb  
COMPANY Permian Basin Pipeline Company

REMARKS

\* 5" O.D. casing perf. as follows: 3110-3127, 3143-3160, 3173-3183, 3218-3300, 3325-3350, 3360-3388, & 3417-3563

Well will be retested due to improper joint alignment on basic pressure curve.

## INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

## NOMENCLATURE

- $Q$  = Actual rate of flow at end of flow period at W. H. working pressure ( $P_w$ ).  
MCF/da. @ 15.025 psia and 60° F.
- $P_c$  = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.  
psia
- $P_w$  = Static wellhead working pressure as determined at the end of flow period.  
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- $P_t$  = Flowing wellhead pressure (tubing if flowing through tubing, casing if  
flowing through casing.) psia
- $P_f$  = Meter pressure, psia.
- $h_w$  = Differential meter pressure, inches water.
- $F_g$  = Gravity correction factor.
- $F_t$  = Flowing temperature correction factor.
- $F_{pv}$  = Supercompressability factor.
- $n$  = Slope of back pressure curve.

Note: If  $P_w$  cannot be taken because of manner of completion or condition of well, then  $P_w$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .