STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

# OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122

## MULTIPOINT AND ONE POINT BACK PRESSURE TEST

ILLEGIBLE

| | | | | | |
|---|---|---|---|---|---|
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | Test Date: 2/16/90 | |
| Company: Enron Oil & Gas Company | | Connection: Enron Pipe Line Company | | | |
| Pool: Pitchfork Ranch | | Formation: Morrow "C" | | | Unit |
| Completion Date: 2/5/90 | Total Depth: 15,675' | | Plug Back TD: 15,490' | Elevation: 3389 KB | Farm or Lease Name: Diamond 8 Fed. |
| Csg. Size: 5½" / Wt.: 20# / d: 4.778 / Set At: 15672' | | | Perforations: From 15,214 To 15,280 | | Well No.: 1 |
| Tbg. Size: 2 7/8" / Wt.: 6.5 4700' 7.9 10064 / d: 2.441 2.323 / Set At: 14,810' | | | Perforations: From OPEN To ENDED | | Unit: B / Sec.: 8 / Twp.: 25S / Rge.: 34E |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single | | | Packer Set At: 14,750' | | County: Lea |
| Producing Thru: TBG. | Reservoir Temp. °F: 211° @ 15,214' | Mean Annual Temp. °F: 60° | Baro. Press. – $P_a$: 13.2 | | State: NM |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| 15,214' | 15,214' | .590 | .75 | .14 | - | | 3.068 | FLG. |

| NO. | FLOW DATA: Prover Line Size x Orifice Size | Press. p.s.i.g. | Diff. $h_w$ | Temp. °F | TUBING DATA: Press. p.s.i.g DWT | Temp. °F | CASING DATA: Press. p.s.i.g. | Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | 5490 | | PKR | | 49.75 hrs. |
| 1. | 3 x 2.000 | 840 | 2.00 | 80 | 4857 | | " | | 1 hr. |
| 2. | 3 x 2.000 | 840 | 8.00 | 76 | 4289 | | " | | 1 hr. |
| 3. | 3 x 2.000 | 850 | 16.00 | 68 | 3617 | | " | | 1 hr. |
| 4. | 3 x 2.000 | 870 | 25.00 | 66 | 3059 | | " | | 1 hr. |
| 5. | | | | | | | | | |

### RATE OF FLOW CALCULATIONS

| NO. | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure $P_m$ | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
|---|---|---|---|---|---|---|---|
| 1 | 21.32 | 41.31 | 853.2 | .9813 | 1.302 | 1.089 | 1,225 |
| 2 | 21.32 | 82.62 | 853.2 | .9850 | 1.302 | 1.089 | 2,460 |
| 3 | 21.32 | 117.52 | 863.2 | .9924 | 1.302 | 1.078 | 3,490 |
| 4 | 21.32 | 148.85 | 883.2 | .9943 | 1.302 | 1.079 | 4,433 |
| 5 | | | | | | | |

| NO. | $P_t$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1 | 1.26 | 540 | 1.52 | .843 |
| 2 | 1.26 | 536 | 1.51 | .843 |
| 3 | 1.28 | 528 | 1.49 | .861 |
| 4 | 1.31 | 526 | 1.48 | .859 |
| 5 | | | | |

Gas Liquid Hydrocarbon Ratio: 483.6 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 48.0 @ 60° Deg.
Specific Gravity Separator Gas: .590 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX 6 MIX = .597
Critical Pressure: 672 P.S.I.A. 672 P.S.I.A.
Critical Temperature: 354 R 354 R

$P_c$ 5503.2 $P_c^2$ 30285.2

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 4480.2 | 20073.1 | 10212.1 |
| 2 | | 4343.5 | 18866.0 | 11419.2 |
| 3 | | 3720.1 | 13839.1 | 16446.1 |
| 4 | | 3228.3 | 10421.9 | 19863.3 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.525$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.525$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 6.760$

Absolute Open Flow: 6.760 Mcfd @ 15.025 Angle of Slope θ: 45 Slope, n: 1.000

Remarks: Well made .75 bbls. 48.0 @ 60 condensate during test

Approved By Division: FOR RECORD ONLY

Conducted By: Jarrel Services, Inc.

Calculated By: Bob Murray

Checked By: Bob Murray

Enron Oil & Gas Co.
Diamond 8 Fed. No. 1
B-8-25S-34E
2-16-90