

**Initial Deliverability Test**

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS WELL TEST DATA SHEET - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA EXCEPT BARKER DOME STORAGE AREA)

Pool Undesignated Formation Dakota County S.J.  
 Purchasing Pipeline El Paso Natural Gas Co. Date Test Filed February 26, 1960  
 Operator El Paso Natural Gas Products Co. Lease Frontier Well No. 3-C  
 Unit E Sec. 5 Twp. 27N Rge. 11W Pay Zone From 6368 To 6471  
 Casing: OD 5.50 WT. 17.00 Set At. 6664 Turn. 2-3/8 WT. 4.70 T. Pen. 6435  
 Produced Through: Casing \_\_\_\_\_ Tubing X Gas Meter Measured 0.673 Estimated \_\_\_\_\_  
 Date of Flow Test: From 1-22-60 To 1-30-60 \* Date of Flow Measured 10-23-59  
 Meter Run Size 4" Orifice Size 1.750 Type Chart S.R. Type Trans. Flange

OBSERVED DATA

Flowing casing pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (a)  
 Flowing tubing pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (b)  
 Flowing meter pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (c)  
 Flowing meter pressure (meter reading when Dwt. measurement taken):  
 Normal chart reading \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (d)  
 Square root chart reading ( \_\_\_\_\_ )<sup>2</sup> x spring constant \_\_\_\_\_ = \_\_\_\_\_ psia (d)  
 Meter error (c) - (d) or (d) - (c) \_\_\_\_\_ ± \_\_\_\_\_ psi (e)  
 Friction loss, Flowing column to meter: \_\_\_\_\_ psi (f)  
 (b) - (c) Flow through tubing; (a) - (c) Flow through casing  
 Seven day average static meter pressure (from meter chart):  
 Normal chart average reading \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (g)  
 Square root chart average reading ( 7.30 )<sup>2</sup> x sp. const. 10 = 533 psia (g)  
 Corrected seven day avge. meter press. (p<sub>f</sub>) (g) + (e) = 533 psia (h)  
 P<sub>f</sub> = (h) + (f) = 533 + \_\_\_\_\_ = \_\_\_\_\_ psia (i)  
 Wellhead casing shut-in pressure (Dwt) 2041 psig + 12 = 2053 psia (j)  
 Wellhead tubing shut-in pressure (Dwt) 2053 psig + 12 = 2065 psia (k)  
 P<sub>c</sub> = (j) or (k) whichever well flowed through = 2065 psia (l)  
 Flowing Temp. (Meter Run) 60 °F + 460 = 520 °Abs (m)  
 P<sub>d</sub> = 1/2 P<sub>c</sub> = 1/2 (l) = 1032 psia (n)

Q = 1,477 (integrated) x  $\left( \frac{\text{FLOW RATE CALCULATION}}{\frac{\sqrt{P_c^2 - P_d^2}}{\sqrt{P_c^2 - P_w^2}}} \right) = \underline{1,477} MCF/da$

D = Q 1,477  $\left[ \frac{(P_c^2 - P_d^2)^{.75}}{(P_c^2 - P_w^2)^{.75}} \right]^n = \underline{1,266} MCF/da.$

SUMMARY  
 P<sub>c</sub> = 2065 psia Company El Paso Natural Gas Products Co.  
 Q = 1,477 Mcf/day By John J. Stange  
 P<sub>w</sub> = 580 psia Title Petroleum Engineer  
 P<sub>d</sub> = 1032 psia Witnessed by \_\_\_\_\_  
 D = 1,266 Mcf/day Company \_\_\_\_\_

- \* This is date of completion test.
- \* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e <sup>-S</sup> )	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-S</sup> ) R <sup>2</sup>	P <sub>f</sub> <sup>2</sup> (Column 1)	P <sub>f</sub> <sup>2</sup> + R <sup>2</sup>	P <sub>w</sub>
4331	0.270	192.8	52.0	284,000	336,000	580

D<sub>500</sub> =  $\left( \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right)^N = \left( \frac{4,002,000}{3,980,000} \right)^{.75} = 1.005^{.75} = \underline{1,482} MCF/D$

*Ok*