

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 Dakota Formation Dakota County San Juan  
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed April 29, 1959  
Operator El Paso Natural Gas Products Co. Lease Delhi-Taylor Well No. 1-C (GD)  
Unit M Sec. 4 Twp. 26N Rge. 11W Pay Zone: From 6282' To 6376'  
Casing: OD 7-5/8" WT. 26.40# Set At 4497' Tubing: OD 2-3/8" WT. 4.70# T. Perf. 6211'  
Liner: 5-1/2" WT. 15.50# Set at 4404'-6524'  
Produced Through: Casing \_\_\_\_\_ Tubing \_\_\_\_\_ Gas Gravity: Measured 0.677 Estimated \_\_\_\_\_  
Date of Flow Test: From 4-22-59 To 4-30-59 \* Date S.I.P. Measured January 14, 1959  
Meter Run Size \_\_\_\_\_ Orifice Size \_\_\_\_\_ Type Chart \_\_\_\_\_ Type Taps \_\_\_\_\_

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:  
(b) - (c) Flow through tubing: (a) - (c) Flow through casing \_\_\_\_\_ = \_\_\_\_\_ psi (f)  
Seven day average static meter pressure (from meter chart):  
Normal chart average reading \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (g)  
Square root chart average reading ( 7.00 ) <sup>2</sup> x sp. const. 10 \_\_\_\_\_ = 490 psia (g)  
Corrected seven day avge. meter press. (p<sub>f</sub>) (g) + (e) \_\_\_\_\_ = 490 psia (h)  
P<sub>t</sub> = (h) + (f) \_\_\_\_\_ = \_\_\_\_\_ psia (i)  
Wellhead casing shut-in pressure (Dwt) 2,029 psig + 12 = 2,041 psia (j)  
Wellhead tubing shut-in pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through \_\_\_\_\_ = 2,041 psia (l)  
Flowing Temp. (Meter Run) 74 °F + 460 \_\_\_\_\_ = 534 °Abs (m)  
P<sub>d</sub> = ½ P<sub>c</sub> = ½ (l) \_\_\_\_\_ = 1,021 psia (n)

Q = \_\_\_\_\_ X  $\left( \frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)}} = \frac{\text{FLOW RATE CALCULATION}}{\sqrt{(d)}} \right) = \underline{2,708}$   
(integrated)

DELIVERABILITY CALCULATION  
D = Q 2,708  $\left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{0.75} \times 2,708 = \underline{2,302}$

SUMMARY  
P<sub>c</sub> = 2,041 psia  
Q = 2,708 Mcf/day  
P<sub>w</sub> = 535 psia  
P<sub>d</sub> = 1,021 psia  
D = 2,302 Mcf/day

Company El Paso Natural Gas Products Company  
By John J. Strojek John J. Strojek  
Title Petroleum Engineer  
Witnessed by \_\_\_\_\_  
Company \_\_\_\_\_

\* This is date of completion test.  $D_{500} = 2,708 \left( \frac{3,904,000}{3,926,000} \right)^{0.75} = 2,708 (0.994)^{0.75} = 2,695$  MCF/d.  
\* 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> )	P <sub>t</sub> <sup>2</sup>	P <sub>t</sub> <sup>2</sup> + R <sup>2</sup>	P <sub>w</sub>
			R <sup>2</sup>	(Column 1)		
2"						
5-1/2"	0.0441	648.2	28,586			
	0.0428	21.0	898	240,100	285,604	535
7-5/8"	0.195	2.0	390			
31/32"			15,630			
			45,504			

\*Weymouths formula used to calculate friction in change over tube.  
Note: Dakota flows as follows: 2-3/8" O.D. Tbg. from 6211' to 5293'. Annular flow through 5-1/2" O.D. Liner from 5293' to 4404' and through 7-5/8" csg. from 4404' to surface. A 31/32" I.D. changeover tube 1" long directs flow from tubing into the 5-1/2" Liner @ 5293'. Two packers are set, one @ 5293' & one @ 6211'

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