

72447  
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 Picture Cliffs County Rio Arriba  
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed \_\_\_\_\_  
Operator El Paso Natural Gas Lease San Juan 27-5 Well No. 42 (7)  
Unit H Sec. 22 Twp. 27 Rge. 5 Pay Zone: From 3296 To 3346  
Casing: OD 7 5/8 WT. 26.4 Set At 983 Tubing: OD 1 1/2 WT. 2.4 T. Perf. 3356  
Produced Through: Casing \_\_\_\_\_ Tubing X Gas Gravity: Measured \_\_\_\_\_ Estimated \_\_\_\_\_  
Date of Flow Test: From 9-21-59 To 9-29-59 \* Date S.I.P. Measured 7-16-59 (27 days)  
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 (\_\_\_\_\_) <sup>2</sup> x sp. const. \_\_\_\_\_ = \_\_\_\_\_ psia (g)  
Corrected seven day avge. meter press. (p<sub>f</sub>) (g) + (e) \_\_\_\_\_ = \_\_\_\_\_ psia (h)  
P<sub>t</sub> = (h) + (f) \_\_\_\_\_ = \_\_\_\_\_ psia (i)  
Wellhead casing shut-in pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (j)  
Wellhead tubing shut-in pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through \_\_\_\_\_ = \_\_\_\_\_ psia (l)  
Flowing Temp. (Meter Run) 63 °F + 460 \_\_\_\_\_ = \_\_\_\_\_ °Abs (m)  
P<sub>d</sub> = 1/2 P<sub>c</sub> = 1/2 (l) \_\_\_\_\_ = \_\_\_\_\_ psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1897 \times 2.4}{193} \times \left( \frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \frac{23.4}{1.0107} = 23.17$$

DELIVERABILITY CALCULATION

$$D = Q \cdot \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 23.17 \cdot \left[ \frac{1879^2 - 340^2}{1879^2 - 550^2} \right]^{1.0107} = 353$$

SUMMARY

P<sub>c</sub> = 1879 psia  
Q = 349 Mcf/day  
P<sub>w</sub> = 550 psia  
P<sub>d</sub> = 340 psia  
D = 353 Mcf/day

Company EL PASO NATURAL GAS COMPANY  
By \_\_\_\_\_  
Title Original Signed  
Witnessed by Harold L. Kondrick  
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>t</sub> <sup>2</sup> (Column i)	P <sub>t</sub> <sup>2</sup> + R <sup>2</sup>	P <sub>w</sub>
2895	.348	73.822	10.986	297.600	308.586	550

D<sub>750</sub> = 423

