

Initial Deliverability
Test
72913

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 Basin Formation Dakota County San Juan
Purchasing Pipeline El Paso Natural Gas Date Test Filed _____

Operator El Paso Natural Gas Lease Madge Well No. 21
Unit G Sec. 9 Twp. 31 Rge. 11 Pay Zone: From 7150 To 7356
Casing: OD 5-1/2 WT. 17 Set At 7375 Tubing: OD 2-3/8 WT. 4.7 T. Perf. 7208
Produced Through: Casing _____ Tubing I Gas Gravity: Measured .651 Estimated _____
Date of Flow Test: From 5/21/61 To 5/29/61 * Date S.I.P. Measured 9/27/60
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 (_____) ² 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 (_____) ² x sp. const. _____ = 511 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 511 psia (h)
P_t = (h) + (f) _____ = 511 psia (i)
Wellhead casing shut-in pressure (Dwt) 2075 psig + 12 = 2087 psia (j)
Wellhead tubing shut-in pressure (Dwt) 2062 psig + 12 = 2074 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 2074 psia (l)
Flowing Temp. (Meter Run) 90 °F + 460 _____ = 550 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 1037 psia (n)

Q = _____ X $\left(\frac{\text{FLOW RATE CALCULATION}}{\frac{\sqrt{(c)}}{\sqrt{(d)}}} = \frac{\text{_____}}{\text{_____}} = \text{_____} \right)^* = \text{665} \text{ MCF/da}$
(Integrated)

DELIVERABILITY CALCULATION

D = Q 665 $\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} = \frac{.3226107}{.4029059} \right]^n \frac{.8007}{8465} = \text{563} \text{ MCF/da.}$

SUMMARY

P_c = 2074 psia
Q = 665 Mcf/day
P_w = 522 psia
P_d = 1037 psia
D = 563 Mcf/day

Company El Paso Natural Gas
By _____
Title _____
Witnessed by H. L. Kendrick
Company _____

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

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(FcQ) ²	(FcQ) ² (1-e ^{-S}) R ²	P _t ² (Column i)	P _t ² + R ²	P _w
4692	0.289	39088	11296	261121	272417	522

D at 500 = 665



