

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

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

Pool South Elmore Formation Natural Gas County San Juan
Purchasing Pipeline El Paso Natural Gas Date Test Filed 11/2/57
Operator El Paso Natural Gas Lease Nelson Unit Well No. 86
Unit F Sec. 15 Twp. 27 Rge. 7 Pay Zone: From 5130 To 5160
Casing: OD 5-1/2 WT. 15.5 Set At 3210 Tubing: OD 1-3/4 WT. 2.3 T-Perf 3210
Produced Through: Casing X Tubing X Gas Gravity: Measured .650 Estimated
Date of Flow Test: From 10/10 To 11/2/57 * Date S.I.P. Measured 1/15/57 (1.2 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 ()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 (7.40)² x sp. const. .5 = 274 psia (g)
Corrected seven day avg. meter press. (p_f) (g) + (e) = 274 psia (h)
P_t = (h) + (f) = 274 psia (i)
Wellhead casing shut-in pressure (Dwt) 995 psig + 12 = 1007 psia (j)
Wellhead tubing shut-in pressure (Dwt) 995 psig + 12 = 1007 psia (k)
P_c = (j) or (k) whichever well flowed through = 1007 psia (l)
Flowing Temp. (Meter Run) 85 °F + 460 = 545 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 504 psia (n)

FLOW RATE CALCULATION

Q = X $\left(\frac{V(c)}{V(d)} \right) = \underline{\underline{399}}$ MCF/day
(Integrated)

DELIVERABILITY CALCULATION

D = Q 399 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \underline{\underline{337}}$ MCF/day
 $\left[\frac{1007^2 - 504^2}{1007^2 - 995^2} \right]^{.819}$

SUMMARY

P_c = 1007 psia
Q = 399 Mcf/day
P_w = 995 psia
P_d = 504 psia
D = 337 Mcf/day

Company El Paso Natural Gas
By
Title Original Signed
Witnessed by Lewis D. Galloway
Company

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

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(F _c Q) ²	(F _c Q) ² (1-e ^{-S}) R ²	P _t ² (Column 1)	P _t ² + <u>2</u> <u>P_d</u> P _w
<u>1033</u>	<u>1.37</u>	<u>96.491</u>	<u>13.219</u>	<u>71.076</u>	<u>83.305</u>

D at 250 = 1412

OK

