

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 Undiscovered Formation Dakota County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed February 2, 1960

Operator Tennessee Gas Transmission Co. Lease USA Walter O. Burger Well No. 4
Unit C Sec. 22 Twp. 36N Rge. 11W Pay Zone: From 6243' To 6245'
Casing: OD 7" WT. 20 Set At 6303 Tubing: OD 2 WT. 4.7 T. Perf. 6243
Produced Through: Casing Tubing X Gas Gravity: Measured .694 Estimated
Date of Flow Test: From 1/10/60 To 1/16/60 * Date S.I.P. Measured August 31, 1959
Meter Run Size 4" Orifice Size 1.870 Type Chart 22 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) (initial casing side) psig + 12 = psia (a)
Flowing tubing pressure (Dwt) psig + 12 = 795 psia (b)
Flowing meter pressure (Dwt) psig + 12 = 405 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 = 270 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)² x sp. const. 1000 = 490 psia (g)
Corrected seven day avg. meter press. (p_f) (g) + (e) = 490 psia (h)
P_t = (h) + (f) = 760 psia (i)
Wellhead casing shut-in pressure (Dwt) psig + 12 = psia (j)
Wellhead tubing shut-in pressure (Dwt) psig + 12 = psia (k)
P_c = (i) or (k) whichever well flowed through = 1938 psia (l)
Flowing Temp. (Meter Run) 69 °F + 460 = 529 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 966 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1740}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \text{MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1740}{\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^n} = 1594 \text{ MCF/da.}$$

SUMMARY

P_c = 1938 psia
Q = 1740 Mcf/day
P_w = 802 psia
P_d = 966 psia
D = 1594 Mcf/day

Company Tennessee Gas Transmission
By J. J. Incey
Title District Engineer
Witnessed by
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 j)	P _t ² + R ²	P _w
<u>4263</u>	<u>.267</u>	<u>26082</u>	<u>69370</u>	<u>577600</u>	<u>646970</u>	<u>802</u>

4263 .267 26082 69370 577600 646970 802

OK