

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 Basin - Dakota Gas Formation Dakota County Rio Arriba
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed January 14, 1961
Operator Bert Fields Lease Federal Unit Well No. 1
Unit 1 Sec. 24 Twp. 27N Rge. 7W Pay Zone: From 7330' To 7630'
Casing: OD 5 1/2" WT. 14,15.5,172 Set At 7640 Tubing: OD 2" WT. 4.79 T. Perf. 7557'
Produced Through: Casing 1 Tubing 1 Gas Gravity: Measured .654 Estimated _____
Date of Flow Test: From 12-22-60 To 12-30-60 * Date S.I.P. Measured 1-7-61
Meter Run Size 4.025" Orifice Size 1.908" Type Chart Sq. root Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 874.0 psig + 12 = 886.0 psia (a)
Flowing tubing pressure (Dwt) 851.0 psig + 12 = 863.0 psia (b)
Flowing meter pressure (Dwt) 597.0 psig + 12 = 609.0 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading 7.80 psig + 12 = 608.0 psia (d)
Square root chart reading (7.80)² x spring constant 10 = 1.0 psi (d)
Meter error (c) - (d) or (d) - (c) ± = _____ psi (e)
Friction loss, Flowing column to meter: _____ psi (f)
(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 (7.75)² x sp. const. 10 = 601.0 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 602.0 psia (h)
P_t = (h) + (f) = 604.0 psia (i)
Wellhead casing shut-in pressure (Dwt) 1593 psig + 12 = 1605 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1498 psig + 12 = 1510 psia (k)
P_c = (j) or (k) whichever well flowed through = 1510 psia (l)
Flowing Temp. (Meter Run) 85 °F + 460 = 545.0 Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 755.0 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{973.0}{(\text{integrated})} \times \left(\frac{\sqrt{(c)} = 24.678}{\sqrt{(d)} = 24.658} = 1.0008 \right) = 974.0 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{974.0}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{1,710,075}{1,547,364} \right]^{.75} \cdot 1.0779} = 1,050 \text{ MCF/day}$$

SUMMARY

P_c = 1,510 psia
Q = 974.0 Mcf/day
P_w = 856.0 psia
P_d = 755.0 psia
D = 1,050 Mcf/day

Company Bert Fields
By L. S. Eaton
Title Agent
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})	P _t ²	P _t ² + H ²	P _w
			R ²	(Column i)		



OK

