

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 BL. NOO MESA VERDE Formation MESA VERDE County SJ
Purchasing Pipeline EL PASO NATURAL GAS CO. Date Test Filed JUNE 13, 1958
Operator BLACKWOOD-NICHOLS Lease HOWELL "G" Well No. 1
Unit N Sec. 24 Twp. 30N Rge. 8W Pay Zone: From 4797 To 5357
Casing: OD 7 WT. Set At 4745 Tubing: OD 2 3/8 WT. T. Perf. 5313
Produced Through: Casing Tubing X Gas Gravity: Measured .590 Estimated
Date of Flow Test: From 5-7 To 5-15 * Date S.I.P. Measured APRIL 14, 1958
Meter Run Size 4" Orifice Size 2,000 Type Chart SR Type Taps FLANGE

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 (5.90) ² x sp. const. 1500 = 522 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 522 psia (h)
P_t = (h) + (f) = 522 psia (i)
Wellhead casing shut-in pressure (Dwt) 821 psig + 12 = 833 psia (j)
Wellhead tubing shut-in pressure (Dwt) 821 psig + 12 = 833 psia (k)
P_c = (j) or (k) whichever well flowed through = 833 psia (l)
Flowing Temp. (Meter Run) 69 °F + 460 = 529 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 416 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1117}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\text{ }}{\text{ }} = \text{ } \right) = \text{ } \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1117}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]} = \frac{520,833}{399,040} \times 1117 = 1,2210 \times 1117 = 1364 \text{ MCF/da.}$$

SUMMARY

P_c = 833 psia
Q = 1117 Mcf/day
P_w = 543 psia
P_d = 416 psia
D = 1364 Mcf/day

Company GEOMETRIC, Inc
By P. H. Keyser
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}) R ²	P _t ² (Column i)	P _t ² + R ²	P _w
3135	.204	110,293	22,500	272,484	294,984	543



