

Initial Deliverability
Test

Form C-122-A
Revised April 20, 1955

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 So. Blanco Pictured Cliffs Formation Pictured Cliffs County San Juan

Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 1-13-59

Operator Western Natural Gas Company Lease Marron Well No. 3

Unit P Sec. 22 Twp. 27-N Rge. 8-W Pay Zone: From 2113 To 2172'

Casing: OD 5 1/2" WT. 14 & 15.5 Set At 2226.45' Tubing: OD 2 3/8" WT. 4.70 T. Perf. 2133

Produced Through: Casing _____ Tubing X Gas Gravity: Measured .665 Estimated _____

Date of Flow Test: From 12-22-58 To 12-30-58 * Date S.I.P. Measured 10-13-58

Meter Run Size 1.026 Orifice Size 2.250" Type Chart I-10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 317 psig + 12 = 329 psia (a)

Flowing tubing pressure (Dwt) 260 psig + 12 = 272 psia (b)

Flowing meter pressure (Dwt) 255 psig + 12 = 267 psia (c)

Flowing meter pressure (meter reading when Dwt. measurement taken:

Normal chart reading _____ psig + 12 = _____ psia (d)

Square root chart reading (7.27)² x spring constant 5 = 264.3 psia (d)

Meter error (c) - (d) or (d) - (c) ± _____ = 2.7 psi (e)

Friction loss, Flowing column to meter:

(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 5.0 psi (f)

Seven day average static meter pressure (from meter chart):

Normal chart average reading _____ psig + 12 = _____ psia (g)

Square root chart average reading (7.25)² x sp. const. 5 = 262.8 psia (g)

Corrected seven day ave. meter press. (p_f) (g) + (e) = 265.5 psia (h)

P_t = (h) + (f) = 270.5 psia (i)

Wellhead casing shut-in pressure (Dwt) 756 psig + 12 = 768.0 psia (j)

Wellhead tubing shut-in pressure (Dwt) 756 psig + 12 = 768.0 psia (k)

P_c = (j) or (k) whichever well flowed through = 768.0 psia (l)

Flowing Temp. (Meter Run) 72 °F + 460 = 532 °Abs (m)

P_d = 1/2 P_c = 1/2 (l) = 384 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{2,035}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{16.34}{16.26} = 1.005 \right) = 2,045 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{2,045}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{142,368}{480,395} \right]^n (0.9208)^{.85} = 0.9324} = 1,907 \text{ MCF/day}$$

SUMMARY

P_c = 768 psia
Q = 2,045 Mcf/day
P_w = 330.8 psia
P_d = 384 psia
D = 1,907 Mcf/day

Company Western Natural Gas
By Calvin M. Hayes
Title Petroleum 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 i)	P _t ² + R ²	P _w
1418	.098	369.7	36.23	73.17	109.40	330.8