

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 West Kutz Formation Picture Cliff County San Juan
Purchasing Pipeline El Paso Natural Gas Co. Date Test Filed 4-27-59
Operator Frank Yockey Lease Yockey Well No. 2
Unit F Sec. 20 Twp. 27N Rge. 11W Pay Zone: From 1831 To 1864
Casing: OD 5½ WT. 15.5 Set At 1831 Tubing: OD 1.315 WT. 1.68 T. Perf. 1854
Produced Through: Casing X Tubing _____ Gas Gravity: Measured .646 Estimated _____
Date of Flow Test: From 4-7-59 To 4-15-59 * Date S.I.P. Measured 4-21-59
Meter Run Size 4" Orifice Size .750 Type Chart Sq. Rt. Type Taps _____

OBSERVED DATA

Flowing casing pressure (Dwt) 205 psig + 12 = 217 psia (a)
Flowing tubing pressure (Dwt) 285 psig + 12 = 297 psia (b)
Flowing meter pressure (Dwt) 205 psig + 12 = 217 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (6.55)² x spring constant 500 = 214 psia (d)
Meter error (c) - (d) or (d) - (c) _____ ± _____ = 3 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing _____ = 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 (6.70)² x sp. const. 500 = 225 psia (g)
Corrected seven day avgs. meter press. (P_f) (g) + (e) _____ = 228 psia (h)
P_t = (h) + (f) _____ = 228 psia (i)
Wellhead casing shut-in pressure (Dwt) 390 psig + 12 = 402 psia (j)
Wellhead tubing shut-in pressure (Dwt) 390 psig + 12 = 402 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 402 psia (l)
Flowing Temp. (Meter Flun) 57 °F + 460 _____ = 517 °Abs (m)
P_d = ½ P_c = ½ (l) _____ = 201 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{334}{(\text{Integrated})} \times \left(\frac{\sqrt{(c)} = 14.73}{\sqrt{(d)} = 14.63} = 1.0068 \right) = 336 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q = 336 \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \frac{121203}{1.1056} \cdot \frac{.85}{1.089} = 366 \text{ MCF/da.}$$

SUMMARY

P_c = 402 psia
Q = 336 Mcf/day
P_w = 228 psia
P_d = 201 psia
D = 366 Mcf/day

Company Well Production Co.
By N.A. Neely
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

