

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 Blanco Formation Mesa Verde County San Juan
Purchasing Pipeline El Paso Natural Gas Date Test Filed _____

Operator Blackwood-Nichols Lease Howell Well No. 2-J
Unit M Sec. 1 Twp. 30N Rge. 8W Pay Zone: From 5632 To 5716
Casing: OD 5 1/2 WT. _____ Set At 4895 Tubing: OD 2 WT. 4.70 T. Perf. 5707
Produced Through: Casing _____ Tubing _____ Gas Gravity: Measured .674 Estimated _____
Date of Flow Test: From 4-29 To 5-7 * Date S.I.P. Measured 5-14-60
Meter Run Size _____ Orifice Size 1.50 Type Chart _____ Type Taps _____

OBSERVED DATA

Flowing casing pressure (Dwt) 573 psig + 12 = 585 psia (a)
Flowing tubing pressure (Dwt) 507 psig + 12 = 519 psia (b)
Flowing meter pressure (Dwt) 503 psig + 12 = 515 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (7.2)² x spring constant 1000 = 518 psia (d)
Meter error (c) - (d) or (d) - (c) _____ ± _____ = 43 psi (e)
Friction loss, Flowing column to meter: _____ = 4 psi (f)
(b) - (c) Flow through tubing: (a) - (c) Flow through casing
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (7.10)² x sp. const. _____ = 504 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 501 psia (h)
_____ = 505 psia (i)
P_t = (h) + (f) _____
Wellhead casing shut-in pressure (Dwt) 926 psig + 12 = 938 psia (j)
Wellhead tubing shut-in pressure (Dwt) 926 psig + 12 = 938 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 938 psia (l)
Flowing Temp. (Meter Run) 77 °F + 460 _____ = 537 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 469 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1,386}{(\text{integrated})} \times \left(\frac{\sqrt{c}}{\sqrt{d}} = \frac{.9942}{.9971} = .9971 \right) = 1,382 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1,382}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{659.883}{533.621} = 1.2366 \right]^n \cdot 1.0964} = 1,515 \text{ MCF/da.}$$

SUMMARY

P_c = 938 psia
Q = 1,382 Mcf/day
P_w = 544 psia
P_d = 469 psia
D = 1,515 Mcf/day

Company Blackwood-Nichols
By _____
Title _____
Witnessed by Thurmond-McGlothlin
Company Thurmond-McGlothlin

- * 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
3846	.244	168.944	41.198	255.025	296.223	544



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