

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 Blanco Formation Mesa Verde County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 1-3-57
Operator Greenbrier Oil Company Lease Mark Maddox Well No. 1
Unit II Sec. 13 Twp. 32N Rge. 11W Pay Zone: From 5630 To 4900
Casing: OD 7" WT. 20# Set At 4829 Tubing: OD 2-7/8 WT. 6.50 T. Perf. 5381
Produced Through: Casing Tubing X Gas Gravity: Measured .660 Estimated
Date of Flow Test: From 12-1-56 To 12-9-56 * Date S.I.P. Measured 12-16-56
Meter Run Size 4" Orifice Size 1-1/8" Type Chart S.R. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 570 psig + 12 = 582 psia (a)
Flowing tubing pressure (Dwt) 548 psig + 12 = 560 psia (b)
Flowing meter pressure (Dwt) 545 psig + 12 = 557 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading psig + 12 = psia (d)
Square root chart reading (7.40)² x spring constant 10 = 548 psia (d)
Meter error (c) - (d) or (d) - (c) = 9 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 3 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading psig + 12 = psia (g)
Square root chart average reading (7.40)² x sp. const. 10 = 548 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 557 psia (h)
P_t = (h) + (f) = 560 psia (i)
Wellhead casing shut-in pressure (Dwt) 750 psig + 12 = 762 psia (j)
Wellhead tubing shut-in pressure (Dwt) 750 psig + 12 = 762 psia (k)
P_c = (j) or (k) whichever well flowed through = 762 psia (l)
Flowing Temp. (Meter Run) 70 °F + 460 = 530 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 381 psia (n)

Q = 1125 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)}} = \frac{1.01642}{1.0082} \right)^* = \underline{1134} \text{ MCF/da}$
(integrated)

DELIVERABILITY CALCULATION

D = Q 1134 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \underline{1679} \text{ MCF/da.}$
 $\left[\frac{762^2 - 381^2}{762^2 - 568^2} \right]^{.75}$

SUMMARY

P_c = 762 psia
Q = 1134 Mcf/day
P_w = 568 psia
P_d = 381 psia
D = 1679 Mcf/day

Company Greenbrier Oil Company
By T. A. Ragan
Title 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
3551	.228	39.6245	9.034	313.6	322.634	568.0



