

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 Dakota Formation Dakota County San Juan
Purchasing Pipeline Southern Union Gas Company Date Test Filed January 13, 1961
Operator Antec Oil and Gas Company Lease Block Well No. 10-0
Unit K Sec. 10 Twp. 22N Rge. 9 Pay Zone: From 4300 To 4340
Casing: OD 4 1/2 WT. 2.30 Set At 4300 Tubing: OD 2 3/8 WT. 4.70 T. Perf. 4300
Produced Through: Casing Tubing I Gas Gravity: Measured 0.670 Estimated
Date of Flow Test: From 12/23 To 12/30 * Date S.I.P. Measured 12/13/60
Meter Run Size 4 Orifice Size 1.750 Type Chart 2 R Type Taps 7

OBSERVED DATA

Flowing casing pressure (Dwt) 1700 psig + 12 = 1800 psia (a)
Flowing tubing pressure (Dwt) 725 psig + 12 = 737 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: = psi (f)
(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 906 psig + 12 = 918 psia (g)
Square root chart average reading () ² x sp. const. = 918 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 918 psia (h)
P_t = (h) + (f) = 918 psia (i)
Wellhead casing shut-in pressure (Dwt) 2000 psig + 12 = 2012 psia (j)
Wellhead tubing shut-in pressure (Dwt) 2000 psig + 12 = 2012 psia (k)
P_c = (j) or (k) whichever well flowed through = 2012 psia (l)
Flowing Temp. (Meter Run) 80 °F + 460 = 540 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 1006 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1407}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \frac{1407}{1.750} = 807 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 1407 \left[\frac{2012^2 - 1006^2}{2012^2 - 1006^2} \right]^{0.75} = 807 \text{ MCF/da.}$$

SUMMARY

P_c = 2012 psia
Q = 1407 Mcf/day
P_w = 1006 psia
P_d = 1006 psia
D = 807 Mcf/day

Company Antec Oil and Gas Company
By ORIGINAL SIGNED BY I. M. STEVENS
Title L. E. Stevens, District Manager
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)	OIL CON. COM. DIST. ² 3	P _w

Well-head working pressure measured. Well produces through bottom hole regulator.

OK