

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 Basin Formation Dakota County San Juan
Purchasing Pipeline Southern Union Gas Company Date Test Filed 12-26-61
Operator International Oil Corp. Lease Fogelson Well No. 1-2
Unit J Sec. 2 Twp. 29N Rge. 11W Pay Zone: From 6630 To 6697
Casing: OD 4 1/2 WT. 10.5 Set At 6815 Tubing: OD 1 1/4 WT. 2.4# T. Perf. 6646
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .568 Estimated _____
Date of Flow Test: From 11-25-61 To 12-2-61 * Date S.I.P. Measured 12-9-61
Meter Run Size 4" Orifice Size 1.375 Type Chart S.R. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 890 psig + 12 = 902 psia (a)
Flowing tubing pressure (Dwt) 565 psig + 12 = 577 psia (b)
Flowing meter pressure (Dwt) 507 psig + 12 = 519 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (7.3)² x spring constant 10 = 533 psia (d)
Meter error (c) - (d) or (d) - (c) ± = -14 psi (e)
Friction loss, Flowing column to meter: _____ = 58 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 (7.5)² x sp. const. 10 = 562 psia (g)
Corrected seven day avge. meter press. (P_f) (g) + (e) = 548 psia (h)
= 606 psia (i)
P_t = (h) + (f) = 666 psia (j)
Wellhead casing shut-in pressure (Dwt) 1554 psig + 12 = 1566 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1546 psig + 12 = 1558 psia (k)
P_c = (i) or (k) whichever well flowed through = 1558 psia (l)
Flowing Temp. (Meter Run) 76 °F + 460 = 536 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 779 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1362}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{.9737}{.9868} \right) = 1344 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1344}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{.75}} = \frac{1.820,523}{1,757,936}^{.75} \frac{1.0265}{(1.0356)^{.75}} = 1380 \text{ MCF/da.}$$

SUMMARY

P_c = 1558 psia
Q = 1344 Mcf/day
P_w = 818 psia
P_d = 779 psia
D = 1380 Mcf/day

Company International Oil Corporation
By John A. Dugan
Title Consulting Engineer DEC 27 1961
Witnessed by CIL
Company DIST.

- * 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
<u>4440</u>	<u>.276</u>	<u>1094.898</u>	<u>302.192</u>	<u>367.236</u>	<u>669.428</u>	<u>818</u>