

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 Basin Formation Dakota County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 11-1-61

Operator FURCO PETROLEUM CORP. Lease State Well No. 29
Unit 1 Sec. 36 Twp. 29 N Rge. 10 W Pay Zone: From 6288 To 6402
Casing: OD 5 1/2" WT. 15 1/2 Set At 6512 Tubing: OD 2" WT. 4.7 T. Perf. 6438
Produced Through: Casing X Tubing X Gas Gravity: Measured .689 Estimated
Date of Flow Test: From 9-20-61 To 9-28-61 * Date S.I.P. Measured 7-13-61
Meter Run Size 4" Orifice Size 2.250 Type Chart Sq. Rt. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 1084 psig + 12 = 1096 psia (a)
Flowing tubing pressure (Dwt) 962 psig + 12 = 974 psia (b)
Flowing meter pressure (Dwt) 508 psig + 12 = 520 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading 7.2 psig + 12 = 518 psia (d)
Square root chart reading (7.2)² x spring constant 10 = 42 psia (d)
Meter error (c) - (d) or (d) - (c) ± = 42 psi (e)
Friction loss, Flowing column to meter: 454 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 7.2 psig + 12 = 518 psia (g)
Square root chart average reading (7.2)² x sp. const. 10 = 520 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 974 psia (h)
P_t = (h) + (f) = 1428 psia (i)
Wellhead casing shut-in pressure (Dwt) 2033 psig + 12 = 2045 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1971 psig + 12 = 1983 psia (k)
P_c = (j) or (k) whichever well flowed through 1983 psia (l)
Flowing Temp. (Meter Run) 75 °F + 460 = 991 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 991 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{2636}{(\text{Integrated})} \times \left(\frac{\sqrt{\frac{508}{22.8035}}}{\sqrt{\frac{518}{22.7596}}} = 1.002 \right) = 2641 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{2641}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{0.75} \frac{1.0611}{1.0022}} = 2802 \text{ MCF/da.}$$

"D" at 512 = 2462

SUMMARY
P_c = 1983 psia
Q = 2641 Mcf/day
P_w = 1057 psia
P_d = 991 psia
D = 2802 Mcf/day

Company FURCO PETROLEUM CORP.
By Sam E. Jurelson
Title Field Foreman
Witnessed by Jack Dunning
Company Furco Petroleum Corp.

- * 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>4435</u>	<u>.276</u>	<u>616,529</u>	<u>170,162</u>	<u>948,676</u>	<u>1,118,838</u>	<u>1057</u>



