

Initial Deliverability
TestForm C-122-A
Revised April 20, 1955NEW 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 - Dakota Formation Dakota County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 12-29-60

Operator PURCO PETROLEUM CORPORATION Lease Federal Well No. 5-B
Unit B Sec. 5 Twp. 29N Rge. 12W Pay Zone: From 6218 To 6343
Casing: OD 5 1/2" WT. 15 1/2 Set At 6493 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 6057
Produced Through: Casing I Tubing I Gas Gravity: Measured 0.643 Estimated
Date of Flow Test: From 11-29-60 To 12-7-60 * Date S.I.P. Measured 10-10-60
Meter Run Size 4" Orifice Size 1.500 Type Chart Sq. Rt. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 652 psig + 12 = 664 psia (a)
Flowing tubing pressure (Dwt) 587 psig + 12 = 599 psia (b)
Flowing meter pressure (Dwt) 480 psig + 12 = 492 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading psig + 12 = psia (d)
Square root chart reading (7.06)² x spring constant 10 = 498 psia (d)
Meter error (c) - (d) or (d) - (c) ± = -6 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 102 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading psig + 12 = psia (g)
Square root chart average reading (7.05)² x sp. const. 10 = 497 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 491 psia (h)
P_t = (h) + (f) = 593 psia (i)
Wellhead casing shut-in pressure (Dwt) 2100 psig + 12 = 2112 psia (j)
Wellhead tubing shut-in pressure (Dwt) 2097 psig + 12 = 2109 psia (k)
P_c = (j) or (k) whichever well flowed through = 2109 psia (l)
Flowing Temp. (Meter Run) 64 °F + 460 = 524 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 1055 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1610}{(\text{integrated})} \times \left(\frac{\sqrt{(c)} \frac{492}{22.18107} = 0.99396}{\sqrt{(d)} \frac{498}{22.31591}} \right) = 1600 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1600}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{3,334,856}{4,038,754} \right]^n 0.82571)^{.75} 0.8662} = 1386 \text{ MCF/da.}$$

SUMMARY

"B" at 512 - 1644

P_c = 2109 psia
Q = 1600 Mcf/day
P_w = 640 psia
P_d = 1055 psia
D = 1386 Mcf/day

Company Purco Petroleum Corporation
By B. L. Mayhaff
Title Production Engineer
Witnessed by Glen O. Rhodes
Company Purco Petroleum Corporation

* 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
4023	0.254	226,292	57,478	351,649	409,127	640

8/1