

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 Date Test Filed _____

Operator FRONTIER OIL & REFINING CO. Lease GOV'T EYENSEN Well No. 42 - GD
Unit P Sec. 19 Twp. 27 Rge. 10 Pay Zone: From 6125 To 6195
Casing: OD 7 1/2 WT. 26.4 Set At 6394 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 6125
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .724 Estimated _____
Date of Flow Test: From 6-22-61 To 7-6-61 * Date S.I.P. Measured 7-12-61
Meter Run Size 4.025 Orifice Size 1.000 Type Chart sq. rt. Type Taps F

OBSERVED DATA

Flowing casing pressure (Dwt) 445 psig + 12 = 457 psia (a)
Flowing tubing pressure (Dwt) 239 psig + 12 = 251 psia (b)
Flowing meter pressure (Dwt) 237 psig + 12 = 249 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (2.00)² x spring constant 10 = 200 psia (d)
Meter error (c) - (d) or (d) - (c) _____ ± _____ = - 1 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing _____ = 2 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (4.95)² x sp. const. 10 = 245 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 244 psia (h)
P_t = (h) + (f) _____ = 246 psia (i)
Wellhead casing shut-in pressure (Dwt) 1525 psig + 12 = 1537 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1310 psig + 12 = 1322 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 1322 psia (l)
Flowing Temp. (Meter Run) 75 °F + 460 _____ = 535 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 661 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{445}{(\text{Integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{0.9960}{0.9960} = 1.0000 \right)^* = 445 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{445}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{1,810,763}{1,681,884} \right]^n} \frac{0.7793}{0.8295} = 385 \text{ MCF/day}$$

SUMMARY

P_c = 1322 psia
Q = 445 Mcf/day
P_w = 237 psia
P_d = 661 psia
D = 385 Mcf/day

Company The Frontier Oil, Cons. Co.
By Donney Seale DIST 3
Title Prod. Foreman
Witnessed by Basil W. King
Company B & R Service

- * 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
4479	.278	19,114	5,314	60,516	65,830	237

INITIAL AND ANNUAL TEST 1961

OK

