

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 BJ
Purchasing Pipeline El Paso Natural Gas Co. Date Test Filed _____
Operator El Paso Natural Gas Co. Lease Ludwick Well No. 15
Unit A Sec. 19 Twp. 30 Rge. 10 Pay Zone: From 7258 To 7445
Casing: OD 5500 WT. 1700 Set At 7484 Tubing: OD 2375 WT. 0470 T. Perf. 7316
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .672 Estimated _____
Date of Flow Test: From 5-14-61 To 5-21-61 * Date S.I.P. Measured 9-16-60
Meter Run Size _____ Orifice Size _____ Type Chart _____ Type Taps _____

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)
Flowing tubing pressure (Dwt) _____ psig + 12 = _____ 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
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = 2059 psia (g)
Square root chart average reading (_____) ² x sp. const. _____ = 462 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 462 psia (h)
P_t = (h) + (f) _____ = 462 psia (i)
Wellhead casing shut-in pressure (Dwt) _____ psig + 12 = 2096 psia (j)
Wellhead tubing shut-in pressure (Dwt) _____ psig + 12 = 2059 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 2059 psia (l)
Flowing Temp. (Meter Run) _____ °F + 460 _____ = _____ ° Abs (m)
P_d = ½ P_c = ½ (l) _____ = 1030 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{738}{(\text{integrated})} \times \left(\frac{\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = 1.0000}{\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = 1.0000} \right) = 738 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{738}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = .7923 \right]^n} = .8397 = 620 \text{ MCF/da.}$$

SUMMARY

P_c = 2059 psia Company El Paso Natural Gas Co.
Q = 738 Mcf/day By H. L. Kendrick Sr. Gas Engineer
P_w = 477 psia Title _____
P_d = 1030 psia Witnessed Original signed by
D = 620 Mcf/day Company H. L. Kendrick

- * 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
4916	.301	48150	14493	213444	227937	477

D at 500 = 731

CORRECTED COPY

FILED
JUN 22 1961