

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DATE April 11, 1957

Operator El Paso Natural Gas Company		Lease San Juan 28-7 Unit # 68	
Location 990'N, 1650'E, Sec. 31-28-7		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing Diameter 5½	Set At: Feet 4868	Tubing Diameter 2	Set At: Feet 4781
Pay Zone: From 4659	To 4821	Total Depth 4872 - c/o - 4835	
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches 0.75		Choke Constant: C 12.3650	
Shut-In Pressure, Casing, PSIG 912	PSIG - 12 - PSIA 924	Days Shut-In 9	Shut-In Pressure, Tubing, PSIG 910
Flowing Pressure, P, PSIG 65	PSIG - 12 - PSIA 77		Working Pressure, Pw, PSIG 169
Temperature, T, F 67	F - 460 .75		Flow From Tables 1.009
			Gravity .681

CHOKE VOLUME $Q = C \times P_r \times F_r \times F_g \times F_{pv}$

$$C = 12.365 \times 77 \times .9933 \times .9393 \times 1.009$$

896

MCF/D

$$\text{OPEN FLOW } A_{of} = Q \left(\frac{P_r^2}{P_c^2 - P_w^2} \right)^n$$

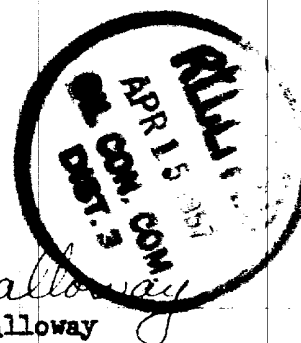
$$A_{of} = \left(\frac{853,776}{821,015} \right)^n (1.0399)^{.75} \times 896 = 1.0298 \times 896$$

Recompleted in Mesa Verde only - was a dual completion.

A_{of} 923 MCF/D

TESTED BY K. C. McBride and R. A. Ullrich

WITNESSED BY



L. D. Galloway

OIL CONSERVATION COMMISSION
AZTEC DISTRICT OFFICE

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Initial Deliverability
Test

Form C-122-A
Revised April 20, 1955

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 Blanco Formation Mesa Verde County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed _____
Operator El Paso Natural Gas Lease San Juan 28-7 Unit Well No. 68
Unit B Sec. 31 Twp. 28N Rge. 7W Pay Zone: From 4659 To 4821
Casing: OD 5-1/2 WT. 11.5 Set At 4868 Tubing: OD 2 WT. 4.7 T. Perf. 4751
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .700 Estimated _____
Date of Flow Test: From 10/8/57 To 10/16/57 Date S.I.P. Measured 4/11/57 (9 days)
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:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing _____ = _____ psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (7.10)² x sp. const. 10 _____ = 504 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 504 psia (h)
P_t = (h) + (f) _____ = 504 psia (i)
Wellhead casing shut-in pressure (Dwt) 912 psig + 12 = 924 psia (j)
Wellhead tubing shut-in pressure (Dwt) 910 psig + 12 = 922 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 922 psia (l)
Flowing Temp. (Meter Run) 63 °F + 460 _____ = 523 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 461 psia (n)

FLOW RATE CALCULATION

Q = _____ X $\left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \underline{251}$ MCF/day
(Integrated)

DELIVERABILITY CALCULATION

D = Q 251 $\left[\frac{p_c^2 - p_d^2}{p_c^2 - p_w^2} \right]^n = \underline{264}$ MCF/day
 $\frac{637,563}{594,870}$ $\frac{1.0717}{1.0533}$

SUMMARY

P_c = 922 psia Company El Paso Natural Gas Company
Q = 251 Mcf/day By Original Signed
P_w = 505 psia Title _____
P_d = 461 psia Witnessed by Lewis D. Galloway
D = 264 Mcf/day Company _____

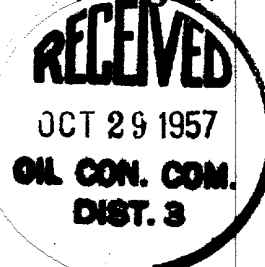
- * This is date of completion test.
- * Meter error correction factor

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
3326	.215	5570	1198	254,016	255,214	505

D at 500 = 248

OK



12-12-1971

100 100 100
100 100 100