

OPEN FLOW TEST DATA

DATE September 8, 1977

Operator El Paso Natural Gas Company		Lease Vanderwart A #2-A	
Location NW 11-29-08		County San Juan	State New Mexico
Formation Pictured Cliffs		Pool Blanco Ext.	
Casing: Diameter 4 1/2	Set At: Feet 5539'	Tubing: Diameter 1 1/4	Set At: Feet 3026'
Pay Zone: From 2980	To 3016	Total Depth: 5539'	Shut In 8-21-77
Stimulation Method Sandwater Frac		Flow Through Casing XX	Flow Through Tubing

Choke Size, Inches .750		Choke Constant: C 12.365	
Shut-In Pressure, Casing, PSIG 821	+ 12 = PSIA 833	Days Shut-In 18	Shut-In Pressure, Tubing PSIG 821
Flowing Pressure: P PSIG 68	+ 12 = PSIA 80	Working Pressure: P _w PSIG 70	+ 12 = PSIA 82
Temperature: T = 59 °F	n = .85	Fpv (From Tables) 1.009	Gravity .670
Ft = 1.001			Fg = .9463

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

$$Q = 12.365(80)(1.001)(.9463)(1.009) = \underline{\quad 945 \quad} \text{ MCF/D}$$

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

$$A_{of} = Q \left(\frac{693889}{687165} \right)^n = 945(1.0098)^{.85} = 945(1.0083)$$

$$A_{of} = \underline{\quad 953 \quad} \text{ MCF/D}$$

Note: Well blew dry gas throughout test.
Well vented 160 MCF of gas to atmosphere during test.

TESTED BY R. Headrick

WITNESSED BY _____

[Signature]
Well Test Engineer

