

OPEN FLOW TEST DATA

DATE August 29, 1977

Operator El Paso Natural Gas Company		Lease Vanderwart A #1-A	
Location SE 11-29-08		County San Juan	State New Mexico
Formation Pictured Cliffs		Pool Blanco Ext.	
Casing: Diameter 4 1/2	Set At: Feet 5708'	Tubing: Diameter 1 1/4	Set At: Feet 3160'
Pay Zone: From 3102	To 3166	Total Depth: 5708	Shut In 8-15-77
Stimulation Method Sandwater Frac		Flow Through Casing	Flow Through Tubing XX

Choke Size, Inches .750		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 759	+ 12 = PSIA 771	Days Shut-In 14	Shut-In Pressure, Tubing PSIG 759	+ 12 = PSIA 771	
Flowing Pressure: P PSIG 33	+ 12 = PSIA 45		Working Pressure: P _w PSIG 209	+ 12 = PSIA 221	
Temperature: T = 60 °F	n = .85		F _{pv} (From Tables) 1.004	Gravity .650	F _g = .9608

$$\text{CHOKE VOLUME} = Q = C \times P_i \times F_i \times F_g \times F_{pv}$$

$$Q = 12.365 (45) (1.000) (.9608) (1.004) = \underline{\quad 537 \quad} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{594441}{545600} \right)^n = 537 (1.0895)^{.85} = 537 (1.0756)$$

$$Aof = \underline{\quad 578 \quad} \text{ MCF/D}$$

Note: Well vented 94 MCF of dry gas to the atmosphere during test.

TESTED BY N. Waggoner

WITNESSED BY _____

C.R. Waggoner
Well Test Engineer

