

EL PASO NATURAL GAS COMPANY OPEN FLOW TEST DATA

DATE September 20, 1977

Operator El Paso Natural Gas Company		Lease Mudge #4-A	
Location NW 1-31-11		County San Juan	State New Mexico
Formation Pictured Cliffs		Pool Blanco	
Casing: Diameter 4 1/2	Set At: Feet 5767'	Tubing: Diameter 1 1/4	Set At: Feet 5167'
Pay Zone: From 3092	To 3172	Total Depth: 5767'	Shut In 0-5-77
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 861	+ 12 = PSIA 873	Days Shut-In 15	Shut-In Pressure, Tubing PSIG 863
Flowing Pressure: P PSIG 143	+ 12 = PSIA 155	Working Pressure: P _w PSIG 157	+ 12 = PSIA 169
Temperature: T = 64 °F	F _t = .9962	F _p (From Tables) 1.014	Gravity .670
n = .85		F _g = .9463	

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

$$Q = 12.365 (155) (.9962) (.9463) (1.014) = 1832 \text{ MCF/D}$$

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

$$Aof = \left(\frac{765625}{737064} \right)^{.85} = 1832(1.0387)^{.85} = 1832(1.0328)$$

$$Aof = 1892 \text{ MCF/D}$$

Note: 531 MCF gas vented during 3 hour test.

TESTED BY Dave Wright

WITNESSED BY

[Signature]
Well Test Engineer

