

EL PASO NATURAL GAS COMPANY

OPEN FLOW TEST DATA

DATE September 12, 1977

Operator El Paso Natural Gas Company		Lease Mudge #4-A	
Location NW 1-31-11		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4 1/2	Set At: Feet 5767'	Tubing: Diameter 2 3/8	Set At: Feet 5552'
Pay Zone: From 4688	To 5659	Total Depth: PBT 5767'	Shut In 9-5-77
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	+ 12 = PSIA	Days Shut-In 7	Shut-In Pressure, Tubing PSIG	+ 12 = PSIA	
			690	702	
Flowing Pressure: P PSIG	+ 12 = PSIA	Working Pressure: Pw PSIG	+ 12 = PSIA		
276	288	Calculated	575		
Temperature: T = 68°F	n = .75	Fpv (From Tables)	Gravity		
Ft = .9924		1.029	.670	Fg = .9463	

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

$$Q = 12.365(288)(.9924)(.9463)(1.029) = \underline{3441} \text{ MCF/D}$$

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

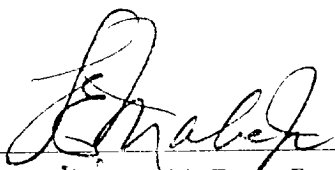
$$Aof = Q \left(\frac{492804}{162179} \right)^{.75} = 3441(3.0386)^{.75} = 3441(2.3015)$$

$$Aof = \underline{7919} \text{ MCF/D}$$

Note: 410 MCF vented during 3 hour test.

TESTED BY _____

WITNESSED BY _____


Division Well Test Engineer