

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE 6-6-68

Operator El Paso Natural Gas Company		Lease Roelofs A No. 4 (OWFO)	
Location 990'S, 990'W, Sec. 22-T-29-N, R-8-W		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4.500	Set At: Feet 5407	Tubing: Diameter 2.375	Set At: Feet 5224
Pay Zone: From 4649	To 5365	Total Depth: 5407	Shut In 5-29-68
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .75		Choke Constant, C 12.365			
Shut-In Pressure, Casing, PSIG 783	+ 12 = PSIA 795	Days Shut-In 8	Shut-In Pressure, Tubing PSIG 787	+ 12 = PSIA 799	
Flowing Pressure: P PSIG 286	+ 12 = PSIA 298		Working Pressure: P _w PSIG 680	+ 12 = PSIA 692	
Temperature: T = 72 °F	F _t = .9887	n = .75	F _{pv} (From Tables) 1.032	Gravity .700	F _g = .9258

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

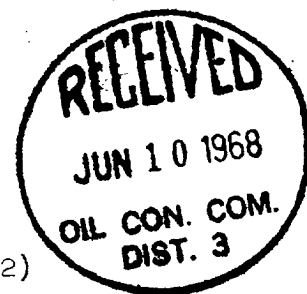
$$Q = (12.365)(298)(.9887)(.9258)(1.032) = \underline{3481} \text{ MCF/D}$$

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

$$Aof = \left(\frac{638401}{159537} \right)^n = (3481)(4.0015)^{.75} = (3481)(2.8292)$$

NOTE: The well produced a medium to heavy fog of distillate and water for the first 6 minutes of the test and a light fog for the remainder of the test.

$$Aof = \underline{9848} \text{ MCF/D}$$

TESTED BY Don NortonCalculated G. A. Lippman
WITNESSED BYCHECKED BY T. B. Grant

T. B. Grant