

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE October 13, 1965

Operator El Paso Natural Gas Company		Lease Vanderwart "A" No. 1 (OWWO)	
Location 990'N, 990'E, Sec. 11, T-29-N, R-8-W		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4.500	Set At: Feet 5415	Tubing: Diameter 2.375	Set At: Feet 5360
Pay Zone: From 4797	To 5378	Total Depth: 5415	Shut In 10-3-65
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .750		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 921	+ 12 = PSIA 933	Days Shut-In 10	Shut-In Pressure, Tubing PSIG 546	+ 12 = PSIA 558	
Flowing Pressure: P PSIG 340	+ 12 = PSIA 352		Working Pressure: P _w PSIG 768	+ 12 = PSIA 780	
Temperature: T = 78 °F	F _t = .9831	n = .75	F _{pv} (From Tables) 1.037	Gravity .696	F _g = .9292

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

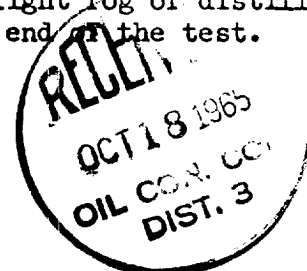
$$Q = (12.365) (352) (.9831) (.9292) (1.037) = \underline{4123} \text{ MCF/D}$$

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

$$A_{of} = \left(\frac{870,489}{262,089} \right)^n = (4123) (3.3213)^{.75} = (4123) (2.4603)$$

$$A_{of} = \underline{10,144} \text{ MCF/D}$$

NOTE: Unloaded a 3 minute slug of distillate and water after 4 minutes. Liquid reduced to a very light fog of distillate and water by the end of the test.

TESTED BY H. E. McAnallyCHECKED BY W. D. Dawson

Lewis D. Galloway
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