

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DATE March 20, 1978

Operator El Paso Natural Gas Company		Lease Lucerne A #4-A	
Location NW 10-31-10		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4 1/2	Set At: Feet 5668'	Tubing: Diameter 2 3/8	Set At: Feet 5588'
Pay Zone: From 4519	To 5600'	Total Depth: 5668'	Shut In 3-2-78
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 18	Shut-In Pressure, Tubing PSIG 628	+ 12 = PSIA 640	
Flowing Pressure: P PSIG 230	+ 12 = PSIA 242		Working Pressure: P _w PSIG Calc. 481	+ 12 = PSIA	
Temperature: T = 69 °F	n = .75	F _{pv} (From Tables) 1.023	Gravity .650	F _g = .9608	

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

$$Q = 12.365(242)(.9915)(.9608)(1.023) = \underline{2916} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{409600}{178239} \right)^n = (2916)(2.2980)^{.75} = (2916)(1.8665)$$

$$Aof = \underline{5443} \text{ MCF/D}$$

Note: Well blew dry gas throughout test.
Well vented 283 MCF to the atmosphere during test.

TESTED BY J. Thurstonson

WITNESSED BY _____

C. R. Wagner
Well Test Engineer