

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE August 16, 1978

Operator El Paso Natural Gas Company		Lease Hughes #3-A (MV)	
Location SE 20-29-08		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4.500	Set At: Feet 5762'	Tubing: Diameter 2 3/8	Set At: Feet 5621'
Pay Zone: From 5262	To 5678'	Total Depth: 5762'	Shut In 8-7-78
Stimulation Method Sandwater Frac		Flow Through Casing	Flow Through Tubing XX

Choke Size, Inches 4" M.R. 2.750 Orifice		Choke Constant: C 41.10		Well tested through 3/4" variable choke	
Shut-In Pressure, Casing, PSIG --	+ 12 = PSIA --	Days Shut-In 9	Shut-In Pressure, Tubing PSIG 677	+ 12 = PSIA 689	
Flowing Pressure: P PSIG M.R. 53 W.H. 351	+ 12 = PSIA R.P. 65 W.H. 363		Working Pressure: P _w PSIG Calc.	+ 12 = PSIA 467	
Temperature: T = 51 °F	F _t = 1.0085	n = .75	F _p v (From Tables) 1.010	Gravity .650	F _g = 1.240

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

$$Q = \text{Calculated from orifice meter readings} = \underline{\hspace{2cm}} 2050 \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{474721}{256632} \right)^n = (1.8498)^{.75} (2050) = (1.5862) (2050)$$

$$Aof = \underline{\hspace{2cm}} 3252 \text{ MCF/D}$$

Note: Well did not make any oil, but made 21 bbls. of water. Well vented 205 MCF to the atmosphere during test.

TESTED BY N. WaggonerWITNESSED BY C. R. Wagner

C. R. Wagner
Well Test Engineer