

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DATE June 19, 1978

Operator <u>El Paso Natural Gas Company</u>		Lease <u>Mudge #3A (PM)</u>	
Location <u>NW 9-31-11</u>		County <u>San Juan</u>	State <u>New Mexico</u>
Formation <u>Mesa Verde</u>		Pool <u>Blanco</u>	
Casing: Diameter <u>4.500</u>	Set At: Feet <u>5523'</u>	Tubing: Diameter <u>2 3/8</u>	Set At: Feet <u>5403'</u>
Pay Zone: From <u>5071</u>	To <u>5393'</u>	Total Depth: <u>5523</u>	Shut In <u>6-12-78</u>
Stimulation Method <u>Sandwater Frac</u>		Flow Through Casing	Flow Through Tubing <u>XXX</u>

Choke Size, Inches <u>.750</u>		Choke Constant: C <u>12.365</u>			
Shut-In Pressure, Casing, PSIG <u>--</u>	+ 12 = PSIA <u>--</u>	Days Shut-In <u>7</u>	Shut-In Pressure, Tubing PSIG <u>622</u>	+ 12 = PSIA <u>634</u>	
Flowing Pressure: P PSIG <u>262</u>	+ 12 = PSIA <u>274</u>		Working Pressure: P _w PSIG <u>Calc.</u>	+ 12 = PSIA <u>542</u>	
Temperature: T = <u>67 °F</u>	F _r = <u>.9933</u>	n = <u>.75</u>	F _{pv} (From Tables) <u>1.026</u>	Gravity <u>.650</u>	F _g = <u>.9608</u>

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

$$Q = 12.365 (274) (.9933) (.9608) (1.026) = \underline{3317} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{401956}{108192} \right)^n = (3.7152)^{.75} = (3317) = (2.6760) (3317)$$

$$Aof = \underline{8876} \text{ MCF/D}$$

Note: Well blew a very light fog of water throughout test. Well vented 322 MCF to the atmosphere during the test.

TESTED BY D. Wright

WITNESSED BY _____

C.R. Hagan
Well Test Engineer