

OPEN FLOW TEST DATA

DATE January 7, 1976

Operator <u>Koch Industries</u>		Lease <u>Lamb #4</u>	
Location <u>NW 21-31-10</u>		County <u>San Juan</u>	State <u>New Mexico</u>
Formation <u>Pictured Cliffs</u>		Pool <u>Blanco</u>	
Casing: Diameter <u>4.500</u>	Set At: Feet <u>3046'</u>	Tubing: Diameter <u>2.375</u>	Set At: Feet <u>2900'</u>
Pay Zone: From <u>2897'</u>	To <u>2967'</u>	Total Depth: <u>3046'</u>	Shut In <u>12-20-75</u>
Stimulation Method <u>Sandwater Frac</u>		Flow Through Casing	Flow Through Tubing <u>XX</u>

Choke Size, inches <u>.750</u>		Choke Constant: C <u>12.365</u>			
Shut-in Pressure, Casing, PSIG <u>869</u>	+ 12 = PSIA <u>881</u>	Days Shut-in <u>18</u>	Shut-in Pressure, Tubing PSIG <u>872</u>	+ 12 = PSIA <u>884</u>	
Flowing Pressure: P PSIG <u>111</u>	+ 12 = PSIA <u>123</u>		Working Pressure: P _w PSIG <u>196</u>	+ 12 = PSIA <u>208</u>	
Temperature: T = <u>65</u> °F	F _t = <u>.9952</u>	n = <u>.85</u>	F _{pv} (From Tables) <u>1.012</u>	Gravity <u>.670</u>	F _g = <u>.9463</u>

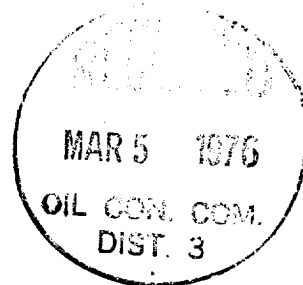
$$\text{CHOKE VOLUME} = Q = C \times P_r \times F_t \times F_g \times F_{pv}$$

$$Q = 12.365(123)(.9952)(.9463)(1.012) = \underline{1450} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{781456}{738192} \right)^n = (1.0586)(1450)^{.85} = (1.0496)(1450)$$

$$Aof = \underline{1522} \text{ MCF/D}$$

TESTED BY Koch IndustriesWITNESSED BY Norton

C. R. Wagner
Well Test Engineer