

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE 12/8/72

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|---|----------------------|-------------------------------|---------------------|
| Operator EL PASO NATURAL GAS COMPANY | | Lease Hughes #20 | |
| Location 1650/N, 850/W, Sec. 21, T29N, R8W | | County San Juan | State NM |
| Formation Pictured Cliffs | | Pool Blanco | |
| Casing: Diameter 2.875 | Set At: Feet 3143 | Tubing: Diameter No tubing | Set At: Feet |
| Pay Zone: From 3074 | To 3094 | Total Depth: 3175 | Shut In 12/1/72 |
| Stimulation Method SWF | | Flow Through Casing X | Flow Through Tubing |

| | | | | | |
|--|--------------------------------|-----------------------------|---|-----------------------|------------------------|
| Choke Size, Inches .750 | | Choke Constant: C 12.365 | | Tubingless Completion | |
| Shut-In Pressure, Casing, PSIG 1060 | + 12 = PSIA 1072 | Days Shut-In 7 | Shut-In Pressure, Tubing PSIG No tubing | + 12 = PSIA | |
| Flowing Pressure: P PSIG 153 | + 12 = PSIA 165 | | Working Pressure: P _w PSIG Calculated | + 12 = PSIA 209 | |
| Temperature: T = 56 °F | n = F _t = 1.0039 | | F _{pv} (From Tables) 1.015 | Gravity .645 | F _g = .9645 |

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

$$Q = (12.365)(165)(1.0039)(0.9645)(1.015) = 2005 \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{1149184}{1105503} \right)^n = (2005)(1.0395)^{.85} = (2005)(1.0335)$$

$$Aof = 2072 \text{ MCF/D}$$

NOTE: The well produced dry gas throughout the test.

TESTED BY Carl Rhames

WITNESSED BY _____

William D. Welch
 William D. Welch
 Well Test Engineer

