

OPEN FLOW TEST DATA

Date: AUGUST 16, 1960

Operator: WESTERN NATURAL GAS CO. Lease: GRAHAM # 1 M V

Location: H 9 - 27 - 8 County: SAN JUAN State: N.MEX.

Formation: MESA VERDE Pool: BLANCO MESA VERDE

Casing: 2" Set @ 4249 Tubing: 2 1/8" Set @ 4189

Pay Zone: 4370 To: 4570 Total Depth: 4572

Choke Size: 3/4" Choke Constant = C = 12.3650

Stimulation Method: PACKER @ 4189 Flow Through: Casing Tubing X

Shut-in Pressure Casing: DUAL psig / 12 = psia (Shut-in 8 days)

Shut-in Pressure Tubing: 92.8 928 psig / 12 = 940 psia

Flowing Pressure: P : 168 psig / 12 = 180 psia

Working Pressure: P_w : psig / 12 = CALCULATED psia

Temperature: T : 69 °F / 460 = 529 °Absolute

F_{pv} (from tables) : 1.016 Gravity .650 (EST) n .750

$$\text{Choke Volume} = Q = C \times P_t \times F_t \times F_g \times F_{pv}$$

$$Q = \frac{12.365 \times 180 \times .9915 \times .9608 \times 1.016}{2154} = \text{MCF/D}$$

$$\text{Open Flow} - Aof = Q$$

$$Aof = \frac{\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n}{\frac{303,600}{883,600 - 81,644}} = \frac{883,600}{801,956} = 1.0020 = 1.0089$$

$$Aof = \frac{2173}{\text{MCF/D}}$$

Tested By: WAYNE SMITH

Witnessed By:

GELECTRIC, INC.