

OPEN FLOW TEST DATA

Date: April 6, 1956

Operator: El Paso Natural Gas Company Lease: San Juan 32-9 # 44

Location: 1650'N, 1735'E, Sec. 11-31-10 County: San Juan State: N.M.

Formation: Mesa Verde Pool: Blanco Mesa Verde

Casing: 5 1/2 " Set @ 5450 ' Tubing: 2 " Set @ 5394 '
7 " Set @ 3175 ' Tubing: 2 " Set @ 5394 '
 Pay Zone: 4826 ' To: 5356 ' Total Depth: 5450 '
 Choke Size: 3/4 " Choke Constant = C = 14.1605

Stimulation Method: Sand Water Frac. Flow Through: Casing _____ Tubing X

Shut-In Pressure Casing: 1036 psig / 12 = 1048 psia (Shut-in _____ days)

Shut-In Pressure Tubing: 1032 psig / 12 = 1044 psia

Flowing Pressure: P : 430 psig / 12 = 442 psia

Working Pressure: P_w : 940 psig / 12 = 952 psia

Temperature: T : 73 °F / 460 = 533 ° Absolute

F_{pv} (from tables) : 1.050 Gravity 0.690 n 0.750

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

$$Q = 14.1605 \times 442 \times 0.9877 \times 0.9325 \times \frac{1}{1.050} = 6053 \text{ MCF/D}$$

$$\text{Open Flow} = Aof = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n$$

$$Aof = 6053 \left[\frac{1,098,304}{192,000} \right]^n = 6053 (5.7203)^{.75} = 6053 \times 3.70$$

$$Aof = 22.396 \text{ MCF/D}$$

Tested By: Tom Grant

Witnessed By: _____



Lewis D. Galloway
 L. D. Galloway

APR 19 1964

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1. *Chlorophyll a* (Chl *a*)

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1987) using a Shimadzu UV-1601U ultraviolet-visible spectrophotometer. The concentration of chlorophyll was expressed as $\mu\text{g mL}^{-1}$ of the sample.

[illegible]

...and the ...

Abstract

1. *Journal of the American Medical Association*, 1997; 277: 1033-1038.

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