

OPEN FLOW TEST DATA

COMPANY DISTRIBUTION ONLY

DATE July 6, 1978

Operator <u>Norman L. Gilbreath</u>		Lease <u>Moonlight Mesa #1</u>	
Location <u>NW 7-29-12</u>		County <u>San Juan</u>	State <u>New Mexico</u>
Formation <u>Fruitland</u>		Pool <u>Wildcat WEST KUTZ - FRUITLAND</u>	
Casing Diameter <u>2 7/8</u>	Set At: Feet <u>1600'</u>	Tubing: Diameter <u>1"</u>	Set At: Feet <u>1280'</u>
Pay Zone: From <u>276</u>	To <u>1282'</u>	Total Depth: <u>1600'</u>	Shut In <u>5-1-78</u>
Stimulation Method <u>Water Frac</u>		Flow Through Casing <u>XX</u>	Flow Through Tubing

2" critical flow prover		plate		Choke Constant: C	
3/8" orifice		3.1420			
Shut-In Pressure, Casing, PSIG	+ 12 = PSIA	Days Shut-In	Shut-In Pressure, Tubing PSIG	+ 12 = PSIA	
307	319	67	307	319	
Flowing Pressure: P PSIG	+ 12 = PSIA		Working Pressure: P _w PSIG	+ 12 = PSIA	
23	35		98	110	
Temperature: 82 °F	n =		F _{pv} (From Tables)	Gravity	
F _t = .9795	.85		1.003	.650	F _g = .9608

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

$$Q = 3.1420(35)(.9795)(.9608)(1.003) = 104 \text{ MCF/D}$$

$$Q = Aoi = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$Aoi = Q \left(\frac{101761}{89661} \right)^n = (1.1350)^{.85} = (1.1136)(104)$$

Note: Well blew dry gas throughout test.

Conducted an I.P. test using a 2" critical flow prover and a B.P. reg., holding a constant R.P. of approx. 100# on the tbg. while flowing the csg. through the 2" critical flow prover, and using a 3/8" orifice plate. At the end of the 3 hr. flow test, I took a 30 min. build-up test and also a 24 hr. build-up test. The following information was obtained.

SIPC = 307 psig
SIPT = 307 psig

$$Aoi = 116 \text{ MCF/D}$$

TESTED BY C.R. Wagner

WITNESSED BY Norman Gilbreath

	Csg. Flow pressure	Back Press. Reg. Tubing Pressure	Temp.
15 min.	100#	120#	63°
30 min.	100#	103#	68°
45 min.	51#	102#	70°
1 hr.	44#	100#	71°
2 hr.	28#	98#	80°
3 hr.	23#	98#	82°

Build-Up Test

15 min.	SIPC = 156	SIPT = 156#
30 min.	SIPC = 170	SIPT = 170#
24 hrs.	SIPC = 276	SIPT = 276#

C.R. Wagner
Well Test Engineer