

OPEN FLOW TEST DATA

DATE April 26, 1977

Operator Northwest Production Corp.		Lease Jicarilla 117E #9-A	
Location NW 33-26-03		County Rio Arriba	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4 1/2	Set At: Feet 6354'	Tubing: Diameter 2 3/8"	Set At: Feet 6296'
Pay Zone: From 6080	To 6314	Total Depth: 6354	Shut In 4-19-77
Stimulation Method Sandwater Frac		Flow Through Casing	Flow Through Tubing XX

Choke Size, Inches 4.000 meter	Plate 2.500	Choke Constant: C 32.64			
Shut-In Pressure, Casing, PSIG 1040	+ 12 = PSIA 1052	Days Shut-In 7	Shut-In Pressure, Tubing PSIG 959	+ 12 = PSIA 971	
Flowing Pressure: P 173 W.H. 46 M.R. PSIG	+ 12 = PSIA 185 W.H. 58 M.R.		Working Pressure: P _w 570 PSIG	+ 12 = PSIA 582	
Temperature: T = 40 °F	F _t = 1.020	n = 0.75	F _{pv} (From Tables) 1.005	Gravity 0.685	F _g = 1.208

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

$$Q = \text{Calculated from orifice meter reading} = 1463 \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{1106704}{767980} \right)^n = (1463)(1.4411)^{.75} = (1463)(1.3153)$$

$$Aof = 1924 \text{ MCF/D}$$

Note: The well produced 11 bbls of 63° API gravity oil and vented 268 MCF of gas during the test.

TESTED BY D.P. Howell & C.R. Wagner

WITNESSED BY _____

C.R. Wagner
Well Test Engineer