

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 6-4-80			
Company El Paso Natural Gas Company				Connection					
Pool Tapacito				Formation Pictured Cliff				Unit	
Completion Date		Total Depth		Plug Back TD		Elevation		Farm or Lease Name San Juan 27-4 Unit	
Csg. Size 7.00	Wt. 23	d 6.336	Set At 4386	Perforations: From 4015 To 4102		Well No. #13A (PC)			
Tbg. Size 1.66	Wt. 2.4	d 1.380	Set At 4056	Perforations: From To		Unit Sec. Twp. Rge. 0 20 27 4			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple GG Dual						Packer Set At 4324		County Rio Arriba	
Producing Thru CSG.		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a		State New Mexico	
L 4015	H	G _g .650	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run 4"	Taps Flg.	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							980		980		18 Days
1.	4 X 2.750			185	6.9 RT	49	390		387		3 Hr.
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	41.10	80.46		1.011	1.240	1.022	4237
2							
3							
4							
5							

NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.29	509	1.35	.958	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____
3					Specific Gravity Flowing Fluid _____
4					Critical Pressure _____ P.S.I.A.
5					Critical Temperature _____ R

P_c 992 P_c² 984064

NO.	P _t	P _w	P _w ²	P _c ² - P _w ²
1		402	161604	822460
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{984064}{822460}$

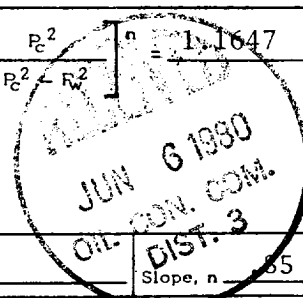
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1647$

ACF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4935$

Absolute Open Flow 4935 Mcfd @ 15.025		Angle of Slope θ _____	
Slope, n 85			

Remarks: Produced Dry Gas Throughout Test
Vented Gas = 610 MCF

Approved By Commission:	Conducted By: Lyle Nation Knox Hedgecock	Calculated By: L. E. Mabe, Jr.	Checked By:
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EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE Dec. 10, 1979

Operator El Paso Natural Gas Company		Lease San Juan 27-4 Unit #13A (PC)	
Location SE 20-27-04		County Rio Arriba	State New Mexico
Formation Pictured Cliff		Pool Tapacita	
Casing: Diameter 4.500	Set At: Feet 6644	Tubing: Diameter 1 1/4	Set At: Feet 4056
Pay Zone: From 4015	To 5860	Total Depth: 6644	Shut In 12-1-79
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing XXX

Choke Size, Inches 4"MR 2.750 Plate		Choke Constant: C 41.10		Well Tested Thru 3/4" Variable Choke	
Shut-In Pressure, Casing, PSIG 867	+ 12 = PSIA 879	Days Shut-In 9	Shut-In Pressure, Tubing PSIG 867	+ 12 = PSIA 879	
Flowing Pressure: P MR 64 WH 144 PSIG	+ 12 = PSIA MR WH 156		Working Pressure: P _w Measured 736 PSIG	+ 12 = PSIA 748	
Temperature: T = °F	F _t = 1.0218	n = .85	F _{pv} (From Tables) 1.005	Gravity .670	F _g = 1.222

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

$$Q = \text{Calculated From Meter Readings} = \underline{1213} \text{ MCF/D}$$

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

$$Aof = \left(\frac{772641}{213137} \right)^{.85} = (3.6251)^{.85} (1213) = (2.9883) (1213)$$

NOTE: Well Did Not Make Any Liquids
During Test and Vented 119 MCF/D
to the Atmosphere.

$$Aof = \underline{3625} \text{ MCF/D}$$

TESTED BY L. NationsWITNESSED BY A. Rector

C.R. Wagner
Well Test Engineer