

NE. MEXICO OIL CONSERVATION COMMS. N
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

Form C-122
Revised 9-65

NOV - 6 1973

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date					
Company Cities Service Oil Co.						Connection Transwestern		O.C.C. ARTESIA, OFFICE			
Pool So. Carlsbad Morrow						Formation Morrow		Unit			
Completion Date			Total Depth 11,732'		Plug Back TD 11,687'		Elevation K.B. 3166		Farm or Lease Name Merland "C" <i>Chm</i>		
Csg. Size 5-1/2		Wt. 17&20#		Set At 11,732'		Perforations: From 11,245' To 11,525'		Well No. 1			
Tbg. Size 2-7/8		Wt. 6.4		Set At 10,037'		Perforations: From To		Unit F		Sec. Twp. Rge. 19 22S 27E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 11,010'		County Eddy			
Producing Thru Tubing			Reservoir Temp. °F 181 @ 11,718'		Mean Annual Temp. °F 60 degrees F		Baro. Press. - P _a 13.2		State New Mexico		
L 10,037'		H 10,037'		G _g 0.58		% CO ₂ 1.0		% N ₂ .26		% H ₂ S 0	
								Prover Orifice		Meter Run 4"	
										Taps Flange	

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	4"		2-1/2	240	6.5	80	240	72	---	---	24 hr
1.											
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	25.99	40.54	253.2	0.9813	1.313	1.020	1,385
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	0.37	540	1.51	0.962	A.P.I. Gravity of Liquid Hydrocarbons _____ No Liquids _____ Deg.
2.					Specific Gravity Separator Gas _____ 0.58 _____ XXXXXXXXXX
3.					Specific Gravity Flowing Fluid _____ XXXXX _____
4.					Critical Pressure _____ 675 _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ 356 _____ R _____ R

P _c 4570 P _c ² 20.8849 x 10 ⁶				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	---	431	.1858 x 10 ⁶	20.6991 x 10 ⁶
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.009$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,397 \text{ MCFD}$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.009$

Absolute Open Flow	1,397	Mcfd @ 15.025	Angle of Slope @	45 degrees	Slope, n	1.0
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Remarks: Pw was taken from bottom hole pressure bomb.

Approved By Commission:	Conducted By: <i>J. L. Russell</i>	Calculated By: <i>Ed Lowrey</i>	Checked By: <i>Sho Dwin</i>
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