

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

Copy 6-1
Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 7-31-74		AUG 19 1974		
Company Cities Service				Connection None		O. C. C.		
Pool Bunter Flat morrow Russell Deep R-4915 12-1-74				Formation Upper Morrow		Unit ARTESIA, OFFICE		
Completion Date 7-31-74		Total Depth 11,450		Plug Back TD 11,240		Elevation 3562 ft.		
Casing Size 5 1/2		WT. 17#		Set At 11,450		Perforations: From 11,123 To 11,230		
Tub. Size 2 7/8		WT. 6.4		Set At 11,050		Perforations: From open To ended		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,050		Farm or Lease Name Government Y		
Producing Thru TBG		Reservoir Temp. °F 178 @ 11,173		Mean Annual Temp. °F		Baro. Press. - P _a 13.2		
L 11,050		H .625		Gg .625		% CO ₂		
						% N ₂		
						% H ₂ S		
						Prover		
						Meter Run 6"		
						Taps Flg		
FLOW DATA				TUBING DATA		CASING DATA		
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Duration of Flow	
1	6 x 1.500			635	6.8	70	24 hr.	
2	6 x 1.500			638	10.0	89	1 hr.	
3	6 x 1.500			640	16.0	90	1 hr.	
4	6 x 1.500			650	27.0	92	1 hr.	
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	10.70	66.39	648.2	.9905	1.265	1.058	942	
2	10.70	80.70	651.2	.9732	1.265	1.052	1118	
3	10.70	102.23	653.2	.9723	1.265	1.051	1414	
4	10.70	133.81	663.2	.9706	1.265	1.052	1849	
5								
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 38 Mcf/bbl.			
1	.97	530	1.45	.893	A.P.I. Gravity of Liquid Hydrocarbons 60 @ 60 Deg.			
2	.97	549	1.50	.904	Specific Gravity Separator Gas .625 XXXXXXXXX			
3	.97	550	1.51	.906	Specific Gravity Flowing Fluid XXXXX G-MIX .657			
4	.99	552	1.51	.904	Critical Pressure 671 P.S.I.A. 670 P.S.I.A.			
5					Critical Temperature 365 R 378 R			
$P_1 = 2278.2$ $P_2 = 5190.2$								
NO.	P _r	P _w	P _r ²	P _w ²	$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 1.860$			$(2) \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.528$
1		2137.6	4569.3	620.9				
2		1973.6	3895.1	1295.1				
3		1799.1	3236.8	1953.4				
4		1549.1	2399.7	2790.5				
5								
$ACF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.825$								
Absolute Open Flow 2,825				Mcf @ 15.025		Angle of Slope 55.75		
						Slope, α .683		
Remarks: Well made 2.5 TML of condensate during test. B. HP. Bomb was run by John Ward Engineering of Hobbs, NM. Static Bottomhole pressure was 3075#, bomb set @ 11,173'.								
Approved By Commission:		Conducted By: R. E. Reston		Calculated By: R. E. Reston		Checked By: <i>Joe Davis</i>		