

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3-10-87			
Company Sofia Exploration				Connection NA					
Pool NA				Formation Glorietta & Yeso				Unit	
Completion Date 2-5-87		Total Depth 3764		Plug Back TD 2700		Elevation 6192 GL		Farm or Lease Name Roxana State	
Csg. Size 5 1/2	Wt. 15.5	d	Set At 3715	Perforations: From 1652/1880 To 1744/1892				Well No. #1	
Tbg. Size	Wt.	d	Set At	Perforations: From To				Unit Sec. Twp. Rge. 36 26N 29E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Multiple						Packer Set At		County Union	
Producing Thru casing		Reservoir Temp. °F 0		Mean Annual Temp. °F		Baro. Press. - P _a 12.2		State New Mexico	
L 1772	H	Gg 1.500	% CO ₂	% N ₂	% H ₂ S	Prover 2"	Meter Run	Taps	

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
Sl									17.5		
1.	2 x 1.500			3.0		45			6.1		23.5
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	43.19		15.2	1.015	.8165	1.000	544
2							
3							
4							
5							

NO	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.	
1	.02	505	1.41	1.000	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.	
2					Specific Gravity Separator Gas 1.500 XXXXXXXXXX	
3					Specific Gravity Flowing Fluid XXXXXX	
4					Critical Pressure 671 P.S.I.A. _____ P.S.I.A.	
5					Critical Temperature 358 R _____ R	

$P_c = 30.8$ $P_c^2 = 948.6$					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.6143635$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4452834$	
NO	P _r	P _w	P _w ²	P _c ² - P _w ²				
1		19.0	361	587.6				
2								
3								
4								
5								

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 786.2$					calculated wellhead open flow 786 mcfd @ 14.65 Mcfd @ 15.025		Angle of Slope $\theta = 52.44$		Slope, n 0.769	
Absolute Open Flow _____										
Remarks: No friction at existing flow rate										
Approved by Division			Conducted By:			Calculated By:			Checked By:	