

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3/3/89		MAR 16 '89	
Company FORAN OIL CO. ✓				Connection PIPELINE		O. C. D.	
Pool DIAMOND MOUND <i>Morrow</i>				Formation MORROW		Unit ARTESIA, OFFICE	
Completion Date 2/3/89		Total Depth 9260		Plug Back TD 9220		Elevation 0	
Casing Size 4.500		Set At 11.6		Perforations From 8903 To 8975		Well No. 2	
Tubing Size 2.375		Set At 4.7		Perforations From 0 To 0		Unit L Sec. Twp. Rye. 36-155-27E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE-GAS				Packer Set At 8799		County CHAVES	
Producing thru TUBING		Reservoir Temp. °F 165 # 8939		Mean Annual Temp. °F 60		Baro. Press. - P ₀ 13.2	
L 8939		H 8939		G _g .685		Prover .0	
		% CO ₂ .99		% N ₂ .43		% H ₂ S .00	
						Meter Run 3.1	
						Tups 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							1200	60			72
1.	3.07 X 1.000			215	18.0	78	1025	60	0	0	1
2.	3.07 X 1.000			220	36.0	78	950	60	0	0	1
3.	3.07 X 1.000			240	50.0	78	825	60	0	0	1
4.	3.07 X 1.000			250	70.0	78	725	60	0	0	1
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	4.79	64.09	228.2	.9831	1.2082	1.0221	373
2	4.79	91.63	233.2	.9831	1.2082	1.0226	533
3	4.79	112.52	253.2	.9831	1.2082	1.0246	656
4	4.79	135.74	263.2	.9831	1.2082	1.0256	792
5							

NO.	P ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.34	538	1.41	.957	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.35	538	1.41	.956	Specific Gravity Separator Gas .685
3	.38	538	1.41	.953	Specific Gravity Flowing Fluid _____
4	.39	538	1.41	.951	Critical Pressure 672. P.S.I.A.
5					Critical Temperature 382. R

NO.	P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇	P ₈	P ₉	P ₁₀	P ₁₁	P ₁₂	P ₁₃	P ₁₄	P ₁₅	P ₁₆	P ₁₇	P ₁₈	P ₁₉	P ₂₀
1	1078	1041	1083	389																
2	928	968	937	535																
3	703	846	715	756																
4	545	751	563	908																
5																				

$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.6211$				$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5446$			
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1223.$							

Absolute Open Flow 1223 Mcfd @ 15.025		Angle of Slope 48		Slope, n .900	
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Remarks:			

Approved By Division	Conducted By: BENNETT-CATHEY	Calculated By: MATT LEE	Checked By: <i>[Signature]</i>
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