

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 11-19-88		DEC 09 '88					
Company UNION TEXAS PETROLEUM ✓				Connection AIR NEW WELL		O.C.D.					
Well McKittrick Hills <i>U/PENN</i>				Formation Penn		Unit ARTESIA, OFFICE					
Completion Date 11-16-88		Total Depth 7979		Plug Back TD 7940		Elevation 3859 GI					
Csg. Size 4.500		Well ID 11.6		Set At 7979		Perforations: From 7830 To 7863					
Tub. Size 2.375		Well ID 4.7		Set At 7730		Perforations: From OPEN To ENDED					
Type Well - Single - Broadhead - G.C. or G.O. Multiple SINGLE				Packer Set At 7730		County EDDY					
Producing thru TUBING		Reservoir Temp. °F 139 @ 7846		Mean Annual Temp. °F 60.0		Baro. Press. - P _g 13.2					
L 7846		H 7846		Cg .632		% CO ₂ 2.50					
				% N ₂ 1.16		% H ₂ S 0					
				Prover 0		Meter Run 4.0					
						Taps FLANGE					
FLOW DATA				TUBING DATA		CASING DATA					
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	Duration of Flow
SI							1730	61			72.
1.	4.03 X 2.500			280	12.0	60	1688	61			1
2.	4.03 X 2.500			290	25.0	50	1620	60			1
3.	4.03 X 2.500			300	50.0	40	1500	60			1
4.	4.03 X 2.500			360	99.0	43	1190	60			1
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 O, Mcid				
1	32.46	59.32	293.2	1.0000	1.2579	1.0269	2501				
2	32.46	87.06	303.2	1.0098	1.2579	1.0292	3715				
3	32.46	125.14	313.2	1.0198	1.2579	1.0324	5409				
4	32.46	192.22	373.2	1.0168	1.2579	1.0378	8327				
5											
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ 866.7 Mcf/bbl.						
1	0.43	520	1.44	0.948	A.P.I. Gravity of Liquid Hydrocarbons _____ 62.100 Deg.						
2	0.45	510	1.41	0.944	Specific Gravity Separator Gas _____ 0.632 _____ X X X X X X X X X						
3	0.46	500	1.38	0.938	Specific Gravity Flowing Fluid _____ X X X X X _____ 0.635						
4	0.55	503	1.39	0.928	Critical Pressure _____ 680.0 P.S.I.A. _____ 680.0 P.S.I.A.						
5					Critical Temperature _____ 361 R _____ 362 R						
P _c 1743.2 P _c ² 3039					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 10.5007$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.4473$						
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	AOG = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 28706.0$						
1		1735.	3009	29							
2		1708.	2918	120							
3		1681.	2825	214							
4		1658.	2749	289							
5											
Absolute Open Flow _____ 28706				Mcid @ 15.025		Angle of Slope @ _____ 62.2		Slope, n _____ 0.526			
Remarks: _____											
Approved By Division Dave Harsell			Conducted By: BENNETT-CATHEY			Calculated By: MATT LEE			Checked By: Ken White		