

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test 4POINT <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 4-27-87			
Company MC CLELLAN OIL COMPANY				Connection TO AIR			
Pool LITTLE LUCKY LAKE				Formation MORROW		Unit 3	
Completion Date 4-20-87		Total Depth 10,220		Plug Back TD 10,160		Elevation 3919	
Casing Size 5.500		Wt. 17.00		Set At 4.892		Perforations: From 9942 To 9966	
Well No. COMM FED 1		Unit 30		Sec. 15S		Twp. 30E	
Type Well - Single - Broadhead - G.C. or C.O. Multiple SINGLE				Packer Set At 9867		County CHAVES	
Producing thru TUBING		Reservoir Temp. °F 165 @ 9867		Mean Annual Temp. °F 60		Baro. Press. - P ₀ 13.2	
L 9954		H 9954		C _g 0.798		% CO ₂ 0.51	
				% N ₂ 2.03		% H ₂ S 0	
				Prover 0		Meter Run 4.026	
						Taps FLG	
FLOW DATA				TUBING DATA		BHP DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.
1	4.026	1.000	395	6.5	90	1678	65
2	4.026	1.000	405	14.5	88	1617	65
3	4.026	1.000	410	31.0	84	1565	65
4	4.026	1.000	410	64.0	83	1418	65
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, Mcfd
1	4.753	51.51	408.2	0.9723	1.1194	1.0511	280
2	4.753	77.87	418.2	0.9741	1.1194	1.0531	425
3	4.753	114.54	423.2	0.9777	1.1194	1.0550	629
4	4.753	164.57	423.2	0.9786	1.1194	1.0553	904
5							
NO.	r ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>7.573</u> Mcf/mbbl.		
1	0.62	550	1.33	0.905	A.P.I. Gravity of Liquid Hydrocarbons <u>58.7</u> Deg.		
2	0.63	548	1.32	0.902	Specific Gravity Separator Gas <u>0.798</u> XXXXXXXXXX		
3	0.64	544	1.31	0.898	Specific Gravity Flowing Fluid <u>XXXXX</u> 1.088		
4	0.64	543	1.31	0.898	Critical Pressure <u>661</u> P.S.I.A. 647 P.S.I.A.		
5					Critical Temperature <u>414</u> R 505 R		
NO.	P ₁ ²	P _w	r _e ²	r _w ²	(1) $\frac{r_e^2}{r_w^2 - r_e^2} = 2.0159$		
1		1682	2829	1204	(2) $\left[\frac{r_e^2}{r_w^2 - r_e^2} \right]^n = 2.0159$		
2		1621	2629	1404	AOI = 0 $\left[\frac{r_e^2}{r_w^2 - r_e^2} \right]^n = 1823$		
3		1571	2467	1566			
4		1426	2032	2001			
5							
Absolute Open Flow <u>1823</u> Mcfd @ 15.025				Angle of Slope @ <u>45°</u>		Slope, n <u>1.000</u>	
Remarks: <u>PRODUCED 12.3 BBLs CONDENSATE API 58.7 @ 60°F</u>							
Approved By Division		Conducted By: RICHARD TOWNLEY		Calculated By: RICHARD TOWNLEY		Checked By:	