

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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Type Test ☒ Initial ☐ Annual ☐ Special				Test Date May 25, 1990		JUN 22 10 47 AM '90					
Company Mewbourne Oil Company				Connection El Paso		CARE AREA					
Pool Avalon Morrow				Formation Morrow		Unit					
Completion Date 2/22/90		Total Depth 10,936'		Plug Back TD 10,750		Elevation 3218					
Casing Size 5-1/2"		WT. 17 & 20		Set At 10,930'		Perforations: From 10,642 To 10,668					
Tubing Size 2-7/8"		WT. 6.5		Set At 10,506'		Perforations: From To					
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At 10,506		Form or Lease Name Federal "Q"					
Producing Thru Tubing		Reservoir Temp. °F 200 @ 10,642'		Mean Annual Temp. °F 75		Buro. Press. - P _a 13.2					
L 10,506'		H 10,506'		G _g 0.6191		% CO ₂ 2.53					
				% N ₂ 0.40		% H ₂ S ---					
				Prover		Meter Run X					
						Taps Flange					
FLOW 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							2990		Packer		
1.	4" x 1.500			487	2.40	85	2950	74			60 min.
2.	4" x 1.500			492	5.00	81	2910	74			60 min.
3.	4" x 1.500			477	11.30	80	2825	74			60 min.
4.	4" x 1.500			472	42.72	64	2500	74			60 min.
5.											60 min.
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 Q, Mcfd				
1	10.84	34.90	500.2	0.977	1.270	1.036	486				
2	10.84	50.26	505.2	0.980	1.270	1.038	704				
3	10.84	74.42	490.2	0.981	1.270	1.037	1042				
4	10.84	143.97	485.2	0.996	1.270	1.040	2053				
5											
NO.		I _g	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio 335 Mcf/bbl.					
1		0.73	545	1.53	0.932	A.P.I. Gravity of Liquid Hydrocarbons 55 @ 60° Deg.					
2		0.74	541	1.52	0.929	Specific Gravity Separator Gas 0.62 XXXXXXXXX					
3		0.72	540	1.51	0.930	Specific Gravity Flowing Fluid XXXXX 0.631					
4		0.71	524	1.48	0.925	Critical Pressure 682 P.S.I.A. 683 P.S.I.A.					
5						Critical Temperature 357 R 360 R					
P _c 3042		P _c ² 9254									
NO.	P _i ²	P _w ²	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3135$						
1	8703	2985	8910	344	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0745$						
2	8468	2894	8375	879							
3	7981	2838	8054	1200							
4	6250	2505	6275	2979	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5800$						
5											
Absolute Open Flow 5800 Mcfd @ 15.025				Angle of Slope 49.03		Slope, n 0.868328					
Remarks:											
Approved By Division		Conducted By: Bill Pierce		Calculated By: Eric W. Nelson		Checked By:					