

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 1/1/77

RECEIVED

Test Type: ☒ Initial ☐ Annual ☐ Special				Test Date: 1-18-77		JAN 25 1977	
Company: GULF OIL CORP.				Connection: AIR		C.O.C.	
Location: WHITE CITY MORROW				Formation: MORROW		Unit: ARTESIA, OFFICE	
Completion Date: 1-15-77		Total Depth: 11517		Plug Back TD: 11471		Elevation: 3393 Gr.	
Well No.: 15		Form or Lease Name: WHITE CITY PEN GAS UNIT		Well No.: 15		Unit: 28 Sec: 24 Twp: 26	
Casing Size: 18.00"		Set At: 11511		Perforations: From 11118 To 11196		Unit: 28 Sec: 24 Twp: 26	
Tubing Size: 2.375"		Set At: 11660		Perforations: From To		Unit: 28 Sec: 24 Twp: 26	
Type Well: Single - Broadhead - G.G. or G.O. Multiple				Packer Set At: 11666		County: EDDY	
Completion: Single Completion				Baro. Press. - P _a : 13.2		State: NEW MEXICO	
Producing Thru: Tubing		Reservoir Temp. *F: 185 @ 11157		Mean Annual Temp. *F: 60		Meter Run: X	
L: 11157		H: 11157		G _g : 0.579		Taps:	
				% CO ₂ : 0.01		% N ₂ : 0.00	
				% H ₂ S: 0.00		Prover:	

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	Duration of Flow
1.	4.00		2.00	605	9.00"	96	3772	60			1.00 Hr.
2.	4.00		2.00	610	19.50"	83	3710	58			1.00 Hr.
3.	4.00		2.00	614	39.50"	77	3592	61			1.00 Hr.
4.	4.00		2.00	620	84.00"	65	3373	61			1.00 Hr.
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 Q, Mcfd
1.	19.81	74.591	618.20	0.9671	1.3142	1.0430	1959
2.	19.81	110.238	623.20	0.9786	1.3142	1.0470	2941
3.	19.81	157.399	627.20	0.9840	1.3142	1.0500	4234
4.	19.81	230.627	633.20	0.9952	1.3142	1.0540	6298
5.							

NO.	P _r	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	0.92	556	1.55	0.909		None Produced	0.579	XXXXXXX	671	358
2.	0.93	543	1.52	0.908			XXXXX			
3.	0.94	537	1.50	0.907						
4.	0.95	525	1.47	0.896						
5.										

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2}$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n$
1.	3667.2	3803.6	14467	441	7.14949	4.3295
2.		3763.9	14167	742		
3.		3691.2	13625	1284		
4.		3561.0	12624	2085		
5.						

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 27267$	Angle of Slope $\theta = 53.31$	Slope, n = 0.745
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Estimated Open Flow: 27267 Mcfd @ 15.025	Calculated By: LARRY DAVIS	Checked By:
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