

056 file
dsi file

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 12/18/91							
Company Collins & Ware, Inc.				Connection							
Pool <i>S. Culebra Bluff Atoka</i>				Formation Atoka							
Completion Date 12-16-91		Total Depth 11843-12180		Plug Back TD 11843							
Elevation 0		Form of Lease Name Ray "25"		Well No. 1							
Csg. Size 7	Int. d	Set At 11580	Perforations From 11827 To 11832		Unit N						
Tub. Size 2.375	Int. d	Set At 11580	Perforations From To		Sec. 25						
Type Well - Single - Blindhead - G.G. or G.O. Multiple				Packer Set At 11580							
Producing Thru 160 # 11827				Mean Annual Temp. °F 60							
Reservoir Temp. °F 160 # 11827				Base Press. - P ₀ 13.20							
L 11827		H 11827		Cg .580							
% CO ₂ .87		% N ₂ .60		% H ₂ S 0							
Prover 0		Meter Run 4		Taps Flange							
FLOW DATA			TUBING DATA		CASING DATA						
NO.	Prover Line Size	X	Orifice Size	Press. psia	Diff. In. H ₂ O	Temp. °F	Press. psia	Temp. °F	Press. psia	Temp. °F	Duration of Flow
SI							5827	60			116.0
1.	4.03	X	1.000	100	30.0	60	4291	60	0	0	1.0
2.	4.03	X	1.000	100	30.0	60	3600	60	0	0	1.0
3.	4.03	X	1.000	118	29.5	60	2310	60	0	0	4.0
4.	4.03	X	1.000	122	64.9	60	2092	60	0	0	2.5
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	4.75	58.28	113.2	1.0000	1.3131	1.0088	367				
2	4.75	58.28	113.2	1.0000	1.3131	1.0088	367				
3	4.75	62.21	131.2	1.0000	1.3131	1.0103	392				
4	4.75	93.67	135.2	1.0000	1.3131	1.0106	591				
5											
NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio .000 Mcf/bbl.						
1	.17	520	1.49	.983	A.P.I. Gravity of Liquid Hydrocarbons 41.3 Deg.						
2	.17	520	1.49	.983	Specific Gravity Separator Gas .580 XXXXXXXXX						
3	.19	520	1.49	.980	Specific Gravity Flowing Fluid .580 XXXXX						
4	.20	520	1.49	.979	Critical Pressure 676. P.S.I.A. 676. P.S.I.A.						
5					Critical Temperature 349. R 349. R						
P _f 5480.2 P _s 34108											
NO.	P _f ²	P _s ²	P _f ² - P _s ²	(1) $\frac{P_f^2}{P_f^2 - P_s^2} = 1.1500$ (2) $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.1091$							
1	4308	18559	15549	LOG = Q $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 655.$							
2	3617	13080	21028								
3	2326	5411	28697								
4	2109	4450	29658								
5											
Absolute Open Flow 655 Mcfd @ 15.025					Angle of Slope @ 53.5			Slope, n 0.741			
Remarks: Calculations done using surface pressures and rates. Data collected by Schlumberger Well Services.											
Approved By Division				Conducted By Schlumberger				Calculated By <i>Terry E. Woods</i>			
Checked By:											