

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 8-17-93				
Company V-F PETROLEUM INC.				Connection WARREN PETROLEUM					
Pool <i>Wildcat</i> Undesignated Atoka				Formation Atoka				Unit	
Completion Date 7-20-93		Total Depth 13635		Plug Back TD 12981		Elevation 3942KB		Farm or Lease Name Graham	
Coq. Size 5.500	Wl. 20.0	d 4.340	Set At 13548	Perforations: From 11893 To 11965			Well No. 1		
Thg. Size 2.875	Wl. 2.4	d .000	Set At 12100	Perforations: From To			Unit Sec. Twp. Rge. SEC 9 - 15S - 36E		
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE				Packer Set At 11750		County Lea			
Producing Thru TUBING		Reservoir Temp. °F 155 # 11929.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.20		State NM	
L 11929.	H 11929.	G _g .720	% CO ₂ .00	% N ₂ .00	% H ₂ S .00	Prover .0	Meter Run 3.1	Taps FLANGE	

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
SI							2292.	69.			120.0
1.	3.02 X 2.250			6.	2.0	58.	2119.	58.	0.	0.	1.0
2.	3.02 X 2.250			6.	3.5	60.	1999.	60.	0.	0.	1.0
3.	3.02 X 2.250			8.	6.5	60.	1671.	60.	0.	0.	1.0
4.	3.02 X 2.250			9.	7.8	58.	1368.	58.	0.	0.	1.0
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	.01	6.12	18.7	1.0019	1.1785	1.0081	160.
2	.01	8.20	19.2	1.0000	1.1785	1.0080	305.
3	.01	11.74	21.2	1.0000	1.1785	1.0080	755.
4	.01	13.10	22.0	1.0019	1.1785	1.0081	1046.
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.03	518.	1.31	.984	87.2	
2.	.03	520.	1.31	.984	61.1	
3.	.03	520.	1.31	.984	.720	XXXXXXX
4.	.03	518.	1.31	.984	XXXXX	.749
5.						

P _f 2288.5 P _f ² 5237				
NO.	P _f ²	P _s	P _s ²	P _f ² - P _s ²
1	4546.	2139.	4574.	663.
2	4049.	2015.	4061.	1177.
3	2837.	1684.	2836.	2402.
4	1908.	1386.	1921.	3317.
5				

(1) $\frac{P_f^2}{P_f^2 - P_s^2} = 1.5791$

AOF = Q $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1652.$

(2) $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.5791$

Absolute Open Flow	1652.	Mcf/d @ 15.025	Angle of Slope θ	45.0	Slope, n	1.000
Remarks:						
Approved By Division		Conducted By: Bobby Fowler		Calculated By: YGH		Checked By: