

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 1-14-91	
Company ANADARKO. <i>Petroleum Corp</i>		Connection FLARE	
Pool N/A		Formation QUEEN (GAS)	
Completion Date 1-5-91		Total Depth 2650	Plug Back TD 2624
		Elevation 4016GL	Farm or Lease Name APACHE <i>Fed</i> COM
Coq. Size 4.5	Wt. 11.6	d 4.000	Set At 2647
Perforations: From 2506 To 2516		Well No. #1	
Thq. Size 2.375	Wt. 4.7	d 1.995	Set At 2443
Perforations: From 0 To 0		Unit Sec. Twp. Rye. 30 13S 31E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE		Packer Set At 2443	County CHAVES
Producing Thru TBG. (GAS)	Reservoir Temp. °F 85 @ 2511	Mean Annual Temp. °F 60.0	Baro. Press. - P_b 13.2
State N.M.			
L 2511	H 2511	G _g 0.968	% CO ₂ 0.00
% N ₂ 66.09		% H ₂ S 0.00	Prover 0
Meter Run 3.0		Taps FLG.	

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
1.	3.00 x 1.000			68	13.0	50	0	0	461	85	72.0
2.	3.00 x 1.000			75	32.0	50	0	0	417	85	1.0
3.	3.00 x 1.000			90	65.0	53	0	0	385	85	1.0
4.	3.00 x 1.000			90	94.0	54	0	0	335	85	1.0
5.							0	0	301	85	1.0

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 _{sp}	Rate of Flow Q, Mcfd
1	4.79	32.49	81.2	1.0098	1.0164	1.0046	161
2	4.79	53.13	88.2	1.0098	1.0164	1.0049	263
3	4.79	81.90	103.2	1.0068	1.0164	1.0057	404
4	4.79	98.49	103.2	1.0058	1.0164	1.0056	485
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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	0.15	510	1.74	0.991	0	0	0.968	XXXXXX	540	294
2	0.16	510	1.74	0.990						
3	0.19	513	1.75	0.989						
4	0.19	514	1.75	0.989						
5										

$P_r = 433.5$ $P_w^2 = 188$				$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 1.7894$ $(2) \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.7498$	
NO.	P_r^2	P_w^2	$P_r^2 - P_w^2$	$AOF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 849$	
1	185	393	155		
2	158	364	133		
3	121	319	102		
4	99	288	83		
5					

Absolute Open Flow	849	Mcfd @ 15.025	Angle of Slope	46.1	Slope, n	0.962
Remarks: CHOKE SIZES 6/64 11/64 14/64 17/64						
Approved By Division	Conducted By	Calculated By	Checked By			
	BENNETT-CATHEY	JIM SMITH				