

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10/22/85			
Company Pogo Producing Co.				Convection Llano					
Pool Wildcat				Formation Pennsylvanian				Unit	
Completion Date 10/18/85		Total Depth 13,600		Plug Back TD 12,555		Elevation 3726		Farm or Lease Name State L 922	
Ceq. Size 5"	Wt. 18	d 4.151	Set At 13600	Perforations: From 12169 To 12403		Well No. 2			
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 12455	Perforations: From Open To End		Unit Sec. Twp. Rge. J 28 21S 34E			
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single						Packer Set At 12145		County Lea	
Producing Thru Tbg.		Reservoir Temp. °F 195 12455		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 12455	H 12455	Cq .7153	% CO ₂ 3.76	% N ₂ .895	% H ₂ S	Prover	Meter Run 4.026	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.	
SI							5055			
1.	4.026 X 1.500			510	3	85	3773			
2.	4.026 X 1.500			520	5	80	2658			
3.	4.026 X 1.500			510	2	79	1720			
4.	4.026 X 1.500			510	12	79	1894			
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	10.84	39.62	523.2	.9768	1.183	1.051	522
2	10.84	51.63	533.2	.9813	1.183	1.052	683
3	10.84	32.35	523.2	.9822	1.183	1.054	429
4	10.84	79.24	523.2	.9822	1.183	1.054	1052
5							

NO.	P _r	Temp. °F	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.	.76	545	1.41	.906	6.545	58° @ 60°	.715	XXXXXX	689	387
2.	.77	540	1.40	.903				XXXXXX		
3.	.76	539	1.39	.901						
4.	.76	539	1.39	.901						
5.										

NO.	P _i ²	P _w	P _r ²	P _r ² - P _w ²
1		5895.1	34752	8966
2		5389.6	29048	14670
3		4934.1	24345	19373
4		3490.8	12186	31532
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.386$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1984$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.261$

Gas Liquid Hydrocarbon Ratio 6.545 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 58° @ 60° Deg.

Specific Gravity Separator Gas .715 XXXXXXXXXX

Specific Gravity Flowing Fluid XXXXXX

Critical Pressure 689 P.S.I.A.

Critical Temperature 387 R

Absolute Open Flow <u>1,261</u> Mcfd @ 15.025	Angle of Slope <u>61</u>	Slope, n <u>.554</u>
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Remarks: P_c & P_w Calculated from known bottom hole pressures. Well Made 17.1 bbls of condensate & 44.6 bbls of water during test.

Approved By Division	Conducted By Duke Services, Inc.	Calculated By R. Reston	Checked By
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NOV 8 - 1985
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