

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4/29/86		RECEIVED BY MAY 12 1986 O. C. D. ARTESIA, OFFICE			
Company Pogo Producing Co.				Connection None					
Pool				Formation Morrow					
Completion Date 4/24/86		Total Depth 15026		Plug Back TD 14965		Elevation 3567		Farm or Lease Name Neff Federal	
Cq. Size 5	Wt. 18	d 4.276	Set At 14,998	Perforations: From 14460 To 14723				Well No. 1	
Thq. Size 2 3/8	Wt. 4.7	d 1.995	Set At 14,400	Perforations: From Open To End				Unit Sec. Twp. Rge. F - 25 22S 31E	
Type Well - Single - Blindhead - G.C. or G.O. Multiple Single				Packer Set At 14,400				County Eddy	
Producing Thru Tbg		Reservoir Temp. °F 220° 14,592		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State New Mexico	
L 14592	H 14592	Gg .588	% CO ₂ 1.039	% N ₂ .290	% H ₂ S	Prover	Meter Run 3.826	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
SI							4520				
1.	3.826 X .750			500	8	99	4205				1 hr.
2.	3.826 X .750			500	16	97	3800				1 hr.
3.	3.826 X .750			500	23	94	3367				1 hr.
4.	3.826 X .750			500	29	93	2852				1 hr.
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. Factor, F _{sp}	Rate of Flow O. Mcd
1	2.662	64.07	513.2	.9645	1.304	1.033	222
2	2.662	90.62	513.2	.9662	1.304	1.034	314
3	2.662	108.64	513.2	.9688	1.304	1.035	378
4	2.662	122.00	513.2	.9697	1.304	1.035	425
5							

NO.	R ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio - Dry- Mcf/bbl.	
1	.76	559	1.58	.938	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.	
2	.76	557	1.57	.936	Specific Gravity Separator Gas .588 XXXXXXXXXX	
3	.76	554	1.56	.934	Specific Gravity Flowing Fluid XXXXX	
4	.76	553	1.56	.934	Critical Pressure 672 P.S.I.A. _____ P.S.I.A.	
5					Critical Temperature 354 R _____ R	

P_f 6159.2 P_f² 37935.7

NO.	R ₁ ²	P ₁ ²	P ₂ ²	R ₁ ² - P ₂ ²
1	5696.2	32446.7	5489.0	
2	5220.0	27248.4	10687.3	
3	4754.2	22602.4	15333.3	
4	4422.2	19555.8	18379.9	
5				

(1) $\frac{P_c^2}{P_c^2 - R_w^2} = 2.064$ (2) $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 1.472$

AOF = O $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = .626$

Foot ID 2
5 2 3 56
Long + 500

Absolute Open Flow .626 Mcd @ 15.025		Angle of Slope 61.5	Slope, n .534
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Remarks: Calculated from known bottom hole pressures

Approved By Division	Conducted By: Duke Services, Inc.	Calculated By: R. Reston	Checked By:
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