STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 3-16-91	
Company: POGO PRODUCING CO.		Connection: FLARE			
Pool: N/A		Formation: ~~MORROW~~ atoka Morrow (See letter 5/4)			Unit: N/A
Completion Date: 3-14-91	Total Depth: 14833	Plug Back TD: 14793		Elevation: 0	Farm or Lease Name: FEDERAL 31
Csg. Size: 5.000 / Wt.: 18.0 / d: 4.276	Set At: 14833	Perforations: From 13971 To 13979			Well No.: #1
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995	Set At: 13849	Perforations: From 0 To 0			Unit: 31 Sec. Twp.: 21S Rge.: 32E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE (GAS)		Packer Set At: 13849			County: LEA
Producing Thru: TBG (GAS)	Reservoir Temp. °F: 199 @ 13975	Mean Annual Temp. °F: 60.0	Baro. Press. – P_a: 13.2		State: N.M.

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
13975	13975	0.598	0.53	0.79	0.00	0	4.0	FLANGE

	FLOW DATA				TUBING DATA		CASING DATA		
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	Duration of Flow
SI					6020	60			72.0
1.	4.00 X 1.750	380	4.0	84	5562	60	0	0	4.0
2.	4.00 X 1.750	380	16.0	85	5232	60	0	0	4.0
3.	4.00 X 1.750	370	27.0	68	4758	60	0	0	4.0
4.	4.00 X 1.750	390	42.0	69	4093	60	0	0	4.0
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	14.94	39.66	393.2	0.9777	1.2932	1.0282	770
2.	14.94	79.32	393.2	0.9768	1.2932	1.0280	1538
3	14.94	101.72	383.2	0.9924	1.2932	1.0307	2010
4.	14.94	130.13	403.2	0.9915	1.2932	1.0321	2572
5							

NO.	P_t	Temp. °R	T_r	Z
1	0.58	544	1.53	0.946
2.	0.58	545	1.54	0.946
3.	0.57	528	1.49	0.941
4.	0.60	529	1.49	0.939
5				

Gas Liquid Hydrocarbon Ratio	79.8 Mcf/bbl.	
A.P.I. Gravity of Liquid Hydrocarbons	56.0 Deg.	
Specific Gravity Separator Gas	0.598	XXXXXXXXX
Specific Gravity Flowing Fluid	XXXXX	0.633
Critical Pressure	674 P.S.I.A.	672 P.S.I.A.
Critical Temperature	355 R	366 R

P_c 6033.2 P_c^2 36400

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	31083	5582	31160	5240
2	27512	5261	27678	8722
3	22764	4796	23001	13399
4	16861	4146	17188	19211
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.8947$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.8071$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4648$

Absolute Open Flow: 4648 Mcfd @ 15.025 | Angle of Slope θ: 47.2 | Slope, n: 0.926

Remarks: CHOKE SIZES 6/64, 7/64, 8/64, 11/64

Approved by Division:	Conducted By:	Calculated By:	Checked By:
	BENNETT-CATHEY	JIM SMITH P.E.	M. R. RANDOLPH