

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Pogo Producing Company						Lease or Unit Name Allison Federal Com					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 8-25-96		Well No. 1			
Completion Date 7-3-96		Total Depth 14,367		Plug Back TD 14,015		Elevation 3392' GL + 28'		Unit Ltr. - Sec. - TWP - Rge. H 7 - 24s - 35e			
Csg. Size 5 1/2	Wt. 23#	d 4.670	Set At 14,367	Perforations: From: 13,894 To: 13,903				County Lea			
Tbg. Size 2 7/8	Wt. 7.9#	d 2.323	Set At 11,429	Perforations: From: Open To: Ended				Pool Wildeat			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 13,687				Formation Morrow			
Producing Thru Tbg		Reservoir Temp. °F 60°		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection NGPL			
L 13,687	H 13,687	Gg 0.590	% CO ₂ 1.08	% N ₂ 0.20	% H ₂ S	Prover		Meter Run 2.067		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							2150		PACKER		72 Hrs
1.	2.067	x	1.000	200	5"	60	1800				24 Hrs
2.	2.067	x	1.000	200	13"	60	1600				24 Hrs
3.	2.067	x	1.000	200	46"	60	1100				24 Hrs
4.	2.067	x	1.000	200	78"	60	525				24 Hrs
5.											

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\frac{h_w P_m}{P_c}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.946	32.65	213.2	1.0000	1.302	1.019	214
2.	4.946	52.65	213.2	1.0000	1.302	1.019	346
3.	4.946	99.03	213.2	1.0000	1.302	1.019	650
4.	4.946	128.96	213.2	1.0000	1.302	1.019	846
5.							

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.	.31	520	1.47	.964	2056.0	55.0 @ 60°	XXXXXXX	XXXXXX	* 676	* 353
2.	.31	520	1.47	.964						
3.	.31	520	1.47	.964						
4.	.31	520	1.47	.964						
5.										

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.	1813.5	3288.6	1390.8	
2.	1614.0	2604.9	2074.6	
3.	1117.2	1248.2	3431.2	
4.	553.2	306.0	4373.4	
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.070$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.070$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .905$

Gas Liquid Hydrocarbon Ratio 2056.0 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 55.0 @ 60° Deg.

Specific Gravity Separator Gas XXXXXXXXX

Specific Gravity Flowing Fluid XXXXXX GMIX=.591

Critical Pressure * 676 P.S.I.A. 676 P.S.I.A.

Critical Temperature * 353 R 353 R

Absolute Open Flow	905	Mcf @ 15.025	Angle of Slope Θ	45	Slope, n	1.000
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Remarks: Well produced 1 BBL 55° @ 60 oil during third rate of test

Approved By Division

Conducted By:

Keith Norvell

Calculated By:

Bob Murray

Checked By:

Bob Murray