

clsr. File

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

RECEIVED

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special						Test Date 09-10-90					
Company Pogo Producing				Connection Vented							
Pool <i>Malaga Atoka</i>				Formation Atoka				Unit			
Completion Date 09-01-90		Total Depth 12,820		Plug Back TD 12,780		Elevation		Farm or Lease Name Lightfoot Comm			
Coq. Size 5"	Wt. 18#	d	Set At 12,820	Perforations: From 11,972 To 11,978				Well No. 2			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 11,868	Perforations: From OPEN To END				Unit P	Sec. 14	Twp. 24S	Age 28E
Type Well - Single - Borehole - G.C. or G.O. Multiple Single						Packer Set At 11,868		County Eddy			
Producing Thru Tbg		Reservoir Temp. °F 192 @ 11,868		Mean Annual Temp. °F 60		Base. Press. - P _g 13.2		State New Mexico			
L 11,868	H 11,868	G _g .577	% CO ₂ .78	% N ₂ .65	% H ₂ S --	Prover	Meter Run 3.068	Taps Flg.			
FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Dist. ft.	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							5568		PKR		48 hrs.
1.	3	X	.750	150	7.00	60	5481		PKR		1 hr.
2.	3	X	.750	155	27.00	60	5299		PKR		1 hr.
3.	3	X	1.000	170	18.00	60	4945		PKR		1 hr.
4.	3	X	1.000	175	59.00	60	4156		PKR		1 hr.
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor. F _{sp}	Rate of Flow Q, Mscf				
1	2.672	22.80	163.2	1.000	1.316	1.013	120				
2	2.672	67.39	168.2	1.000	1.316	1.013	240				
3	4.789	57.42	183.2	1.000	1.316	1.014	367				
4	4.789	105.37	188.2	1.000	1.316	1.015	674				
5											
NO.	P ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio <u>DRY GAS</u> Mcf/bbl.						
1.	.24	520	1.50	.975	A.P.I. Gravity of Liquid Hydrocarbons <u>DRY</u> Deg.						
2.	.25	520	1.50	.974	Specific Gravity Separator Gas <u>.577</u> X X X X X X X X						
3.	.27	520	1.50	.972	Specific Gravity Flowing Fluid <u>X X X X X</u>						
4.	.28	520	1.50	.971	Critical Pressure <u>672</u> P.S.I.A. P.S.I.A.						
5.					Critical Temperature <u>346</u> R R						
$P_e = 5581.2$ $P_w = 31149.8$											
NO.	P ₁ ²	P _w ²	P ₂ ²	P ₂ ² - P _w ²	(1) $\frac{P_e^2}{P_2^2 - P_w^2} = 2.265$ (2) $\left[\frac{P_e^2}{P_2^2 - P_w^2} \right]^n = 1.728$						
1		5494.3	30186.9	962.9	AOF = Q $\left[\frac{P_e^2}{P_2^2 - P_w^2} \right]^n = 1.165$						
2		5312.4	28222.0	2927.8							
3		4958.8	24589.5	6560.3							
4		4171.3	17400.1	13749.7							
5											
Absolute Open Flow <u>1.165</u> Mscf @ 15.025				Angle of Slope θ <u>56.2</u>				Slope, n <u>.669</u>			
Remarks: <u>NO FLUID PRODUCED DURING TEST</u>											
Approved By Division			Conducted By:			Calculated By:			Checked By:		