

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

API #30-025-24833

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-27-74	
Company Phillips Petroleum Company				Connection _____			
Pool Undesignated Atoka gas				Formation Atoka		Unit _____	
Completion Date 11-7-74		Total Depth 10,934'		Plug Back TD 10,890'		Elevation 4318' DF, 4298' GR	
Farm or Lease Name Marg-A "Com"						Well No. 1	
Csg. Size 5-1/2"	Wt. 15.5 & 17	d 10,934'	Set At 10,934'	Perforations: 10,571 To 10,577 From 10,762 To 10,772		Well No. 1	
Tub. Size 2-3/8"	Wt. 4.7	d 1.995	Set At 10,450	Perforations: From Open To Ended		Unit K	Sec. 25
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10,450'		County Lea	
Producing Thru Tubing		Reservoir Temp. *F 168 @ 10,934'		Mean Annual Temp. *F 74		Baro. Press. - P _a 13.2	
State New Mexico							
L 10,450	H 10,450	G _g .712	% CO ₂ 1.20	% N ₂ 1.79	% H ₂ S 0	Prover _____	Meter Run 4"
Taps Flange							

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							2,302	45	Packer		72 hrs.
1.	4	X	2.50	16	12.3	11	1,950	59			1 hr.
2.	4	X	2.50	38.6	33.6	16	1,250	66			1 hr.
3.	4	X	2.50	41.6	37.2	27	980	68			1 hr.
4.	4	X	2.50	41.6	59.3	42	602	68			1 hr.
5.											

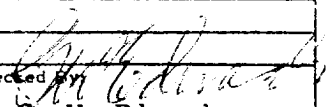
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	32.64	18.95	29.2	1.051	1.185	1.022	787
2	32.64	41.72	51.8	1.045	1.185	1.021	1,722
3	32.64	45.15	54.8	1.033	1.185	1.019	1,838
4	32.64	57.00	54.8	1.018	1.185	1.017	2,282
5							

NO.	P _r	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.044	471	1.19	.958	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.078	476	1.20	.959	Specific Gravity Separator Gas _____
3	.082	487	1.23	.963	Specific Gravity Flowing Fluid _____
4	.082	502	1.27	.966	Critical Pressure _____ P.S.I.A.
5					Critical Temperature _____ R

$P_c = 2315.2$ $P_c^2 = 5360.1$				$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{5360.1}{4740.9} = 1.13^{(2)} \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.099$	
NO.	P _r	P _w	P _w ²	P _c ² - P _w ²	$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,507$
1	3854.2	2035.5	4143.2	1216.2	
2	1595.6	1402.1	1965.9	3394.2	
3	986.4	1121.8	1258.4	4101.7	
4	378.5	786.9	619.2	4704.9	
5					

Absolute Open Flow _____ 2,507 _____ Mcfd @ 15.025		Angle of Slope θ _____ 52.2 _____		Slope, n _____ .775 _____	
--	--	--	--	---------------------------	--

Remarks: Calculations made by Electronic Calculator. Program based on New Mexico Manual for Back Pressure Testing of Gas Wells.

Approved By Commission: 	Conducted By: R. E. Lee	Calculated By: D. E. Simpson	Checked By:  G. W. Edwards
--	----------------------------	---------------------------------	---