

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-17-80			
Company Phillips Petroleum Co.				Connection Phillips Petroleum Company					
Pool Undesignated Atoka (Gas)				Formation Atoka				Unit	
Completion Date 3-13-80 (perf)		Total Depth -----		Plug Back TD 11,700'		Elevation 3587 GR 3610		Farm or Lease Name RKB Lusk Deep Unit A	
Csg. Size 5-1/2	Wt. 17# & 20#	d 	Set At 12,520'	Perforations: From 11,678 To 11,686				Well No. 13	
Tbg. Size 2-7/8	Wt. 6.7	d 2.441	Set At 11,552	Perforations: From To				Unit Sec. Twp. Rge. K 18 19-S 32-E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,552		County Lea			
Producing Thru Tubing		Reservoir Temp. °F 201 @ 11,600		Mean Annual Temp. °F 74		Baro. Press. - P _a 13.2		State New Mexico	
L 11,552	H 11,552	G _g .739	% CO ₂ .32	% N ₂ 2.41	% H ₂ S	Prover	Meter Run 4 x 1.75	Taps F	

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.	
SI							3453	69	Packer	
1.	4 x 1.75			529.3	2.0	81	3065	70		
2.	4 x 1.75			529.3	6.48	74	2832	70		
3.	4 x 1.75			529.3	9.68	65	2575	71		
4.	4 x 1.75			532.9	21.13	53	2068	71		
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	14.93	32.53	529.3	.9804	1.163	1.068	591
2	14.93	58.56	529.3	.9868	1.163	1.070	1,078
3	14.93	71.58	529.3	.9953	1.163	1.071	1,325
4	14.93	106.11	532.9	1.007	1.163	1.076	1,996
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	25.2 Mcf/bbl.
1	.79	542	1.34	.877	A.P.I. Gravity of Liquid Hydrocarbons	64
2.	.79	534	1.32	.874	Specific Gravity Separator Gas	.739
3.	.79	525	1.30	.872	Specific Gravity Flowing Fluid	X X X X X
4.	.80	513	1.27	.862	Critical Pressure	667 P.S.I.A.
5.					Critical Temperature	405 R

P _c 3466.2	P _c ² 12014.5	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{12,014.5}{7,683.1}$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5637$
NO	P _t ²	P _w	P _w ²
1	9475	3078.2	9475.2
2	8095	2845.2	8095.1
3	6698	2588.2	6698.7
4	4331	2081.2	4331.4
5			

Absolute Open Flow		3121 Mcfd @ 15.025	Angle of Slope θ	45	Slope, n	1
Remarks: Test calculator by computer. Program based on New Mexico Back Pressure Manual.						
Approved By Commission:		Conducted By:		Calculated By:		Checked By:
		B. O. Worley		D. E. Simpson		W. J. Mueller