

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

Form C-122
Revised 9-1-65

Page 1 of 2

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date Aug 11 1967	
Company Phillips Petroleum Company			Connection Shut in pending market		
Pool Undesignated			Formation Devonian - Gas		Unit
Completion Date 7-23-67		Total Depth 12894		Plug Back TD -	Elevation 4146' Gr
Farm or Lease Name West Ranger Lake Unit					
Csq. Size 5-1/2	Wt. 17	d 4.892	Set At 12828	Perforations: 12828-94'	
	20	4.778		From Open To Hole	
Tbg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 12889	Perforations:	
				From Open To Hole	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At -	
Producing Thru Tubing				State New Mexico	
Reservoir Temp. °F 164 @ 12900		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 12889	H 12889	G _g .708 H.P. 1.082 LP	% CO ₂ 1.96 1.88	% N ₂ 3.40 .61	% H ₂ S 26 q 27 Q.
Prover O.W. 2" L.P.		Meter Run 4 H.P.		Taps	

FLOW DATA H.P.						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							2650	90	3201	90
1.	4.00		2.00	600	2.5	102	2532	80	3052	80
2.	4.00		2.00	600	11	82	2411	80	2793	80
3.	4.00		2.00	600	24	82	2085	84	2509	84
4.	4.00		2.00	600	43	84	1691	83	2163	83
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		
							HP	LP	Total
1	19.81	39.15	613.2	.9619	1.188	1.052	932	150	1082
2	19.81	82.13	613.2	.9795	1.188	1.059	2006	154	2160
3	19.81	121.31	613.2	.9795	1.188	1.059	2962	196	3158
4	19.81	162.07	613.2	.9777	1.188	1.059	3951	243	4194
5									

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.91	562	1.47	.903	A.P.I. Gravity of Liquid Hydrocarbons	58.0
2.	.91	542	1.42	.891	Specific Gravity Separator Gas	.708
3.	.91	542	1.42	.891	Specific Gravity Flowing Fluid	.307
4.	.91	544	1.42	.891	Critical Pressure	668 P.S.I.A.
5.					Critical Temperature	395 R

P _c 3214.2 P _c ² 10,331.1						
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.206$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.22$
1		3065.2	9395.5	935.6		
2		2806.2	7874.8	2456.3		
3		2522.2	6361.5	3969.6		
4		2176.2	4735.8	5595.3		
5						

Absolute Open Flow			6955	Mcf/d @ 15.025	Angle of Slope °	51	Slope, n	.814
Remarks: See page two this report for further data								
Approved By Commission:			Conducted By: B. O. Worley		Calculated By: D. E. Simpson		Checked By: <i>[Signature]</i>	

NE11 MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Page 2 of 2

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 7-31-67			
Company Phillips Petroleum Company				Connection					
Pool (See Page One)				Formation				Unit	
Completion Date		Total Depth		Plug Back TD		Elevation		Farm or Lease Name West Ranger Lake Unit	
Csg. Size	Wt.	d	Set At	Perforations: From To		Well No. 1			
Tbg. Size	Wt.	d	Set At	Perforations: From To		Unit Sec. Twp. Rge. C 26 11 4			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple						Packer Set At		County	
Producing Thru		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a		State	
L	H	Gg	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps	

Orifice Well Test 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	2.00		.50	56		84					
1.	2.00		.75	16		82					
2.	2.00		.75	24		82					
3.	2.00		.75	34		84					
4.											
5.											

RATE OF FLOW CALCULATIONS Lower Pressure							
NO.	Volume Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	206.4		40.7	.9777	.7447	1.00	150
2	211.5		21.1	.9795	.7447	1.00	154
3	268.7		25.0	.9795	.7447	1.00	196
4	333.6		29.9	.9777	.7447	1.00	243
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	.06	544	1.06	NA	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	.03	542	1.06	NA	Specific Gravity Separator Gas _____ X X X X X X X X
3.	.04	542	1.06	NA	Specific Gravity Flowing Fluid _____ X X X X X
4.	.06	544	1.06	NA	Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1				
2				
3				
4				
5				

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

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

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

Absolute Open Flow _____ Mcfd @ 15.025		Angle of Slope θ _____	Slope, n _____
--	--	------------------------	----------------

Remarks: See page one of this report for further data

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
-------------------------	---------------	----------------	-------------