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appropriate district office
See Rule 401 & Rule 1122

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 Phillips Petroleum Company						Lease or Unit Name Ranger					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-22-94		Well No. 17			
Completion Date 2-21-94		Total Depth 13800		Plug Back TD 12730		Elevation		Unit Ltr. - Sec. - TWP - Rge. 26-12-34			
Csg. Size 9-5/8	Wt.	d	Set At 13800	Perforations: From: 11675 To: 11694				County Lea			
Tbg. Size 2-7/8	Wt.	d 2.441	Set At 11523	Perforations: From: To:				Pool Ranger Lake, West-Atoka			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11523				Formation Atoka			
Producing Thru TBG		Reservoir Temp. °F 189 @ 11523		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection GPM			
L 11523	H 11523	Gg .726	% CO ₂ .54	% N ₂ 1.73	% H ₂ S	Prover	Meter Run 4"	Taps FLG			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	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						2910		PKR		24 Hours
1.	4 x 1.250		326.8	27.10	52	2620		"		1 Hour
2.	4 X 1.250		324.4	31.00	72	1952		"		1 Hour
3.	4 X 1.250		340.3	65.10	73	2250		"		1 Hour
4.	4 X 1.250		353.5	99.60	76	1910		"		1 Hour
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg.	Super Compress. Factor, F _{pv} .	Rate of Flow Q, Mcfd
1.	7.469	95.99	340.0	1.008	1.174	1.044	886
2.	7.469	102.30	337.6	.9887	1.174	1.044	926
3.	7.469	151.70	353.5	.9877	1.174	1.041	1,368
4.	7.469	191.11	366.7	.9850	1.174	1.043	1,722
5.							

N _c	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1.	.50	512	1.29	.917	A.P. I. Gravity of Liquid Hydrocarbons	Dry	Deg.
2.	.50	532	1.34	.925	Specific Gravity Separator Gas	.726	XXXXXXXXXX
3.	.52	533	1.34	.922	Specific Gravity Flowing Fluid	XXXXXX	
4.	.54	536	1.35	.919	Critical Pressure	*667	P.S.I.A. P.S.I.A.
5.					Critical Temperature	*395	R R

P _c 2923.2		P _c ² 8545.1		$1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.776$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.381$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.378$		
1.		2635.8	6943.3	1601.8			
2.		1967.7	3872.0	4673.1			
3.		2268.1	5144.1	3401.0			
4.		1932.1	3733.1	4812.0			
5.							

Absolute Open Flow 2,378		Mcf @ 15.025		Angle of Slope θ 60.5		Slope, n .562	
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Remarks: NO FLUID PRODUCED DURING TEST	
* = CORRECTED TO 1.73% N2	

Approved By Division	Conducted By: WEST-TEST, INC.	Calculated By: B.M.	Checked By: B.M.
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