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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 MALAGA "C"					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-15-93		Well No. 3			
Completion Date 9-28-93		Total Depth 12198		Plug Back TD 12106		Elevation 2972		Unit Ltr. - Sec. - TWP - Rge. N 36-23-28			
Csg. Size 7"		Wt. 23.8		Set At 10500		Perforations: From: 11824 To: 12011		County EDDY			
LINER 5 1/2"		17		9711-12193							
Tbg. Size 2-7/8"		Wt. 6.5		Set At 11952		Perforations: From: To:		Pool Culebra Bluff, S. Atoka			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At 11940		Formation ATOKA			
Producing Thru TBG		Reservoir Temp. °F 60		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection EPNG			
L 11952	H 11952	Gg .584	% CO ₂ .49	% N ₂ .91	% H ₂ S	Prover		Meter Run 4.026		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						1809		PKR		24 HRS
1.	4 X 1.500		301	2.30	61	1502		"		1 HR
2.	4 X 1.500		318	10.20	66	1374		"		1 HR
3.	4 X 1.500		323	28.10	68	1054		"		1 HR
4.	4 X 1.500		335	40.32	70	802		"		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 Fg.	Super Compress. Factor, F _{pv} .	Rate of Flow Q, Mcfd
1.	10.84	26.88	314.2	.9990	1.309	1.028	392
2.	10.84	58.12	331.2	.9943	1.309	1.026	841
3.	10.84	97.20	336.2	.9924	1.309	1.027	1406
4.	10.84	118.49	348.2	.9905	1.309	1.027	1710
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcf/bbl.
1.	.46	521	1.48	.947	A.P. I. Gravity of Liquid Hydrocarbons	DRY	Deg.
2.	.49	526	1.50	.950	Specific Gravity Separator Gas	.584	XXXXXXXXXX
3.	.50	528	1.50	.949	Specific Gravity Flowing Fluid	XXXXXX	
4.	.51	530	1.51	.948	Critical Pressure	672 P.S.I.A.	P.S.I.A.
5.					Critical Temperature	350 R	R

P_c 1822.2 P_c² 3320.4

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		1515.8	2297.7	1022.7
2.		1390.3	1932.8	1387.6
3.		1078.6	1163.4	2157.0
4.		837.7	701.7	2618.7
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.268$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.268$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.168$

Absolute Open Flow 2.168 Mcfd @ 15.025	Angle of Slope Θ 45	Slope, n 1.000
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Remarks: **NO FLUID PRODUCED**

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