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State of New Mexico
Energy, Minerals and Natural Resources Department

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Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

FEB 12 1992

O. C. D.
ARTIFICIAL OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator OXY USA						Lease or Unit Name Merland A					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-21-91		Well No. 1			
Completion Date 12-17-91		Total Depth 11750		Plug Back TD 11188		Elevation		Unit Ltr. - Sec. - Twp. - Rge. 19 22 27E			
Csg. Size 5 1/2	Wt. 17	d	Set At 11750	Perforations: <i>S. Carlbad Strawn</i>				County Eddy			
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 10232	Perforations: From: To:				Pool			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple						Packer Set At 10232		Formation Strawn			
Producing Thru Tbg.		Reservoir Temp. °F 177 @10329		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection Vented			
L *10232	H *10232	Gg .654	% CO ₂ 1.05	% N ₂ 2.38	% H ₂ S	Prover		Meter Run 3.068		Taps Fig.	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice X 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						2882		PKR		72 hrs.
1.	3 X	1.500	480	26.00	90	2770		"		1 hr.
2.	3 X	1.500	510	52.00	74	2630		"		1 hr.
3.	3 X	2.250	510	11.00	76	2660		"		1 hr.
4.	3 X	2.250	570	24.00	70	2640		"		30Min.
5.	3 X	2.250	570	40.00	72	2500		"		1 hr.

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.	11.13	113.24	493.2	.9723	1.237	1.044	1,583
2.	11.13	164.94	523.2	.9868	1.237	1.046	2,323
3.	28.78	75.86	523.2	.9850	1.237	1.046	2,783
4.	28.78	118.31	583.2	.9905	1.237	1.059	4,418
5.	28.78	152.74	583.2	.9887	1.237	1.059	5,693

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio n/a	Mcf/bbl.
1.	.73	550	1.49	.918	A.P. I. Gravity of Liquid Hydrocarbons n/a	Deg.
2.	.77	534	1.45	.914	Specific Gravity Separator Gas .654	XXXXXXXXXX
3.	.77	536	1.45	.914	Specific Gravity Flowing Fluid XXXXXX	
4.	.86	530	1.44	.892	Critical Pressure **671	P.S.I.A. P.S.I.A.
5.	.86	532	1.44	.892	Critical Temperature **368	R R

P_c 2959.3 P_c² 8757.5

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		2850.0	8122.5	635.0
2.		2712.5	7357.7	1399.8
3.		2557.6	6541.3	2216.2
4.		2397.4	5747.5	3010.0
5.		2012.3	4049.4	4708.1

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.860$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.576$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 8.972$

Absolute Open Flow 8,972	Mcf/d @ 15.025	Angle of Slope θ 53.7	Slope, n .733
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Remarks: * BND Instrument set @ this depth
** Corrected to 1.05% CO₂ & 2.38% N₂. Well made 11.00 bbls N₂ during test.

Approved By Division	Conducted By: PRO WELL TESTING	Calculated By: BM	Checked By: BM
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