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appropriate district office
See Rule 401 & Rule 1122

OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MARATHON OIL COMPANY						Lease or Unit Name LEA UNIT					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-7-93		Well No. 16			
Completion Date 11-28-93		Total Depth 13,400'		Plug Back TD 13073		Elevation 3657'		Unit Ltr. - Sec. - TWP - Rge. L 12 20S 34E			
Csg. Size 5 1/2"	Wt. 23#	d 4.653	Set At 13249	Perforations: From: 12856 To: 12896				County LEA			
Tbg. Size 2 3/8"	Wt. 4.7#	d 1.995	Set At 12847	Perforations: From: To:				Pool LEA (PENN)			
Type Well - Single - Bradenhead - G.G. or: F.O. Multiple SINGLE						Packer Set At 12799'		Formation MORROW			
Producing Thru TBG		Reservoir Temp. °F 175°		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection GPM			
I 12876	II 12876'	Gg. .694	% CO ₂ .52	% N ₂ .55	% H ₂ S	Prover		Meter Run 2.067	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.	
SI						1450		PKR.	
1.	2.067 X 1.25		20	2	63	1340			1 hr.
2.	2.067 X 1.25		50	3.5	78	1228			1 hr.
3.	2.067 X 1.25		50	16	78	978			1 hr.
4.	2.067 X 1.25		50	38	78	617			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.	8.319	8.15	33.2	.9971	1.200	1.021	83
2.	8.319	14.87	63.2	.9831	1.200	1.060	155
3.	8.319	31.80	63.2	.9831	1.200	1.060	331
4.	8.319	49.01	63.2	.9831	1.200	1.060	510
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	N/A	Mcf/bbl.
1.	.05	523	1.55	.96	A.P. I. Gravity of Liquid Hydrocarbons	N/A	Deg.
2.	.09	538	1.39	.89	Specific Gravity Separator Gas	.694	XXXXXXXXXX
3.	.09	538	1.39	.89	Specific Gravity Flowing Fluid	XXXXXX	
4.	.09	538	1.39	.89	Critical Pressure	669	P.S.I.A.
5.					Critical Temperature	388	R

P_c **1463.2** P_c² **2141.0**

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.		1353.3	1831.4	309.6
2.		1241.6	1541.5	599.5
3.		993.3	986.7	1154.3
4.		638.7	407.9	1733.0
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{1.235}$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{.630}$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{1.235}$

Absolute Open Flow 630	Mcf/d @ 15.025	Angle of Slope θ 45	Slope, n 1.000
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Remarks:

Approved By Division	Conducted By: PRO WELL TESTERS	Calculated By: KS	Checked By: BM
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