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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

RECEIVED

SEP 29 1993

O.C.D.

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Operator MARATHON OIL COMPANY					Lease or Unit Name INDIAN HILLS				
Type Test ☒ Initial ☐ Annual ☐ Special 79702					Test Date 9-16-93		Well No. 5		
Completion Date 8-30-93		Total Depth 9555		Plug Back TD 9550		Elevation GL: 3637 KB: 3653		Unit Ltr. - Sec. - TWP - Rge. 36 20 24	
Csg. Size 7 5/8	Wt. 29.7	d 6.875	Set At 9383	Perforations: From: 9266 To: 9428			County EDDY		
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 9163.7	Perforations: From: 9266 To: 9428			Pool Cemetery/Morrow		
Type Well - Single - Bradenhead - G.G. or F.O. Multiple single				Packer Set At 9163		Formation MORROW			
Producing Thru		Reservoir Temp. °F 165.6 @ 9164		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection VENTED	
L 9164	H 9164	Gg .606	% CO ₂ .89	% N ₂ .16	% H ₂ S	Prover		Meter Run 3.068	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						1400		PKR		72 hrs.
1.	3 X 1.750		620	6.00	100	1340		"		1 hr.
2.	3 X 1.750		630	9.00	100	1280		"		1 hr.
3.	3 X 1.750		645	14.00	100	1170		"		1 hr.
4.	3 X 1.750		670	19.00	96	1120		"		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 _{spv}	Rate of Flow Q, Mcfd
1.	15.61	61.64	633.2	.9636	1.285	1.044	1,244
2.	15.61	76.08	643.2	.9636	1.285	1.045	1,537
3.	15.61	95.99	658.2	.9636	1.285	1.052	1,952
4.	15.61	113.93	683.2	.9671	1.285	1.048	2,316
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
					78.3	
1.	.94	560	1.56	.917	A.P. I. Gravity of Liquid Hydrocarbons 63.0 @ 60°	Deg.
2.	.95	560	1.56	.916	Specific Gravity Separator Gas .606	XXXXXXXXXX
3.	.98	560	1.56	.914	Specific Gravity Flowing Fluid XXXXXX	GMTX = .642
4.	1.01	556	1.55	.911	Critical Pressure 671 P.S.I.A.	670 P.S.I.A.
5.					Critical Temperature 358 R	372 R

p_c **1413.2** p_c² **1997.1**

NO.	p _t ²	p _w	p _w ²	p _c ² - p _w ²
1.		1358.7	1846.0	151.1
2.		1302.0	1695.2	302.0
3.		1198.9	1437.3	559.9
4.		1156.3	1337.0	660.1
5.				

1) $\frac{p_c^2}{p_c^2 - p_w^2} = 3.025$

AOF = Q $\left[\frac{p_c^2}{p_c^2 - p_w^2} \right]^n = 4.140$

(2) $\left[\frac{p_c^2}{p_c^2 - p_w^2} \right]^n = 1,788$

Absolute Open Flow 4,140 Mcfd @ 15.025	Angle of Slope θ 62.3	Slope, n .5248
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Remarks: **WELL MADE 3.75 BBLs OF 63.0 @ 60° CONDENSATE DURING TEST.**

Approved By Division	Conducted By: PRO WELL TESTERS	Calculated By: BM	Checked By: BM
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Thomas [Signature]