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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 Marathon Oil Company					Lease or Unit Name North Indian Basin Unit				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 9-9-94		Well No. 9		
Completion Date July 13, 1994		Total Depth 7750		Plug Back TD 7640		Elevation 3934 GL		Unit Ltr. Sec. TWP. Rge. K 16 21S-23E	
Csg. Size 5 1/2"	Wt. 17#	d 4.892	Set At	Perforations: From: 7237 To: 7408			County Eddy		
Tbg. Size 2 7/8	Wt. 6.5#	d 2.441	Set At 7135	Perforations: From: To:			Pool N. Indian Basin		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 7139			Formation K/Penn		
Producing Thru Tubing		Reservoir Temp. °F 125 @ 7323		Mean Annual Temp. °F 60		Baro. Press - P 13.2		Connection	
L 7323	H 7323	Gg .6192	% CO ₂ .5	% N ₂ 1.0	% H ₂ S .62	Prover		Meter Run 3.068	Taps Flange

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.	
SI						795	74	Packer	
1.	3	x 2.250	675	1	67	780	74		1
2.	3	x 2.250	595	1.4	67	776	74		1
3.	3	x 2.250	477	1.8	65	766	74		1
4.	3	x 2.250	384	2.3	63	764	74		2
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.	28.78	26.23	688.2	.9933	1.271	1.061	1011
2.	28.78	29.18	608.2	.9933	1.271	1.054	1117
3.	28.78	29.70	490.2	.9952	1.271	1.044	1129
4.	28.78	29.89	397.2	.9971	1.271	1.038	1132
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio			Mcf/bbl.	
1.	1.03	527	1.46	1.061	N.A.				
2.	.91	527	1.46	1.054	A.P. I. Gravity of Liquid Hydrocarbons			N.A.	
3.	.73	525	1.45	1.044	Specific Gravity Separator Gas			.619	
4.	.59	523	1.44	1.038	Specific Gravity Flowing Fluid			XXXXXXX	
5.					Critical Pressure			670 P.S.I.A.	
					Critical Temperature			362 R	

P_c 808		P_c^2 653				
NO.	P_i^2	P_w	P_w^2	$P_c^2 - P_w^2$	1) $\frac{P_c^2}{P_c^2 - P_w^2} = 15.9$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 15.9$
1.	629		638	15		
2.	623		633	20		
3.	607		618	35		
4.	604		615	38		
5.						

AOF = Q

$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 18000$

Absolute Open Flow 18000 Mcfd @ 15.025 Angle of Slope θ 45 Slope, n 1

Remarks: Due to Production Equipment limitations, a larger draw Down was not possible

Approved By Division Conducted By: Raymond Raines Calculated By: Dan Fleeman Checked By: T. J. Folsom