STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Revised 10-1-78

clst. File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: ☒ Initial ☐ Annual ☐ Special			Test Date: 6/4/90	
Company: MARATHON OIL	Connection: FLARE	RECEIVED SEP 07 '90 O. C. D. ARTESIA, OFFICE		
Pool: INDIAN BASIN	Formation: MORROW		Unit	
Completion Date: 5/16/90	Total Depth: 9303	Plug Back TD: 9247	Elevation: 3970 G.L.	Farm or Lease Name: N. INDIAN BASIN
Csg. Size: 5.500 / Wt.: 17 / d: 4.892 / Set At: 9300	Perforations: From 9167 To 9185			Well No.: 8
Tbg. Size: 2.875 / Wt.: 6.5 / d: 2.441 / Set At: 9185	Perforations: From 0 To 0			Unit: M / Sec. / Twp.: S9-T21S / Rge.: R23E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: DUAL	Packer Set At: 9109			County: EDDY
Producing Thru: TBG.	Reservoir Temp. °F: 146 @ 9176	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: N.M.

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
9176	9176	.585	.80	.18	.00	.0	4.0	FLANGE

	FLOW DATA				TUBING DATA		CASING DATA		
NO.	Prover Line Size X 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	Duration of Flow
SI					2972	60			72
1.	4.00 X 1.250	600	9.0	80	2845	60	0	0	1
2.	4.00 X 1.250	600	30.0	74	2794	60	0	0	1
3.	4.00 X 1.250	600	58.0	74	2743	60	0	0	1
4.	4.00 X 1.250	610	100.0	80	2698	60	0	0	1
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, Fpv	Rate of Flow Q, Mcfd
1	7.47	74.29	613.2	.9813	1.3074	1.0439	743
2.	7.47	135.63	613.2	.9868	1.3074	1.0439	1367
3	7.47	188.59	613.2	.9868	1.3074	1.0439	1901
4.	7.47	249.64	623.2	.9813	1.3074	1.0439	2500
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.91	540	1.53	.918
2.	.91	534	1.52	.914
3.	.91	534	1.52	.914
4.	.92	540	1.53	.916
5				

Gas Liquid Hydrocarbon Ratio .0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons .0 Deg.
Specific Gravity Separator Gas .585 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX .585
Critical Pressure 676 P.S.I.A. 676 P.S.I.A.
Critical Temperature 352 R 352 R

P_c 2985.2 P_c^2 8911

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	8169	2861	8187	725
2	7880	2812	7908	1003
3	7597	2764	7639	1273
4	7351	2723	7415	1496
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.9563$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5.9563$

Post FD-2 9-21-90 comp Mar

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 14888$

Absolute Open Flow 14888 Mcfd @ 15.025 | Angle of Slope θ 45 | Slope, n 1.000

Remarks: 1ST RATE – 602 MCF 2ND RATE – 1117 MCF 3RD RATE – 1701 MCF
4TH RATE – 2264 MCF

Approved By Division	Conducted By:	Calculated By:	Checked By:
	BENNETT & CATHEY	JIM SMITH	Carl Bagwell