NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT A. ONE POINT BACK PRESSURE TEST R GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 11-19-69	
Company: Marathon Oil Company		Connection: Llano, Inc.			
Pool: Lea Pennsylvanian		Formation: Bend		Unit	
Completion Date: 11-11-69	Total Depth: 14,492'		Plug Back TD: 14,487'	Elevation: 3655 GL	Farm or Lease Name: Lea Unit
Csg. Size: 7 / 4 1/2 — Wt.: 29 / 14.98 — d: 6.184 / 3.826 — Set At: 14,040 / 14,490			Perforations: From 12,852 To 12,972		Well No.: 4-U
Tbg. Size: 2 3/8 — Wt.: 4.7 — d: 1.995 — Set At: 12,533			Perforations: From To		Unit: H — Sec.: 11 — Twp.: 20S — Rge.: 34E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: G.O. Multiple			Packer Set At: 12,542-13,885		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 178 @ 12,400	Mean Annual Temp. °F:	Baro. Press. – P_a: 13.2		State: New Mexico
L: 12,553	H: 12,553	Gg: 0.678	% CO_2:	% N_2:	% H_2S: — Prover: — Meter Run: 3" — Taps: 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	3" x 1.250"					97	810	85	SI 20 Hr.
1.	"	920	5	113	1719	97	810	85	45 Min.
2.	"	940	12	112	1470	97	810	85	75 Min.
3.	"	940	23	116	1170	97	810	85	75 Min.
4.	"	940	34	121	967	97	810	85	60 Min.
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	7.615	60.5	933.2	.9526	1.214	1.073	571.6
2.	7.615	106.9	953.2	.9535	1.214	1.078	1012.9
3.	7.615	148.0	953.2	.9501	1.214	1.075	1396.4
4.	7.615	180.0	953.2	.9460	1.214	1.073	1688.9
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	1.39	573	1.49	.869
2.	1.42	572	1.48	.860
3.	1.42	576	1.50	.866
4.	1.42	581	1.51	.869
5.				

Gas Liquid Hydrocarbon Ratio 37.6 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 59.2 Deg.
Specific Gravity Separator Gas 0.678 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 669 P.S.I.A. ____ P.S.I.A.
Critical Temperature 385 R ____ R

P_c 3311 P_c^2 10,963

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2511	6305	4658
2		2157	4653	6310
3		1784	3183	7780
4		1542	2378	8585
5				

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

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

Absolute Open Flow 2150 Mcfd @ 15.025 Angle of Slope θ 45 Slope, n 1.000

Remarks: The slope of a line derived from the four points was in excess of 1.000, therefore a 45° line was drawn thru the point of the highest rate. Based on past experience, it is anticipated that a more representative test may be obtained after several months of production. The well appears to have developed considerable skin damage during completion.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	J. E. Evans	J. E. Evans	