

OCT 05 2009

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-11-83	
Company MESA PETROLEUM CO.				Connection UNDETERMINED	
Pool DIAMOND MOUND, ATOKA-MORROW				Formation MORROW	
Completion Date 2-28-83		Total Depth 9370		Plug Back TD 9304	
				Elevation 3569'	
Farm or Lease Name MESA STATE COM					
Csg. Size 4 1/2		Wt. 13.5		Set At 3.795	
Perforations: From 9094		To 9122		Well No. 2	
Thq. Size 2 3/8		Wt. 4.7		Set At 1.995"	
Perforations: From OPEN ENDED		To		Unit F	
				Sec. 32	
				Twp. 15	
				Rge. 28	
Type Well - Single - Bronthead - G.C. or G.O. Multiple SINGLE				Packer Set At 8976	
Producing Thru TUBING				County CHAVES	
Reservoir Temp. °F 168°@ 8996		Mean Annual Temp. °F 60		State NEW MEXICO	
Baro. Press. - P _g 13.2					
L 8976		H 8976		Cg .686	
				% CO ₂ 1	
				% N ₂ 1	
				% H ₂ S	
				Prover	
				Meter Run 3"	
				Taps FLANGE	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
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	
SI							2640		RECEIVED		72 hr. SI
1.	3" X 1.75"			500	13	66	2320	63			1 hr.
2.	3" X 1.75"			515	26.5	56	2180	64	MAR 21 1983		1 hr.
3.	3" X 1.75"			530	44	53	1995	65	MAR 21 1983		1 hr.
4.	3" X 1.75"			525	67	54	1775	65	PRODUCTION RESUMED		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, Fpv	Rate of Flow Q, Mcfd
1	15.61	81.663	513	.9943	1.207	1.054	1612
2	15.61	118.288	528	1.0040	1.207	1.061	2374
3	15.61	154.570	543	1.0070	1.207	1.067	3129
4	15.61	189.858	538	1.0060	1.207	1.067	3839
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.760	526	1.369	.900	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.786	516	1.344	.889	Specific Gravity Separator Gas _____ XXXXX
3	.808	513	1.335	.878	Specific Gravity Flowing Fluid _____ XXXXX
4	.801	514	1.338	.879	Critical Pressure _____ 672 P.S.I.A.
5.					Critical Temperature _____ 384 R

P _c 2653 P _c ² 7038			
NO.	P _t ²	P _w	P _w ²
1	2333	2372	5626
2	2193	2283	5212
3	2008	2175	4731
4	1788	2060	4244
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{2.5189}{}$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{2.5189}{}$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{9,700}{}$

Absolute Open Flow 9,700 Mcfd @ 15.025

Angle of Slope θ 45°

Slope, n 1

Remarks: Plot of P_c²-P_w² vs. Q yielded a straight line with a θ less than 45°. Drew 45° line through highest point.

Approved By Division	Conducted By: J. Craig	Calculated By: E. Buttross	Checked By:
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