

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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JAN 12 1984

O. C. D.

ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 12-14-83	
Company MESA PETROLEUM CO.		Connection UNCONNECTED	
Pool WEST PECOS SLOPE ABO		Formation ABO	
Completion Date 12-11-83	Total Length 3200	Plug Back TD 3145	Elevation 3985
Farm or Lease Name DEBBIE FEDERAL		Well No. 7	
Ceq. Size 4 1/2	Wt. 10.5#	Set At 3200	Perforations: From 2773 To 2905
Trg. Size 2 3/8	Wt. 4.7#	Set At 2902	Perforations: From OPEN ENDED To
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE		Packer Set At NONE	County CHAVES
Producing Thru TUBING	Reservoir Temp. °F 92° 3200'	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
State NEW MEXICO		Unit Sec. Twp. Rge. K 29 7S 23E	
L	H	G _g	% CO ₂
		.65	1
		% N ₂	1
		% H ₂ S	
2" CRITICAL FLOW PROVER			

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.	
SI							805		800	
1.	2" x 1"			33		40	750	62	752	1 hr
2.	2" x 1"			75		44	650	61	675	1 hr
3.	2" x 1"			100		50	540	60	595	1 hr
4.	2" x 1"			107		54	420	56	520	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 F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	17.09	FLOW PROVER	46	1.020	1.24		994
2	17.09	FLOW PROVER	88	1.016	1.24		1895
3	17.09	FLOW PROVER	113	1.012	1.24		2423
4	17.09	FLOW PROVER	120	1.006	1.24		2558
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ XXXXXXXXXX
3					Specific Gravity Flowing Fluid _____ XXXXX
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ R _____ R

P _c 813	P _c ² 661	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.7533$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3241$
NO.	P _t ²	P _w	P _w ²
1		765	585
2		688	473
3		608	370
4		533	284
5			

AOI = 0 $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3,400$

Plot of P_c² - P_w² vs. Q yielded a straight line with a θ greater than 63.5°
Drew 63.5° through highest point.

Post ID-2
12-30-83
Sample 4 B4

Absolute Open Flow 3,400 Mcfd @ 15.025	Angle of Slope θ 63.5°	Slope, n .5
Remarks: Plot of P _c ² - P _w ² vs. Q yielded a straight line with a θ greater than 63.5° Drew 63.5° through highest point.		
Approved By Division	Conducted By: JAMES CRAIG	Calculated By: E.L. BUTTROSS, JR 12-19-83
Checked By:		