

NEW MEXICO OIL CONSERVATION COMMISSION MULTIPOINT AND ONE POINT BACK PRESSURE TEST OR GAS WELL

Form O-144
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 3-18-81	
Company Mesa Petroleum Co.		Connection Unconnected	
Pool Undesignated Abo		Formation Abo	
Completion Date 3-18-81	Total Depth 4890	Plug Back TD 3593	Elevation 3585
Farm or Lease Name Garcia Federal		Well No. 1	
Csg. Size 4 1/2	Wt. 10.5	Set At 3658	Perforations: From 3404 To 3414
Thq. Size 2 3/8	Wt. 4.7	Set At 3383	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 100 @ 4890	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
L 3383	H 3383	G _g .65	% CO ₂ % N ₂ % H ₂ S 6
Prover 2" Orifice Well Tester		Meter Run Taps	

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							980		980		48 hr
1.	2" Orifice	1"		3		50	760	80	760		1 hr
2.	Well	1"		5		50	560	80	580		3/4 hr
3.	Tester	1"		6		50	330	80	410		1 hr
4.		1"		7		50	290	80	380		3/4 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 _{pv}	Rate of Flow Q, Mcfd
1	227	2" Orifice Well Tester		1.0098	.9608		220
2	299			1.0098	.9608		290
3	331			1.0098	.9608		321
4	361			1.0098	.9608		350
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.										
2.										
3.										
4.										
5.										

NO.	P _t ²	P _w	P _w ²	P _t ² - P _w ²
1	980	760	578	382
2	960	580	336	624
3		410	168	792
4		380	144	816
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.1765$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 380$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1042$$

Absolute Open Flow	380	Mcfd @ 15.025	Angle of Slope	58.6°	Slope, n	.61
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Remarks:

Approved By Commission:	Conducted By: <u>E.L.B.</u>	Calculated By: <u>E.L.B.</u>	Checked By:
	F. I. Buttross, Jr.	E. L. Buttross, Jr.	