

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-28-81		RECEIVED OCT 13 1981	
Company Mesa Petroleum Co. /				Connection UNCONNECTED					
Pool UNDESIGNATED ABO				Formation ABO				Unit O. C. D. ARTESIA, OFFICE	
Completion Date 9-28-81		Total Depth 4104'		Plug Back TD 4061'		Elevation 3906'		Farm or Lease Name DORIS FEDERAL	
Csg. Size 4 1/2"	Wt. 10.5#	d	Set At 4103'	Perforations: From 3539' To 3836'		Well No. 4			
Tbg. Size 2 3/8"	Wt. 4.7#	d	Set At 3432'	Perforations: From OPEN ENDED To		Unit J	Sec. 11	Twp. 5S	Rge. 24E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 100 @ 4104		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State NEW MEXICO	
L 3432	H 3432	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	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							900		870		72 HR SI
1.	2" ORIFICE		1 1/4	8		80	290	84	375		1 HR
2.	WELL										
3.	TESTER										
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	661	2" ORIFICE WELL		.9813	.9608		623
2.		TESTER					
3.							
4.							
5.							

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

P _c 883 P _c ² 780	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2401$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2401$																														
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>P_t²</th> <th>P_w</th> <th>P_w²</th> <th>P_c² - P_w²</th> </tr> <tr> <td>1</td> <td></td> <td>388</td> <td>151</td> <td>629</td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	1		388	151	629	2					3					4					5					AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 800$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²																												
1		388	151	629																												
2																																
3																																
4																																
5																																

Absolute Open Flow 800 Mcfd @ 15.025	Angle of Slope @ 45°	Slope, n 1
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Remarks: UNABLE TO RUN FOUR FLOW RATES DUE TO LOW DELIVERY OF WELL.
 ASSUMED n = 1 AND BASED CALCULATIONS ON ONE POINT TEST.

Approved By Commission:	Conducted By: JAMES CRAIG	Calculated By: E. L. BUTTROSS, JR.	Checked By:
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46 7403

CONCLUSION

MC 1W

CYCLES
MADE IN U.S.A.

LOGARITHMIC 3 X
LUIFEL & ESSER C

ASSUMED $n = 1$ AND $\theta = 45^\circ$