

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-7-78		SEP 25 1978	
Company MESA PETROLEUM COMPANY ✓				Connection EPNG				O. C. C.	
Pool City Block				Formation Spartan				Unit ARTESIA, OFFICE	
Completion Date 5-17-78		Total Depth 11730		Plug Back TD 11643		Elevation 3342 GL		Farm or Lease Name RINGER FED Com.	
Csg. Size 1 1/2	Wt. 11.6	d	Set At 11730	Perforations: From 11555 To 11589		Well No. #2			
Tub. Size 2 3/8	Wt. N/80	d	Set At 11510	Perforations: From To		Unit Sec. Twp. Rge. C 4 25 S 26 E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE GAS						Packer Set At 11505		County EDDY	
Producing Thru TEG		Reservoir Temp. °F 180 @ Perfs		Mean Annual Temp. °F 60.		Baro. Press. - P _a 13.2		State NEW MEXICO	
L 11505	H 11505	Gg .675	% CO ₂ 1.17	% N ₂ .240	% H ₂ S -----	Prover -----	Meter Run 4	Taps FLG	

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
1.	4 X .500			435	1	84	773				24 Hrs
2.	4 X .500			438	1.7	87	681				1 Hr
3.	4 X .500			439	3.2	89	597				1 Hr
4.	4 X .500			441	4.0	93	502				1 Hr
5.							468				1 Hr

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	1.182	21.13	448.2	.9777	1.217	1.043	30
2	1.182	27.70	451.2	.9750	1.217	1.043	41
3	1.182	38.04	452.2	.9732	1.217	1.042	55
4	1.182	42.62	454.2	.9697	1.217	1.041	59
5							

NO.	P _r	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	.67	544	1.42	.919					669	382
2	.67	547	1.43	.920						
3	.68	549	1.44	.921						
4	.68	553	1.45	.923						
5										

NO.	P _r	P _w	P _w ²	P _r ² - P _w ²
1		694.2	481.9	136.2
2		670.2	372.3	245.8
3		575.2	265.1	352.7
4		481.2	231.6	386.5
5				

$$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 1.599$$

$$AOF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = .82$$

$$(2) \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.389$$

Absolute Open Flow	82	Mcfd @ 15.025	Angle of Slope	55	Slope, n	.700
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Remarks: DUE TO SMALL RATES AND LOW TUBING PRESSURE WELL HEAD PRESSURES WERE USED TO PLOT CURVE, FRICTION WOULD BE MINOR WELL BORE.

Approved by Commission:	Conducted by:	Calculated by:	Checked by:
	<i>Shirley Davis</i>	<i>Shirley Davis</i>	