

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

51-1/2 + C-122
Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10-21-81		DEC 15 1981	
Company Mesa Petroleum Co.				Connection UNCONNECTED		O. C. D.	
Pool UNDESIGNATED ABO				Formation ABO		Unit ARTESIA, OFFICE	
Completion Date 10-21-81		Total Depth 4250		Plug Back TD 4170		Elevation 3710	
Farm or Lease Name SPRING FEDERAL				Well No. 2			
Csg. Size 4 1/2	Wt. 10.5#	d 4221	Set At 4221	Perforations: From 3767 To 4014		Unit Sec. Twp. Rge. M 5 6S 26E	
Thq. Size 2 3/8	Wt. 4.7#	d 3638	Set At 3638	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 104 @ 4250		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State NEW MEXICO							
L 3638	H 3638	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover CHOKE	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							935		805		72 hr. 91
1.	CHOKE		16/64	905		60	905	60	788		1 hr.
2.	COEFF.		19/64	840		60	840	60	755		1 hr.
3.			22/64	737		61	737	61	717		1 hr.
4.			26/64	620		58°	620	58	680		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 _{pv}	Rate of Flow Q, Mc/d
1	1.050	CHOKE	918	1.000	1.240		1195
2	1.484	CHOKE	853	1.000	1.240		1570
3	1.999	CHOKE	750	.999	1.240		1857
4	2.794	CHOKE	633	1.002	1.240		2197
5							

NO.	P _r	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 _____ X 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 818	P _c ² 669	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.5397$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.8814$
NO.	P _w	P _w ²	P _c ² - P _w ²
1	801	642	27
2	768	590	79
3	730	533	136
4	693	480	189
5			

Absolute Open Flow 4,100 Mc/d @ 15.025		Angle of Slope @ 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° line through highest point.			
Approved By Commission:	Conducted By: JAMES CRAIG	Calculated By: E.L. BUTTROSS, JR.	Checked By: