

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Well # 122
Revised 9-1-65

RECEIVED

Type Test: ☐ Initial ☐ Annual ☒ Special				Test Date: 6-3-76			
Company: MESA PETROLEUM CO.				Connection: TRANSWESTERN PIPELINE CO.		Date: JUN 21 1976	
R-5252 9-1-76 Nash Draw atoka				Formation: ATOKA		Unit: U.C.C. AREA OFFICE	
Completion Date: 4-21-76		Total Depth: 13946		Plug Back TD: 13895		Elevation: 3057 D. F.	
Casing Size: 5.00"		Well No.: 23.00#		Set At: 4.670"		Perforations: From 12432 To 12441	
Tubing Size: 2.375EUE		Well No.: 4.70#		Set At: 1.995"		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple				Packer Set At: 10692		County: Eddy	
Dual Completion Gas-Gas						State: New Mexico	
Producing Thru: Tubing		Reservoir Temp. °F: 180		Mean Annual Temp. °F: 60		Baro. Press. - P _a : 13.2	
L: 12437		H: 12437		C _g : 0.611		% CO ₂ : 0.00	
						% N ₂ : 0.01	
						% H ₂ S: 0.00	
						Prover: X	
						Meter Run: Taps	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prever Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.
1.	4.00		1.88	660	5.00"	71	4250
2.	4.00		1.88	680	10.00"	68	4000
3.	4.00		1.88	680	15.00"	65	3800
4.	4.00		1.88	680	35.00"	63	3000
5.							
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.	17.26	58.017	673.20	0.9896	1.2793	1.0580	1341
2.	17.26	83.259	693.20	0.9924	1.2793	1.0560	1927
3.	17.26	101.971	693.20	0.9952	1.2793	1.0620	2380
4.	17.26	155.763	693.20	0.9971	1.2793	1.0620	3642
5.							
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 85920 Mcf/cst.		
					A.P.I. Gravity of Liquid Hydrocarbons 56.00 Deg.		
1.	1.00	531	1.47	0.890	Specific Gravity Separator Gas 0.611		
2.	1.03	528	1.46	0.887	Specific Gravity Flowing Fluid 0.646		
3.	1.03	525	1.45	0.887	Critical Pressure 671 P.S.I.A.		
4.	1.03	523	1.44	0.887	Critical Temperature 362 °R		
5.							
P _c 4563.2		P _c ² 20823					
NO.	P _r ²	P _w	P _w ²	P _c ² - P _w ²			
1.		4264.9	18189	2633			
2.		4033.8	16272	4551			
3.		3844.6	14781	6042			
4.		3094.4	9575	11247			
5.							
					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.85133$		
					(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5352$		
					AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5591$		
Absolute Open Flow 5591 Mcfd @ 15.025				Angle of Slope @ 55.16		Slope 0.596	
Remarks:							
Approved by Completion:		Conducted By: LARRY DAVIS		Calculated By: LARRY DAVIS		Checked By:	