

MAR 31

MAY -1 '89
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Special		ARTESIA OFFICE Annual		Test Date 3/21/89	
Company CITATION		Connection AIR			
Pool INDIAN BASIN		Formation MORROW GAS		Unit M	
Completion Date 3/10/89		Total Depth 10200		Plug Back TD 10156	
Elevation 4295		Farm or Lease Name IB 32 STATE			
Coq. Size 5.000	Wt. 18.0	d 4.276	Set At	Perforations: From 9678 To 9710	
Thq. Size 2.875	Wt. 6.5	d 2.441	Set At 9580	Perforations: From 0 To 0	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE-GAS				Packer Set At 9580	
Producing Thru TUBING		Reservoir Temp. °F 166 @ 9694		Mean Annual Temp. °F 60.0	
Baro. Press. - P _a 13.2		State NEW MEXICO			
L 9694	H 9694	Gg .601	% CO ₂ .00	% N ₂ 1.16	% H ₂ S .00
Prover .0		Meter Run 4.0		Taps FLANGE	

FLOW DATA					TUBING DATA		BHP 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	Duration of Flow
SI									3044	166	90.0
1.	4.03 X 1.250			210	8.0	61	0	0	2931	166	4.0
2.	4.03 X 1.250			215	23.0	61	0	0	2810	166	4.0
3.	4.03 X 1.250			225	55.0	60	0	0	2548	166	4.0
4.	4.03 X 1.250			235	85.0	61	0	0	2244	166	4.0
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	7.47	42.26	223.2	.9990	1.2899	1.0188	414
2	7.47	72.45	228.2	.9990	1.2899	1.0192	711
3	7.47	114.46	238.2	1.0000	1.2899	1.0202	1125
4	7.47	145.25	248.2	.9990	1.2899	1.0209	1427
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	.33	521	1.46	.963	.0	.0	.601	.601	670	356
2.	.34	521	1.46	.963						
3.	.36	520	1.46	.961						
4.	.37	521	1.46	.959						
5										

NO.	P _i	P _w	P _w ²	P _c ² - P _w ²
1	8668	2332	5439	431
2	7970	2236	4998	872
3	6560	2028	4114	1756
4	5095	1790	3205	2665
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.2028$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.7051$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2434$

Post ID-2
5-19-89
comp & B11

Absolute Open Flow	2434	Mcfd @ 15.025	Angle of Slope θ	56.0	Slope, n	.676
Remarks:						
Approved By Division						
Conducted By:		BENNETT & CATHEY		Calculated By:		MATT LEE
Checked By:						