

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL **APR 17 '89**

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 12/22/82		O. C. D. ARTESIA, OFFICE	
Company Chama Petroleum Company ✓				Connection None		Unit	
Pool <i>Cemetery Morrow</i> Undesignated				Formation Morrow		Farm or Lease Name Huber Federal	
Completion Date 12/16/82		Total Depth 9666'		Plug Back TD 9652'		Elevation 3465' GL	
Coq. Size 4 1/2"	Wt. 11.6	d 4.000	Set At 9666'	Perforations: From 9398' To 9541'		Well No. 2	
Trq. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 9383'	Perforations: Open Ended From To		Unit Sec. Twp. Rye. G 3 20s 25e	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At 9346'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 176 @ 9469'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 9469	H -	G _g 0.6558	% CO ₂ 6.369	% N ₂ 0.723	% H ₂ S -	Prover -	Meter Run 2.900
Taps F							

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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							2640	66	PACKER		20.25 hrs.
1.	2.900	3/64	0.750	470	7.0	67	2550	67			1.0 hr
2.	2.900	3.8/64	0.750	450	17.0	75	2499	68			1.0 hr
3.	2.900	4.6/64	0.750	460	34.5	81	2432	70			1.0 hr
4.	2.900	5.8/64	0.750	460	61.5	78	2315	69			1.0 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 _{sp}	Rate of Flow Q, Mcfd
1	2.675	58.16	483.2	0.9933	1.235	1.040	198.49
2	2.675	88.74	463.2	0.9859	1.235	1.036	299.44
3	2.675	127.77	473.2	0.9804	1.235	1.036	428.73
4	2.675	170.59	473.2	0.9831	1.235	1.037	574.54
5							

NO.	P _r	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio _____ Dry Gas _____ Mcf/bbl.
1	0.69	527	1.46	0.924	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	0.66	535	1.49	0.932	Specific Gravity Separator Gas _____ 0.6558 _____ XXXXXXXXXX
3	0.68	541	1.50	0.932	Specific Gravity Flowing Fluid _____ XXXXX
4	0.68	538	1.49	0.930	Critical Pressure _____ 699 _____ P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ 360 _____ R _____ R

P _c 3419.2 P _c ² 11690.9				(1) $\frac{P_c^2}{P_r^2 - P_w^2} = 5.000$		(2) $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 2.717$	
NO.	P _r ²	P _w *	P _r ²	P _c ² - P _w ²			
1		3342.2	11170.3	520.6			
2		3297.2	10871.6	819.3			
3		3197.2	10222.1	1468.8			
4		3058.2	9352.6	2338.3			
5							

AOF = Q $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 1561.0$

Absolute Open Flow 1561 Mcfd @ 15.025 Angle of Slope @ 58° 9' Slope, n 0.621

Remarks: * BOTTOM HOLE PRESSURE @ (-6004)9469' USED FOR PRESSURE CALCULATIONS

Approved By Division	Conducted By: JARREL WELL TESTING, INC	Calculated By: Joe A. Coleman	Checked By: <i>D. Dickerson</i> D. Dickerson
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