

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

C/SF C-122

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 10/24/81		RECEIVED NOV 06 1981 O. C. D. ARTESIA, OFFICE State 'FP' 13 Com.	
Company Tenneco Oil Company		Connection None			
Field CatClaw Draw <i>Morrow</i>		Formation Morrow			
Completion Date 10/17/81		Total Depth 10575'			
Plug Back TD 10413'		Elevation 3301' GL		Well No. #2	
Casing Size 5 1/2"	Wt. 17.0	d 4.892	Set At 10575'	Perforations: From 10234' To 10299'	
Tub. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 10180'	Perforations: Open Ended	
Type Well - Single - Packerhead - G.C. or G.O. Multiple Single				Packer Set At 10182'	
Producing Thru Tubing		Reservoir Temp. °F 176 @ 10172'		Mean Annual Temp. °F 60	
Baro. Press. - P ₀ 13.2		State New Mexico		County Eddy	
L 10267'	H -	G _g 0.5891	% CO ₂ 0.888	% N ₂ 1.033	% H ₂ S -
Prover 2.900		Meter Run 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							3250	60	PACKER		49.5 hrs
1.	2.900	6/64	1.250	480	10	81	2782				1.0 hr
2.	2.900	8/64	1.250	490	20	81	2425				1.0 hr
3.	2.900	11/64	1.250	500	36	81	1870				1.0 hr
4.	2.900	14/64	1.250	495	46	81	1420				1.0 hr
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (4 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super. Compress. Factor, F _{spv}	Rate of Flow C. Mhd
1	7.615	70.23	493.2	0.9804	1.303	1.038	709.15
2	7.615	100.32	503.2	0.9804	1.303	1.039	1013.96
3	7.615	135.92	513.2	0.9804	1.303	1.039	1373.78
4	7.615	152.90	508.2	0.9804	1.303	1.039	1545.40
5							

NO.	P ₀	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio Dry Gas			
1	0.73	541	1.56	0.929	A.P.L. Gravity of Liquid Hydrocarbons -			
2	0.75	541	1.56	0.927	Specific Gravity Separator Gas 0.5891			
3	0.76	541	1.56	0.926	Specific Gravity Flowing Fluid XXXXX			
4	0.75	541	1.56	0.927	Critical Pressure 675 P.S.I.A			
5					Critical Temperature 346 °R			

r _i 4056.2 r _e 16452.8				
NO.	P _w *	P _w ²	P _e ² - P _w ²	
1	3520.2	12391.8	4061.0	(1) $\frac{P_e^2}{P_e^2 - P_w^2} = 2.371$ (2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.843$ AOIF = Q $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1869$
2	3084.2	9512.3	6940.5	
3	2395.2	5737.0	10715.8	
4	1839.2	3382.7	13070.1	
5				

Absolute Open Flow 1869		Mhd 15.025		Angle of Slope α 54° 41'		Slope n 0.708	
-------------------------	--	------------	--	--------------------------	--	---------------	--

Remarks: * BOTTOM HOLE PRESSURE @ (-6966) 10267' USED FOR PRESSURE CALCULATIONS

Approved By Division <i>Al Wilson</i>	Conducted By: JARREL WELL TESTING, INC	Calculated By: Joe A. Coleman	Checked By: PE #2208 Joe A. Coleman
--	---	----------------------------------	--