

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL
C/SF + C-122

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 12/14/81	
Company Tenneco Oil Company		Connection None	
Well S. Empire Morrow		Formation Morrow	
Completion Date 12/5/81	Total Depth 10732'	Plug Back TD 10616'	Elevation 3623' GL
Well No. 1	Federal KL 17		
Case Size 5 1/2"	WT 17.0	d 4.892	Set At 10732'
Perforations From 10500' To 10550'	1		
Tubing Size 2 3/8"	WT 4.7	d 1.995	Set At 10446'
Perforations Open Ended	Unit Sec. Twp. Range 8F 17 17s 29e		
Type Well - Single - Production - C.G. or G.C. Multiple		Packer Set At 10446'	
Tubing 150 # 10402'		Mean Annual Temp. °F 60	
Baro. Press. at 10446'		Baro. Press. at 10732'	
10525'	0.7238	% CO ₂ 6.991	% N ₂ 0.780
Prover		Meter Run 2.900	
Flag		New Mexico	

FLOW DATA						TUBING DATA		CASING DATA		FIG.
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Flow Rate
1						3030	60	PACKER		122.0 hrs.
1.	2.90	4.5/64	1.00	300	5	102	2865			1.0 hr
2.	2.90	6/64	1.00	310	14	83	2705			1.0 hr
3.	2.90	8/64	1.00	315	30	81	2420			1.0 hr
4.	2.90	12/64	1.00	330	66	80	1935			1.0 hr
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (4 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, C _{pv}	Rate of Flow Q, mcf/d
1	4.801	39.57	313.2	0.9619	1.175	1.026	220.30
2	4.801	67.27	323.2	0.9786	1.175	1.029	382.13
3	4.801	99.23	328.2	0.9804	1.175	1.030	565.27
4	4.801	150.50	343.2	0.9813	1.175	1.032	859.78
5							

NO.	R	Temp. °R	T _f	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	0.45	562	1.47	0.950	44.462	57.8	0.7238	XXXXXX	697	383
2	0.46	543	1.42	0.944						
3	0.47	541	1.41	0.942						
4	0.49	540	1.41	0.939						
5										

P_c	4306.2	P_c^2	18543.4		
NO	P_w *	P_w^2	$P_c^2 - P_w^2$	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{14.513}{}$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{5.626}{}$
1	4155.2	17265.7	1277.7		
2	3943.2	15548.8	2994.6		
3	3608.2	13019.1	5524.3		
4	2950.2	8703.7	9839.7		
5					

$AOI = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{1239}{}$

Absolute Open Flow 1239	Mcf/d @ 15.025	Angle of Slope @ 57° 9'	Slope, n 0.646
* BOTTOM HOLE PRESSURE @ (-6898) 10525' USED FOR PRESSURE CALCULATIONS			
WELL PRODUCED 1.9 BD IN 4.0 HOURS = 11.40 BD/D			
Approved by Division G. Wilson	Conducted by: JARREL WELL TESTING INC	Calculated by: Joe A. Coleman	Checked by: Joe A. Coleman PE #2208