

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-2-90			
Company SANTA FE ENERGY				Connection TRANS-WESTERN					
Pool				Formation MORROW				Unit	
Completion Date		Total Depth		Plug Back TD		Elevation		Form or Lease Name BILBREY 284 FEDERAL	
Csg. Size	Wt.	d	Set At	Perforations: From 14279 - To 14498				Well No. 1	
Tbg. Size	Wt.	d	Set At	Perforations: From open To end				Unit Sec. Twp. Rge. 28 21S 32E	
Type Well - Single - Dracenned - G.C. or G.O. Multiple SINGLE						Packer Set At		County LEA	
Producing thru TUBING		Reservoir Temp. °F 215 # 14050		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State NEW MEXICO	
* L	H	G _g	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps	
1.4050	14050	.628	1.08	.15	--		3.068	FLANGE	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. In. H ₂ O	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							4933		PKR		48 HRS
1.	3 X .750			570	8.00	58	4769		PKR		1 HR
2.	3 X .750			580	24.00	59	4647		PKR		1 HR
3.	3 X 1.000			585	10.00	56	4575		PKR		1 HR
4.	3 X 1.000			595	28.00	60	4269		PKR		1 HR
5.	3 X 1.000			600	42.00	63	3851		PKR		1 HR

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_v P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	2.672	68.31	583.2	1.002	1.262	1.059	244
2	2.672	119.32	593.2	1.001	1.262	1.061	427
3	4.789	73.34	598.2	1.004	1.262	1.061	472
4	4.789	130.50	608.2	1.000	1.262	1.062	838
5	4.789	160.48	613.2	.9971	1.262	1.062	1.027

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.L. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure **	Critical Temperature **
1.	.87	518	1.42	.891	DRY GAS	DRY	628	XXXXXXX	667	364
2.	.88	519	1.42	.889						
3.	.89	516	1.41	.888						
4.	.91	520	1.42	.886						
5.	.91	523	1.43	.886						

***P₂ 5087.6 P₂² 25883.7

NO.	P ₁ ²	P ₂	P ₂ ²	P ₁ ² - P ₂ ²	(1) $\frac{P_1^2}{P_2^2 - P_1^2} = 2.785$	(2) $\left[\frac{P_1^2}{P_2^2 - P_1^2} \right]^n = 2.785$
1	***	4895.3	23964.0	1919.7		
2	***	4783.2	22879.0	3004.7		
3	***	4705.2	22138.9	3744.8		
4	***	4432.3	19645.3	6238.4		
5	***	4072.9	16588.5	9295.5		

AOF = 0 $\left[\frac{P_1^2}{P_2^2 - P_1^2} \right]^n = 2.860$

Absolute Open Flow	2.860	Mcfd @ 15.025	Angle of Slope @	45	Slope, n	1.000
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Remarks: *=BHP INSTRUMENT SET @ THIS DEPTH
 **= CORRECTED TO 1.08% CO2
 ***= CALCULATED FROM KNOWN B.H.P.'S & CORRECTED BACK TO SURFACE PRESSURES PSIA

Approved By Division	Conducted By	Calculated By	Checked By
ORIGINAL SIGNED BY JERRY SEXTON	KEITH NORVELL	JBM	JBM

DISTRICT SUPERVISOR