

Type Test: ☒ Initial ☐ Annual ☐ Special		Test Date: FEB 04 1977	
Company: Texas Oil & Gas Corp.		Connection: To Air	
Pool: Happy Valley - Morrow Undersaturated 2-5609 1-1-78		Formation: Morrow	
Completion Date: 2-1-77		Total Depth: 11294	
Csg. Size: 4 1/2"		Wt. 13.5	
Tbg. Size: 2 3/8"		Wt. 4.7	
Plug Back TD: 11252		Perforations: From 10960 To 11225	
Form or Lease Name: Federal "B" #4		Well No. 1	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple		Packer Set At: 10790	
Producing Thru Tubing: 11092		Reservoir Temp. °F: 11092	
Mean Annual Temp. °F: 60		Baro. Press. - P _a : 13.2	
L: 11092		H: 11092	
G _g : 0.5954		% CO ₂ : 1.322	
% N ₂ : 0.248		% H ₂ S: -0-	
Prover: 3"		Meter Run: 3"	
Taps: Pipe		County: Eddy	
State: New Mexico		Duration of Flow: 24 Hrs.	
FLOW DATA			
NO.	Prover Line Size	X	Orifice Size
1.	3"	X	1.50"
2.	3"	X	1.50"
3.	3"	X	1.50"
4.	3"	X	1.50"
5.			
TUBING DATA			
NO.	Press. p.s.i.g.	Temp. °F	Duration of Flow
1.	3444.0	106	24 Hrs.
2.	2442.0	64	90 Min.
3.	1775.0	67	60 "
4.	1320.0	70	60 "
5.	1535.0	71	60 "
RATE OF FLOW CALCULATIONS			
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m
1.	12.94	42.02	353.2
2.	12.94	49.72	353.2
3.	12.94	59.43	353.2
4.	12.94	46.03	353.2
5.			
TSM			
NO.	P _f	Temp. °R	T _f
1.	0.52	565	1.60
2.	0.52	596	1.69
3.	0.52	594	1.68
4.	0.52	610	1.73
5.			
Gas Liquid Hydrocarbon Ratio: 0.5954			
A.P.I. Gravity of Liquid Hydrocarbons: 676			
Specific Gravity Separator Gas: 0.5954			
Specific Gravity Flowing Fluid: 0.5954			
Critical Pressure: 676 P.S.I.A.			
Critical Temperature: 353 °R			
Rate of Flow Q, Mcfd			
1.	690.3		
2.	792.1		
3.	948.3		
4.	723.4		
5.			
P _f 4369.2 P _s 19090			
NO.	P _f ²	P _s ²	P _f ² - P _s ²
1.	3312.2	10971	8119
2.	2889.2	8347	10743
3.	2770.2	7674	11416
4.	3120.2	9736	9354
5.			
(1) $\frac{P_f^2}{P_f^2 - P_s^2} = 1.777$			
(2) $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.347$			
AOF = Q $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1067$			
Absolute Open Flow: 1067 Mcfd @ 15.025			
Angle of Slope θ: 62.6°			
Slope, n: 0.518			
Remarks: Bottom hole pressure measured with Amerada gage @ 11092'			
Acceptable point alignment but well appears to be cleaning up @ end of test.			
Approved By Commission:		Conducted By: D. A. T.	
Calculated By: R. L. West		Checked By: J. W. W.	