

MAY 11 1977

Type Test ☒ Initial ☐ Annual ☐ Special Test Date **3-10-77**

Company **Yates Petroleum Co. OFFICE** Connection **Natural Gas Pipeline Co.**

Pool **Boston Flat morrow** Formation **Morrow** Unit **K-5115**

Undesignated **11,000'**

Completion Date **2-15-77** Total Depth **11500'KB** Plug Back TD **11415'KB** Elevation **3315'KB** Farm or Lease Name **Stonewall "EP" State**

Csg. Size **5 1/2"** Wt. **20 #** Set At **11458'KB** Perforations: From **11,060** To **11,070'KB** Well No. **2**

Tbg. Size **2-7/8"** Wt. **6.7 #** Set At **11059'KB** Perforations: From **11,042'** To **11,044'KB** Unit **N 19- 20S- 28E**

Type Well - Single - Bradenhead - G.G. or G.O. Multiple **Single** Packer Set At **11,036'KB** County **Eddy**

Producing Thru **Tubing** Reservoir Temp. °F **178 @ 11,065** Mean Annual Temp. °F **62** Baro. Press. - P_a **13.2** State **New Mexico**

L **11,057** H **11,057** G_g **0.605** % CO₂ **.76** % N₂ **0.32** % H₂S **Nil** Prover **5.761** Meter Run **Flange**

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.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							3600	68			Weeks
1.	6 X 2.625			710	14	65	3372	70			1 hr.
2.				712	32	72	3218	71			1 hr.
3.				715	68	78	2950	72			1 hr.
4.				717	88	82	2813	73			1 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 _{pv}	Rate of Flow Q, Mcfd
1	33.73	100.6	723.2	.9952	1.290	1.061	4.622
2	33.73	152.3	725.2	.9887	1.290	1.058	6.932
3	33.73	222.5	728.2	.9831	1.290	1.055	10.041
4	33.73	253.5	730.2	.9795	1.290	1.054	11.388
5							

NO.	P _r	Temp. °R	T _r	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	1.073	525	1.475	.889	645.3	51.0	601	XXXXXX	674	356
2	1.076	532	1.494	.893				XXXXX		
3	1.080	538	1.511	.898						
4	1.083	542	1.522	.900						
5										

NO.	P _r	P _w	R _w ²	P _c ² - R _w ²
1			19014	2019
2			17924	3109
3			16275	4758
4			15518	5515
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.8138$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.2094$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 36548$ MCFPD

Absolute Open Flow **36548** Mcfd @ 15.025 Angle of Slope θ **490** Slope, n **0.8711**

Remarks: **Static pressures by Bennett Wireline, flowing pressures by DWT. Calculations worksheet C-122D attached.**

Approved By Commission: **Don Weaver** Conducted By: **Eddie Mahfood** Calculated By: **Eddie Mahfood** Checked By: