

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 07-19-89		RECEIVED			
Company YATES ENERGY CORP		Connection AIR		JUL 26 89			
Pool E. HESS EAST		Formation MORROW		O. C. D. ARTESIA, OFFICE			
Completion Date 06-29-89		Total Depth 10600.		Plug Back TD 10549.			
Elevation 4319.		Farm or Lease Name LONESOME DOVE FED.		Well No. 1			
Coq. Size 4.500	Wt. 11.6	d 4.000	Set At 10593.	Perforations: From 10137 To 10173.	Unit N 26/23S/23E		
Thq. Size 2.375	Wt. 4.7	d 1.995	Set At 10120.	Perforations: From 0. To 0.	Sec. Twp. Rge. 26/23S/23E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE GAS				Packer Set At 10113.			
Producing Thru TUBING		Reservoir Temp. °F 177.° 10155.		Mean Annual Temp. °F 60.0			
Baro. Press. - P _a 13.2		State NM		County EDDY			
L 10155.	H 10155.	G _g .598	% CO ₂ .47	% N ₂ .15	% H ₂ S .00		
Prover 0		Meter Run 4.0		Taps FLANGE			
FLOW DATA							
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w		
SI							
1.	4.03 X 2.000			110.	2.0		
2.	4.03 X 2.000			110.	4.0		
3.	4.03 X 2.000			110.	9.0		
4.	4.03 X 2.000			120.	19.0		
5.							
TUBING DATA							
				Press. p.s.i.g.	Temp. °F		
				3240			
				3100			
				3010			
				2875			
				2690			
BHP							
				Press. p.s.i.g.	Temp. °F		
				4057.	177.		
				3848	177.		
				3777	177.		
				3635	177.		
				3450	177.		
Duration of Flow							
					72.		
					1.		
					1.		
					1.		
					1.		
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	19.81	15.70	123.2	.9905	1.2932	1.0097	402.
2	19.81	22.20	123.2	.9905	1.2932	1.0097	569.
3	19.81	33.30	123.2	.9905	1.2932	1.0097	853.
4	19.81	50.31	133.2	.9905	1.2932	1.0105	1290.
5							
NO.	R ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.		
1.	.18	530.	1.49	.981	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.		
2.	.18	530.	1.49	.981	Specific Gravity Separator Gas _____		
3.	.18	530.	1.49	.981	Specific Gravity Flowing Fluid _____		
4.	.20	530.	1.49	.979	Critical Pressure _____ P.S.I.A.		
5.					Critical Temperature _____ R		
P _c 3237.7 P _c ² 10483.					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.4824$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.4824$		
NO.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4493.$		
1	14987.	3071.	9429.	1054.			
2	14369.	3003.	9021.	1462.			
3	13306.	2885.	8323.	2159.			
4	11994.	2734.	7473.	3010.			
5							
Absolute Open Flow 4493.				Mcf @ 15.025		Angle of Slope @ 45.0	
				Slope, n 1.000			
Remarks:							
Approved By Division							
Conducted By: BENNETT & CATHEY				Calculated By: MATT LEE		Checked By:	