

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 11-15-89		DEC 8 '89	
Company YATES ENERGY CORP.		Connection AIR		O. C. O. ARTESIA OFFICE	
Pool		Formation STRAWN			
Completion Date 11-09-89		Total Depth 10310		Plug Back TD 10236	
Elevation 0		Farm or Lease Name DESERT ROSE			
Ceg. Size 4.5	Wt. 11.6	d 4.000	Set At 10310	Perforations: From 8772 To 8816	
Thg. Size 2.375	Wt. 4.7	d 1.995	Set At 8819	Perforations: From To	
Type Well - Single - Drdhead - G.C. or G.O. Multiple SINGLE - GAS				Packer Set At 8745	
Producing Thru TUBING				State NEW MEXICO	
Reservoir Temp. °F 166 # 8844		Mean Annual Temp. °F 60		Baro. Press. - P _b 13.2	
L 8844	H 8844	G _g 0.621	% CO ₂ 0.66	% N ₂ 0.20	% H ₂ S 0
Prover 0		Meter Run 3.068		Taps FLANGE	

FLOW DATA						TUBING DATA		BHP 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.	
SI										
1.	3.07 X 1.750			170	2	75	2830	70	3501	166
2.	3.07 X 1.750			200	6	70	2770	60	3438	166
3.	3.07 X 1.750			200	14	60	2690	60	3354	166
4.	3.07 X 1.750			200	30	65	2545	60	3185	166
5.							2380	60	2988	166

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	15.61	19.14	183.2	.9859	1.2690	1.0150	379
2	15.61	35.77	213.2	.9905	1.2690	1.0181	714
3	15.61	54.63	213.2	1.0000	1.2690	1.0194	1103
4	15.61	79.97	213.2	.9952	1.2690	1.0187	1606
5							

NO.	I _g	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio _____ 0 _____ Mcf/bbl.
1	.27	535	1.47	.971	A.P.I. Gravity of Liquid Hydrocarbons _____ 0 _____ Deg.
2	.32	530	1.46	.965	Specific Gravity Separator Gas _____ .621 _____ XXXXXXXXX
3	.32	520	1.43	.962	Specific Gravity Flowing Fluid _____ XXXXX _____ .621
4	.32	525	1.44	.964	Critical Pressure _____ 674 _____ P.S.I.A. _____ 674 _____ P.S.I.A.
5					Critical Temperature _____ 363 _____ R _____ 363 _____ R

P _c 28263 P _c ² 7959					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.6124$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.5028$	
NO	P _i ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4020$			
1	11909	2769	7665	295				
2	11335	2699	7282	677				
3	10228	2560	6551	1408				
4	9010	2399	5756	2203				

Absolute Open Flow _____ 4020 _____ Mcfd @ 15.025		Angle of Slope _____ 54.5 _____		Slope, n _____ 0.714 _____	
Remarks: CHOKE SIZES 1ST RATE 4/64 2ND RATE 7/64 3RD RATE 10/64 4TH RATE 12/64					
Approved By Division		Conducted By: BENNETT-CATHEY WIRELINE		Checked By:	
		Calculated By: MATT LEE			