

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 5-9-79		JUL 9 1979	
Company Yates Petroleum Corp.				Connection Transwestern Pipeline Co.			O. C. C.	
Pool Richard Knob Atoka Morrow				Formation Morrow			Unit ARTESIA, OFFICE	
Completion Date 1-11-79		Total Depth 8800'		Plug Back TD 8748'		Elevation 3636' KB		Farm or Lease Name Gulf State "KC" Com
Csg. Size 5-1/2"	Wt. 17#	d 4.892	Set At 8775' KB	Perforations: From 8365 To 8394' KB			Well No. 1	
Tbg. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 8364' KB	Perforations: From 8351 To 8353' KB			Unit Soc. Twp. Rge. C 18 18S 25E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 8345' KB			County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 140 @ 8380' KB		Mean Annual Temp. °F 62		Baro. Press. - P _g 13.2		State New Mexico
L 8373	H 8373	G _g	% CO ₂ 0.57	% N ₂ 0.58	% H ₂ S Nil	Prover	Meter Run 2"	Taps 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							2436	70			Days
1.	2.067 x 1.375			506	12	65	2415	72			1 hour
2.				507	25	65	2403	73			1 hour
3.				508	48	65	2382	74			1 hour
4.				510	86	65	2352	75			1 hour
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	10.20	78.93	519.2	.9952	1.282	1.0454	1074
2	10.20	114.04	520.2	.9952	1.282	1.0454	1552
3	10.20	158.17	521.2	.9952	1.282	1.0457	2152
4	10.20	212.12	523.2	.9952	1.282	1.0460	2887
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>363.83</u> Mcf/bbl.		
					A.P.I. Gravity of Liquid Hydrocarbons <u>54.4</u> Deg.		
1.	0.771	525	1.462	.915	Specific Gravity Separator Gas <u>0.608</u>	XXXXXXX	
2.	0.773	525	1.462	.915	Specific Gravity Flowing Fluid <u>XXXXX</u>	.616	
3.	0.774	525	1.462	.915	Critical Pressure <u>673</u> P.S.I.A.	673 P.S.I.A.	
4.	0.777	525	1.462	.914	Critical Temperature <u>359</u> °R	361.5 °R	
5.							

P _c 3031.2 P _c ² 9188					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 24.042$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 16.1566$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²				
1			9053	135				
2			9001	187				
3			8916	272				
4			8810	378				
5								

Absolute Open Flow <u>46640</u> Mcfd @ 15.025					Angle of Slope <u>48.8</u> deg		Slope, n <u>.8750</u>	
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Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT. Calculations worksheet C-122D attached. NOTE: Too small an orifice plate was used to attain greater pressure drawdown.			
Approved By Commission:	Conducted By: David Weaver	Calculated By: Eddie M. Mahfood	Checked By: