

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 10/21/82		JAN 03 1983 O. C. D. ARTESIA, OFFICE		
Company Yates Petroleum Corporation				Connection Transwestern Pipeline					
Pool Pecos Slope - Abo Gas				Formation Abo					
Completion Date 5/20/82		Total Length 4250'		Plug Back TD 4195'		Elevation 3950' GL		Farm or Lease Name Thomas "LN" Federal	
Csg. Size 4 1/2"	Wt. 9.5#	Id 4.090	Set At 4251'	Perforations: From 4019' To 4081'		Well No. 5			
Tub. Size 2 3/8"	Wt. 4.7#	Id 1.995	Set At 3975'	Perforations: From To		Unit Sec. Twp. Rge. N 10 6S 25E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 3975'		County Chaves		
Producing Thru Tubing		Reservoir Temp. °F 102 @ 3973'		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2 psi		State New Mexico	
L 3975	H 3975	G _g .638	% CO ₂ .07	% N ₂ 4.92	% H ₂ S 0	Provor -	Meter Run 2"	Tags Flanged	

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
1.	2.067 x 1.000			185	27.1	72	844	62			24 hr.
2.	2.067 x 1.000			185	29.1	72	833	62			24 hr.
3.	2.067 x 1.000			180	35.9	72	823	62			24 hr.
4.	2.067 x 1.000			180	44.0	72	805	62			24 hr.
5.											

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, Mhd
1.	4.946	73.3	198.2	.9887	1.252	1.016	456
2.	4.946	75.9	198.2	.9887	1.252	1.016	472
3.	4.946	83.3	193.2	.9887	1.252	1.016	518
4.	4.946	92.2	193.2	.9887	1.252	1.016	574
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Met/bbl.
1.	.30	532	1.49	.968	Dry	
2.	.30	532	1.49	.968	A.P.I. Gravity of Liquid Hydrocarbons	
3.	.29	532	1.49	.969	Specific Gravity Separator Gas	.638
4.	.29	532	1.49	.969	Specific Gravity Flowing Fluid	.638
5.					Critical Pressure	661 P.S.I.A.
					Critical Temperature	358 R

NO.	P _t ²	P _w ²	P _w ²	P _c ² - P _w ²
1.	734.8		737.6	174.8
2.	716.1		719.1	193.3
3.	699.2		702.9	209.5
4.	669.5		673.9	238.5
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.826$

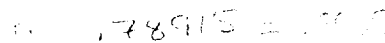
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1654$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.882$

Absolute Open Flow	1654	Mhd @ 15.025	Angle of Slope	°	Slope, n	.789
Remarks:						

Approved By Commission:	Conducted By: David Weaver	Calculated By: Andie Alderson	Checked By:
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Charles County



COMPANY Yates Petroleum Corp LEASE Theresa "L" Federal WELL NO. 5 DATE 12/16/82

LOCATION: Unit D Section 10 Township 6S Range 25E

L 5115 H 3115 L/H 1 C .638 % CO₂ .07 % N₂ 4.92 % H₂S 0

d 1.0195 F₁ .01823 GH 2.536 P_{cr} 661 T_{cr} 358

TABLE 18 & 19

LINE	1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	11TH	12TH	13TH	14TH	15TH	16TH	17TH	18TH	19TH	20TH	21TH	22TH	23TH
1 Q _m	.456	.472	.518	.541																			
2 T _w (W.H.°R)	522	522	522	522																			
3 T _s (B.H.°R)	562	562	562	562																			
4 T = (LW ² /L _s)	542	542	542	542																			
5 Z (Est.)	.873	.875	.877	.878																			
6 T ₂	473.12	474.25	475.33	475.88																			
7 GH/T ₂	5.360	5.347	5.335	5.329																			
8 e ^s (Table XIV)	1.223	1.222	1.221	1.221																			
9 1.e ^s (Table XIV)	.182	.182	.181	.181																			
10 F ₁	857.2	846.2	836.2	818.2																			
11 F ₁ 2/1000	734.8	716.1	699.2	669.5																			
12 F ₁ (Table XVI)	.01823	.01823	.01823	.01823																			
13 F ₂ = F ₁ T ₂	8.626	8.646	8.665	8.675																			
14 F ₂ Q _m	3.433	4.081	4.489	4.980																			
15 L/H (F ₂ Q _m) ²	15.471	16.652	20.148	24.796																			
16 F ₂ L/H (F ₂ Q _m) ² (1.e ^s)	2.816	3.031	3.642	4.488																			
17 P _w ² = P _i ² + F _w	737.6	719.1	702.7	673.9																			
18 F ₂ ² = e ^s P _w ²	602.1	658.2	822.9																				
19 F ₂	049.8	937.4	926.4	607.1																			
20 F ₂ = (F ₂ + P _s)	903.5	891.8	881.3	862.7																			
21 F ₂ 2/P ₂	1.37	1.37	1.38	1.31																			
22 T ₂ = (T/T ₂)	1.51	1.51	1.51	1.51																			
23 Z (Table XI)	.875	.875	.877	.878																			