

457
File

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10/13/82	
Company Yates Petroleum Corporation ✓				Connection Transwestern Pipeline			
Pool Pecos Slope - Abo Gas				Formation Abo		Unit	
Completion Date 5/8/82		Total Depth 4200'		Plug Back TD 4132'		Elevation 3750' GL	
Form or Lease Name Thorpe "MI" Federal							
Csq. Size 4 1/2"	Wt. 9.5#	d 4.090	Set At 4190'	Perforations: From 3636 To 3884		Well No. 7	
Trq. Size 2 3/8"	Wt. 4.7#	d 1.995	Set At 3572'	Perforations: From To		Unit Sec. Twp. Rge. C 3 7S 25E	
Type well - Single - Brodenhead - G.C. or G.O. Multiple Single				Packer Set At 3572'		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 98 @ 3570'		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2 psi	
L 3572'		H 3572'	G _g .649	% CO ₂ .11	% N ₂ 5.35	% H ₂ S 0	Prover --
						Meter Run 2"	Feet 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 1.125			185	21.0	70	913	62			24 hr.
2.	2.067 x 1.125			185	30.3	70	889	62			24 hr.
3.	2.067 x 1.125			190	37.9	70	863	62			24 hr.
4.	2.067 x 1.125			195	57.0	70	820	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, Mscf/d
1	6.393	64.4	198.2	.9905	1.241	1.017	515
2	6.393	77.5	198.2	.9905	1.241	1.017	619
3	6.393	87.7	203.2	.9905	1.241	1.017	701
4	6.393	108.9	208.2	.9905	1.241	1.017	871
5							

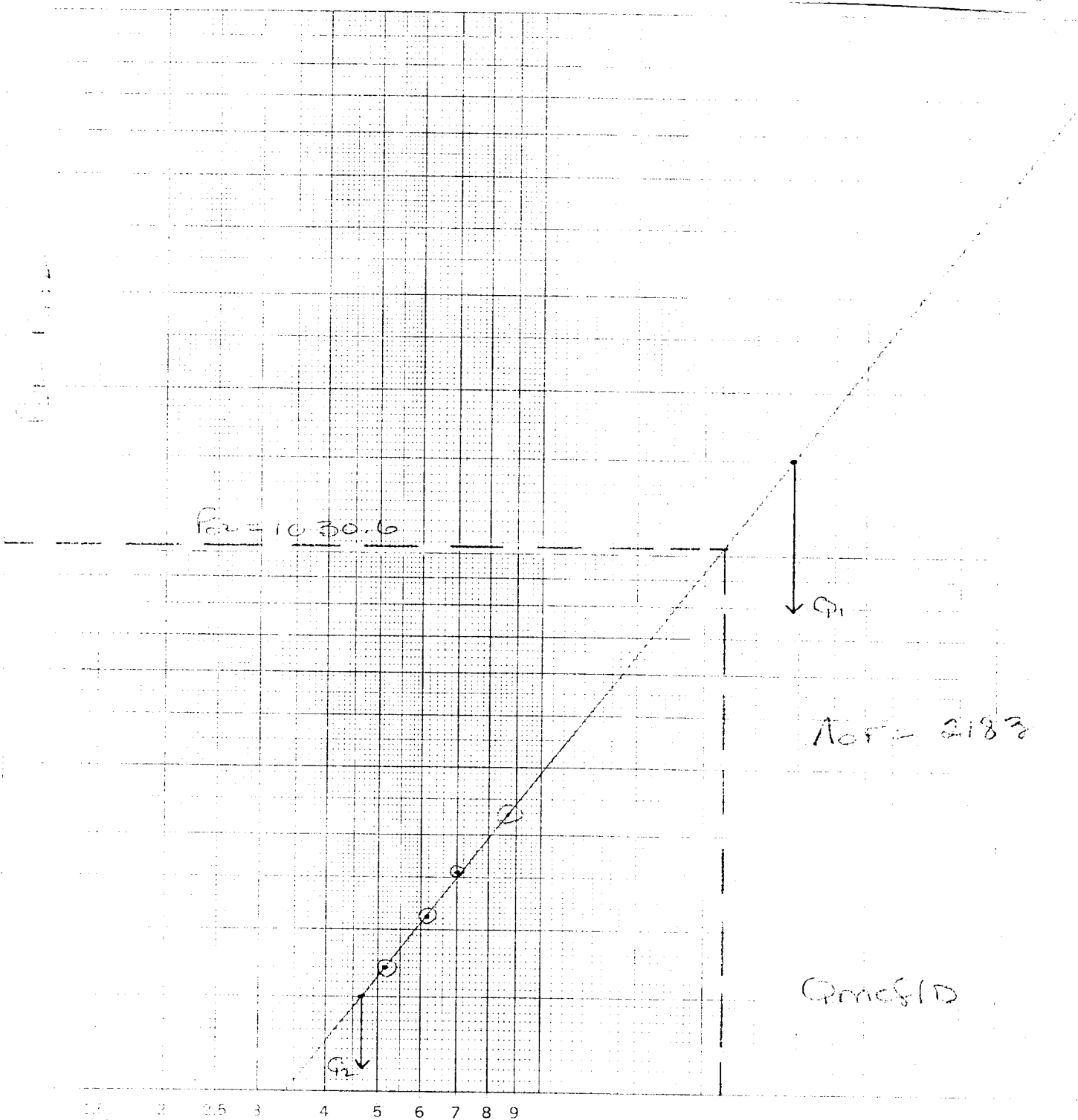
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	.30	530	1.47	.967	Dry	--	.649	X X X X X X X X	661	361
2.	.30	530	1.47	.967				X X X X X		
3.	.31	530	1.47	.966						
4.	.31	530	1.47	.966						
5.										

NO.	P _r ²	P _w ²	P _w ² - P _r ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1	857.8	861.1	169.5	3.153	2.506
2	814.0	818.7	211.9		
3	767.7	773.8	256.8		
4	649.2	703.7	326.9		
5					

Absolute Open Flow <u>2183</u> Mscf/d @ 15.025		Angle of Slope θ <u>.800</u>	
Remarks:			
Approved by Commission: _____ Conducted By: <u>David Weaver</u> Calculated By: <u>Andie Alderson</u> Checked By: _____			

Lytle Petroleum Co., Ltd.
 Thompson Federal #1
 Unit C 3-75-700
 Chase County,

ILLECIBLE



$$\begin{aligned}
 (1) \quad (1.07)_{10} &= 1500 \\
 (1) \quad (1.07)_{20} &= 150 \\
 Q_1 &= 150 \\
 Q_2 &= 468
 \end{aligned}$$

$$\begin{aligned}
 \log Q_1 &= 2.176182 \\
 \log Q_2 &= 2.67025 \\
 n &= 1.799023
 \end{aligned}$$

APR 9-1-63

COMPANY Water Resources Corp. LEASE Thompson WELL NO. 45 DATE 11/16/82

LOCATION: Unit C Section 3 Township 4S Range 25E

L 3572 H 3572 L/H 1 G 647 % CO₂ 11 % N₂ 3.35 % H₂S 0

d 1775 F₁ 3572 GH 3578 P_{cr} 661 T_{cr} 361

TABLE IX & X

LINE	(est)	Q _{sc}	Q _{sc}	Q _{sc}	Q _{sc}	Q _{sc}	Q _{sc}	Q _{sc}	Q _{sc}
1 Q _m									
2 T _{sc} (W.H. °R)	522	522	522	522	522	522	522	522	522
3 T _{sc} (B.H. °R)	540	540	540	540	540	540	540	540	540
4 T = $(\frac{1}{2}W + \frac{1}{2}Ts)$	540	540	540	540	540	540	540	540	540
5 Z (Est.)	540	540	540	540	540	540	540	540	540
6 T ₂	465.48	465.48	465.48	465.48	465.48	465.48	465.48	465.48	465.48
7 Q _{sc} /T ₂	4.980	4.980	4.980	4.980	4.980	4.980	4.980	4.980	4.980
8 e ^s (Table XIV)	1.203	1.203	1.203	1.203	1.203	1.203	1.203	1.203	1.203
9 1-e ^s (Table XIV)	.170	.170	.170	.170	.170	.170	.170	.170	.170
10 P ₁	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2
11 P ₁ ² /1000	857.8	857.8	857.8	857.8	857.8	857.8	857.8	857.8	857.8
12 P ₁ (Table XV)	6.123	6.123	6.123	6.123	6.123	6.123	6.123	6.123	6.123
13 F ₀ = F ₁ T ₂	8.172	8.172	8.172	8.172	8.172	8.172	8.172	8.172	8.172
14 F ₀ Q _m	4.540	4.540	4.540	4.540	4.540	4.540	4.540	4.540	4.540
15 L/H (F ₀ Q _m) ²	17.016	17.016	17.016	17.016	17.016	17.016	17.016	17.016	17.016
16 F ₀ = L/H (F ₀ Q _m) ² (1-e ^s)	3.747	3.747	3.747	3.747	3.747	3.747	3.747	3.747	3.747
17 P ₁ ² = P ₁ ² + F ₀	861.1	861.1	861.1	861.1	861.1	861.1	861.1	861.1	861.1
18 F ₁ ² = e ^s P _w ²	1.376	1.376	1.376	1.376	1.376	1.376	1.376	1.376	1.376
19 F ₁	1.170	1.170	1.170	1.170	1.170	1.170	1.170	1.170	1.170
20 F ₁ = $(\frac{1}{2} + \frac{1}{2}F_s)$	4.754	4.754	4.754	4.754	4.754	4.754	4.754	4.754	4.754
21 P ₁ (Table XV)	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
22 T ₂ = (T/T ₀)	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
23 Z (Table XI)									

TABLE IX & X