

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

57 file
Form C-122
Revised 9-1-83

RECEIVED

JUN 30 1982

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 5-11-82		JUN 30 1982	
Company Yates Petroleum Corporation		Connection Transwestern Pipeline Co.		O. C. D. ARTESIA, OFFICE	
Pool Pecos Slope Abo		Formation Abo		Unit	
Completion Date 5-26-82 2-13-82		Total Depth 4450'		Elevation 3757.7' GR	
Casing Size 4-1/2"		Set At 4433'		Perforations: From 3816' To 3982'	
Tub. Size 2-3/8"		Set At 3944'		Perforations: From - To -	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At -	
Producing Thru tubing		Reservoir Temp. °F 92 3942		Mean Annual Temp. °F 62	
Baro. Press. - P _u 13.2		State New Mexico		County Chaves	
L 3944	H 3944	C _g .652	% CO ₂ .26	% N ₂ 6.30	% H ₂ S -
Prover -		Meter Run 2"		Taps 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
SI							990				days
1.	2.067	x	1.125	180	26.4	60	889	72			24 hrs
2.	2.067	x	1.125	210	29.4	60	805	72			24 hrs
3.	2.067	x	1.125	230	52.0	60	745	72			24 hrs
4.	2.067	x	1.125	240	65.2	60	675	72			24 hrs
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, Mcfd
1	6.393	71.4	193.2	1.000	1.238	1.017	575
2	6.393	81.8	223.2	1.000	1.238	1.020	660
3	6.393	112.5	243.2	1.000	1.238	1.022	910
4	6.393	128.4	253.2	1.000	1.238	1.023	1040
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	.29	520	1.45	.966			.652	XXXXXX	659	358
2	.33	520	1.45	.961						
3	.36	520	1.45	.958						
4	.38	520	1.45	.955						
5										

P _r 1003.2 P _c 1006.4			
NO.	P ₁	P _w	P _c
1	814.7		819.0
2	670.7		676.4
3	575.8		587.1
4	473.5		488.2
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.942$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.474$

AGF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1532 \text{ mcfpd}$

Absolute Open Flow 1532 Mcfd @ 15.025 Angle of Slope 0 Slope, n .584

Remarks:

Approved By Commission: _____

Computed By: David Weaver

Calculated By: Brent Mulliniks

Checked By: _____

COMPANY 3949 LEASE 3949 WELL NO. 1 DATE 1-30-12
 LOCATION: Unit I Section 15 Township 23 Range 25E
 L 3949 H 3949 LN 000 G 652 % CO₂ 20 % N₂ 6.30 % H₂S —
 d 1.945 F₁ 21823 GH 2571 P_{CT} 659 T_{CT} 358

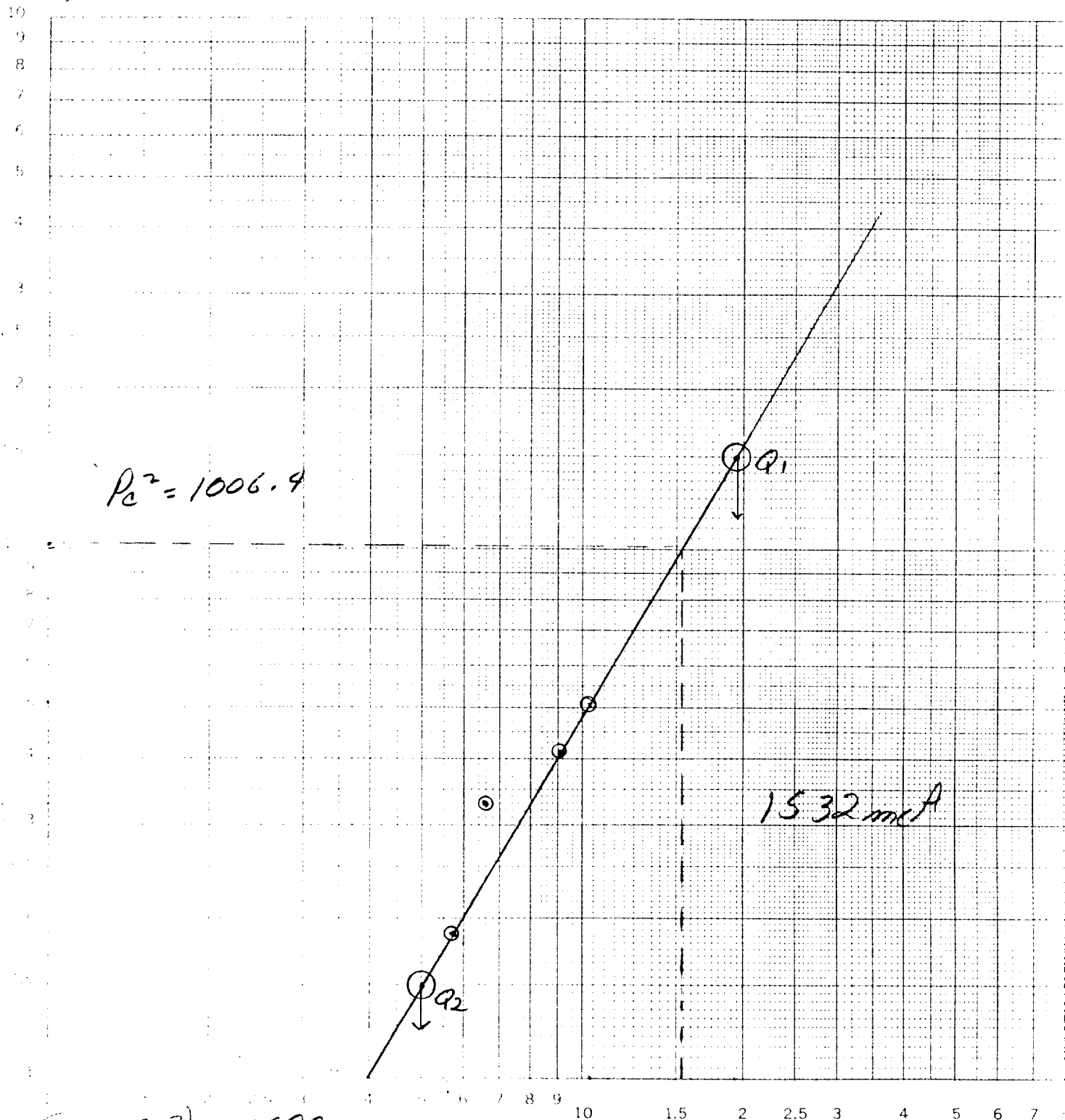
LINE	Rate 1	Rate 2	Rate 3	Rate 4
1 Q _m	.575	.660	.910	1.040
2 T _w (W.H. °R)	520	520	520	520
3 T _s (B.H. °R)	532	532	532	532
4 T = $(\frac{T_w + T_s}{2})$	523	523	523	523
5 Z (Est.)	.844	.860	.870	.883
6 T ₂	444.03	449.78	455.01	464.46
7 GH/TZ	5.790	5.716	5.650	5.535
8 e ^s (Table XIV)	1.242	1.239	1.236	1.231
9 1 - e ^s (Table XIV)	.195	.193	.191	.188
10 P _t	902.2	818.2	758.2	688.2
11 P _t ² /1000	814.7	670.7	575.4	473.6
12 F _t (Table XV)	.01823	.01823	.01823	.01823
13 F _c = F _t T ₂	8.095	8.194	8.215	8.467
14 F _c Q _m	4.654	5.412	7.549	8.806
15 L/H (F _c Q _m) ²	21.663	29.286	56.199	77.511
16 F _w = L/H (F _c Q _m) ² (1 - e ^s)	4.224	5.652	10.483	14.574
17 P _w ² = P _t ² + F _w	818.9	676.3	586.9	488.2
18 P _s ² = e ^s P _w ²	1017.1	838.0	725.2	601.0
19 P _s	1008.5	915.4	851.6	775.2
20 P = $(\frac{P_t + P_s}{2})$	955.6	867.2	805.2	731.7
21 P _r = (P/P _{ct})	1.45	1.32	1.22	1.11
22 T _r = (T/T _{ct})	1.46	1.46	1.46	1.47
23 Z (Table XI)	.949	.960	.970	.983

GOODYEAR 1

I-15-75-2SE

Chaves New Mexico

Yates Petr



$$P_c^2 = 1006.4$$

15.32 mA

$$(P_c^2 - P_w^2)_1 = 1500$$

$$(P_c^2 - P_w^2)_2 = 150$$

$$Q_1 = 1920$$

$$Q_2 = 500$$

$$\log Q_1 = 3.28330$$

$$\log Q_2 = 2.69897$$

$$N = .58433$$

$$N = .584$$