

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

Form C-122 *File*

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 01/01/1992	
Company Yates Petroleum Corp				Connection Transwestern Pipeline	
Pool Abo				Formation Pecos Slope	
Completion Date 07/28/1983		Total Depth 4300		Plug Back TD 4236	
				Elevation 3576	
Farm or Lease Name Marie VU Federal					
Csg. Size 4.500		Wt 9.500		d 4.090	
Tbg. Size 2.375		Wt 4.700		d 1.995	
Set At 4300		Set At 3675		Perforations: From 3724 To 3892	
				Perforations: From 3724 To 3892	
Type Well Single				Packer Set At 3675	
Producing Thru		Resv. Temp. °F 122 @ 3675		Mean Temp. °F 62	
Baro. Press. - Pa 13.2		State New Mexico			
Tubing L 3675		H 3675		Gg 0.645	
				%CO ₂ 0.022	
				%N ₂ 5.890	
				%H ₂ S 0.000	
Prover 0.000		Meter Run 2.000		Taps Flange	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI	0.000	x	0.000	0	0.0	0	390	0			0
1	2.067	x	0.875	115	8.0	61	350	62			24
2	2.067	x	0.875	115	37.0	58	272	62			24
3	2.067	x	0.875	107	60.5	55	193	62			24
4	2.067	x	0.875	115	88.0	52	115	62			24
5		x									

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	$\sqrt{hwP_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	3.729	32.0	128.2	0.9990	1.245	1.011	150
2	3.729	68.9	128.2	1.0019	1.245	1.011	324
3	3.729	85.3	120.3	1.0048	1.245	1.010	402
4	3.729	106.2	128.2	1.0078	1.245	1.011	503
5							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	0	Mcf/bbl.
					A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
1	0.19	521	1.47	0.979	Specific Gravity Separator Gas	0.645	XXXXXXXXXX
2	0.19	518	1.46	0.978	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.645
3	0.18	515	1.45	0.979	Critical Pressure	661 P.S.I.A.	661 P.S.I.A.
4	0.19	512	1.44	0.978	Critical Temperature	354 °R	354 °R
5							

Pc	403.2	Pc ²	162.6	(1) $\frac{Pc^2}{Pc^2 - Pw^2} = 2.037$	(2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.746$
NO	Pt	Pw	Pw ²	Pc ² - Pw ²	
1	131.9	363.6	132.2	30.4	
2	81.3	287.7	82.8	79.8	
3	42.5	211.6	44.8	117.8	
4	16.4	141.3	20.0	142.6	
5					

Absolute Open Flow		566	Mcf/d @ 15.025	Angle of Slope	0 38	Slope, n	0.783
Remarks:							
Approved By Commission:		Conducted By:		Calculated By:		Checked By:	
		Bill Hansen		Andrea Carpenter			

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 01/01/1992

COMPANY Yates Petroleum Corp LEASE Marie VU Federal WELL NO. 1

LOCATION: Unit I Section 20 Township 9S Range 25E

L 3675 H 3675 L/H 1.000 G 0.645 %CO₂ 0.022 %N₂ 5.890 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2370.4 P_{cr} 660.7 T_{cr} 354.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.150	0.324	0.402	0.503	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	582	582	582	582	
4 T = (Tw+Ts) / 2	551.7	551.7	551.7	551.7	
5 Z (Est.)	0.950	0.960	0.971	0.981	
6 TZ	523.9	529.6	535.5	541.2	
7 GH / TZ	4.525	4.476	4.426	4.380	
8 e ^{as} (Table XIV)	1.185	1.183	1.181	1.179	
9 1-e ^{as} (Table XIV)	0.156	0.155	0.153	0.151	
10 Pt	363.2	285.2	206.2	128.2	
11 Pt ² / 1000	131.9	81.3	42.5	16.4	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.313	9.415	9.520	9.620	
14 FcQm	1.40	3.05	3.83	4.84	
15 L / H(FcQm) ²	2.0	9.3	14.7	23.4	
16 Fw = L / H(FcQm) ² (1-e ^{as})	0.31	1.44	2.24	3.54	
17 Pw ² = Pt ² +Fw	132.2	82.8	44.8	20.0	
18 Ps ² = e ^{as} Pw ²	156.7	97.9	52.8	23.5	
19 Ps	395.8	312.9	229.9	153.4	
20 P = (Pt+Ps) / 2	379.5	299.0	218.0	140.8	
21 Pr = (P / P _{cr})	0.57	0.45	0.33	0.21	
22 Tr = (T / T _{cr})	1.56	1.56	1.56	1.56	
23 Z (Table XI)	0.950	0.960	0.971	0.981	

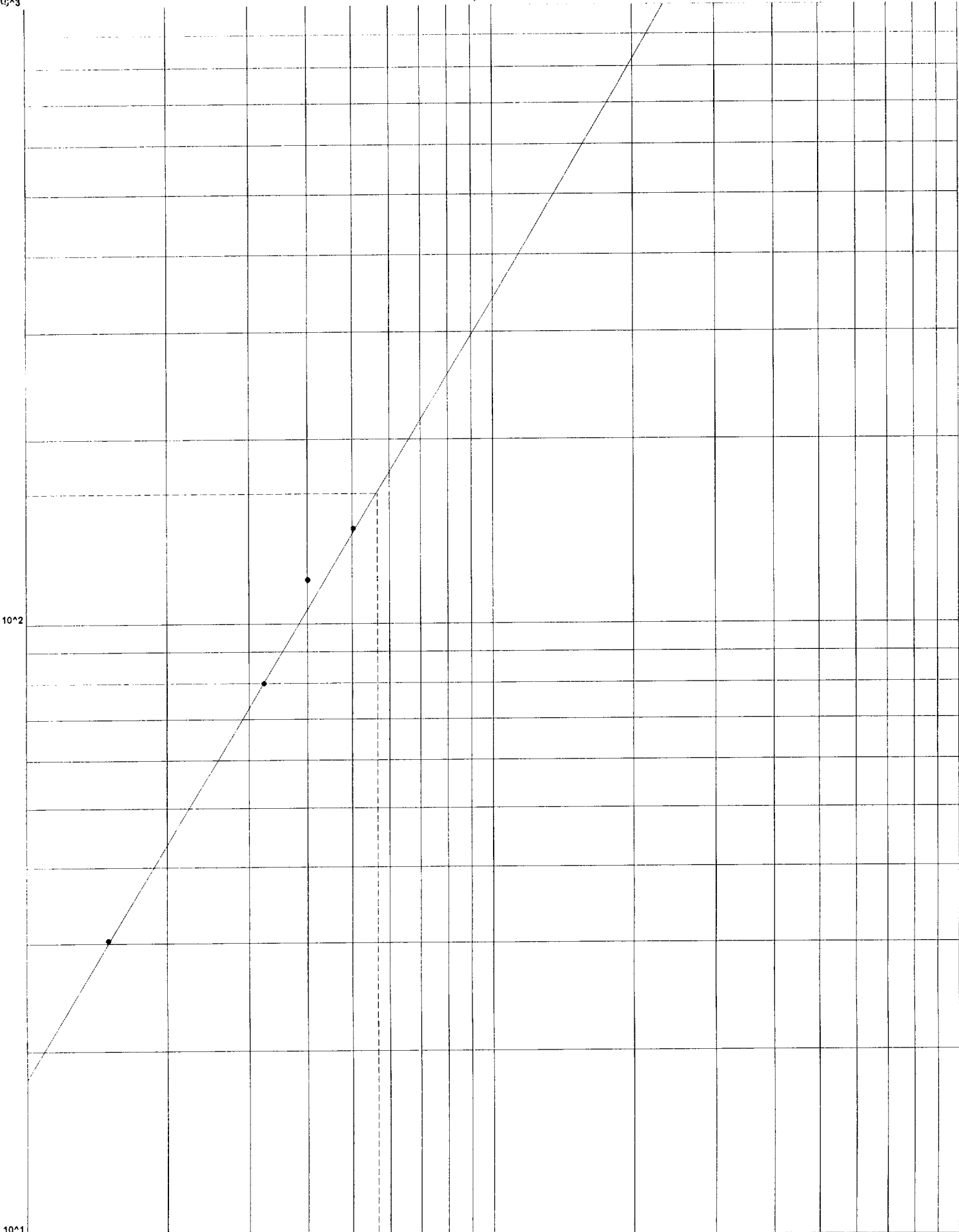
Company
Well
Location

Yates Petroleum Corp
Marie VU Federal #1
20-9S-25E

County
Date

Chaves
01-01-1992

Q, Mcfd



10^2

10^3

10^4

AOF = 566

PC-PWF