

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

Form C-122

*dsf
File*

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 03/18/93	
Company Yates Petroleum Corp			Connection Enron			
Pool Abo			Formation Pecos Slope			
Completion Date 02/19/93		Total Depth 4300		Plug Back TD 4254		
				Elevation 3645		
Farm or Lease Name Catterson SS Federal						
Csg. Size 4.500	Wt. 11.600	d 4.000	Set At 4298	Perforations: From 3712 To 3736		
Well No. 6						
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 3591	Perforations: From 3712 To 3736		
Unit Sec. Twp. Rge. O 7 7S 26E						
Type Well Single				Packer Set At 3591		
County Chaves						
Producing Thru Tubing		Resv. Temp. °F 114 @ 3591		Mean Temp °F 62		
				Baro. Press. - Pa 13.2		
State New Mexico						
L 3591	H 3591	Gg 0.639	%CO ₂ 0.566	%N ₂ 5.690	%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	Duration of Flow
SI	0.000	x	0.000	0	0.0	0	350	0			0
1	2.067	x	0.750	98	27.4	67	250	62			24
2	2.067	x	0.750	92	42.3	64	200	62			24
3	2.067	x	0.750	100	62.0	60	150	62			24
4	2.067	x	0.750	100	74.0	61	100	62			24
5		x									

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	2.709	55.1	110.9	0.9933	1.251	1.009	187
2	2.709	66.7	105.1	0.9962	1.251	1.008	227
3	2.709	83.8	113.2	1.0000	1.251	1.009	287
4	2.709	91.5	113.2	0.9990	1.251	1.009	313
5							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	0	Mcf/bbl.
1	0.17	527	1.50	0.983	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2	0.16	524	1.49	0.983	Specific Gravity Separator Gas	0.639	XXXXXXXXXX
3	0.17	520	1.48	0.982	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.639
4	0.17	521	1.48	0.982	Critical Pressure	664 P.S.I.A.	664 P.S.I.A.
5					Critical Temperature	352 °R	352 °R

Pc	363.2	Pc ²	131.9
NO	Pt ²	Pw	Pw ²
1	69.3	264.1	69.7
2	45.5	214.8	46.1
3	26.6	166.5	27.7
4	12.8	118.9	14.1
5			

(1) $\frac{Pc^2}{Pc^2 - Pw^2} = 1.266$		(2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.211$	
AOF = Q		$\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 347$	

Absolute Open Flow	347	Mcf @ 15.025	Angle of Slope	0 39	Slope, n	0.812
Remarks:						
Approved By Commission:						
Conducted By:		Calculated By:		Checked By:		
David Weaver		Andrea Carpenter				

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

DATE 03/18/93

COMPANY Yates Petroleum Corp LEASE Catterson SS Federal WELL NO. 6

LOCATION: Unit O Section 7 Township 7S Range 26E

L 3591 H 3591 L/H 1.000 G 0.639 %CO₂ 0.566 %N₂ 5.690 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2294.6 Pcr 663.6 Tcr 352.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.187	0.227	0.287	0.313	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	574	574	574	574	
4 T = (Tw+Ts) / 2	547.7	547.7	547.7	547.7	
5 Z (Est.)	0.963	0.970	0.977	0.984	
6 TZ	527.6	531.3	535.0	538.7	
7 GH / TZ	4.350	4.319	4.289	4.259	
8 e ^s (Table XIV)	1.177	1.176	1.174	1.173	
9 1-e ^s (Table XIV)	0.150	0.150	0.149	0.148	
10 Pt	263.2	213.2	163.2	113.2	
11 Pt ² / 1000	69.3	45.5	26.6	12.8	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.378	9.445	9.511	9.577	
14 FcQm	1.75	2.14	2.73	2.99	
15 L / H(FcQm) ²	3.1	4.6	7.4	9.0	
16 Fw = L / H(FcQm) ² (1-e ^s)	0.46	0.69	1.10	1.32	
17 Pw ² = Pt ² +Fw	69.7	46.1	27.7	14.1	
18 Ps ² = e ^s Pw ²	82.1	54.3	32.6	16.6	
19 Ps	286.5	232.9	180.5	128.8	
20 P = (Pt+Ps) / 2	274.9	223.1	171.8	121.0	
21 Pr = (P / Pcr)	0.41	0.34	0.26	0.18	
22 Tr = (T / Tcr)	1.56	1.56	1.56	1.56	
23 Z (Table XI)	0.963	0.970	0.977	0.984	

Company
Well
Location
10^3

Yates Petroleum Corp
Catterson SS Federal #6
O 7-7S-26E

County
Date

Chaves
03-18-93

Q, Mcfd

10^2

Pc-Pwf

10^1

10^3

10^4

10^2

DOF = 347

