

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

Form C-122

File

Type Test		☒ Initial		☐ Annual		☐ Special		Test Date		01/12/1994	
Company				Connection							
Yates Petroleum Corp				Transwestern Pipeline Co							
Pool				Formation				Unit			
Morrow				Kennedy Farms							
Completion Date		Total Depth		Plug Back TD		Elevation		Farm or Lease Name			
06/12/1993		8660		8620		3330		Caffall FD Com			
Csg Size	Wt.	d	Set At	Perforations:				Well No.			
5.500	15.500	4.950	8655	From 8367 To 8491				2			
Tbg Size	Wt.	d	Set At	Perforations:				Unit Sec. Twp. Rge.			
2.875	6.500	2.441	8179	From 8367 To 8491				1 15 17S 26E			
Type Well				Packer Set At				County			
Single				8179				Eddy			
Producing Thru		Resv. Temp. °F		Mean Temp. °F		Baro. Press. - Pa		State			
Tubing		140 @ 8660		62		13.2		New Mexico			
L	H	Gg	%CO ₂	%N ₂	%H ₂ S	Prover	Meter Run	Taps			
8179	8179	0.665	0.304	0.605	0.000	0.000	4.000	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	700	0			0
1	4.026	x	0.875	425	6.0	42	630	62			24
2	4.026	x	0.875	425	15.0	44	562	62			24
3	4.026	x	0.875	391	23.0	44	493	62			24
4	4.026	x	0.875	425	35.0	46	425	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	3.630	51.3	438.2	1.0178	1.226	1.053	245
2	3.630	81.1	438.2	1.0158	1.226	1.052	386
3	3.630	96.5	404.7	1.0158	1.226	1.048	457
4	3.630	123.8	438.2	1.0137	1.226	1.051	588
5							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature	Mcf/bbl. Deg.
1	0.65	502	1.34	0.902	0	0.000	0.665	xxxxxxx	670	375	0.665
2	0.65	504	1.34	0.903				xxxxxxx			
3	0.60	504	1.34	0.911							
4	0.65	506	1.35	0.904							
5											

NO	Pc	Pw	Pw ²	Pc ² - Pw ²	(1) $\frac{Pc^2}{Pc^2 - Pw^2} =$	(2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n =$
1	413.7	643.6	414.3	94.4	2.883	2.166
2	330.9	576.4	332.3	176.4		
3	256.2	508.2	258.2	250.4		
4	192.0	442.0	195.4	313.3		
5						

Absolute Open Flow		836		Mcf/d @ 15.025		Angle of Slope		0 36		Slope, n		0.730			
Remarks:															
Approved By Commission:				Conducted By:				Calculated By:				Checked By:			
				Ed Perry				Andrea Carpenter							

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

DATE 01/12/1994

COMPANY Yates Petroleum Corp LEASE Caffall FD Com WELL NO. 2

LOCATION: Unit I Section 15 Township 17S Range 26E

L 8179 H 8179 L/H 1.000 G 0.665 %CO₂ 0.304 %N₂ 0.605 %H₂S 0.000

d 2.441 Fr 0.010495 GH 5440.7 Pcr 670.0 Tcr 375.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.245	0.386	0.457	0.588	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	600	600	600	600	
4 T = (Tw+Ts) / 2	560.7	560.7	560.7	560.7	
5 Z (Est.)	0.894	0.905	0.915	0.926	
6 TZ	501.2	507.1	513.3	519.4	
7 GH / TZ	10.856	10.728	10.600	10.476	
8 e ^{as} (Table XIV)	1.502	1.495	1.488	1.481	
9 1-e ^a -s(Table XIV)	0.334	0.331	0.328	0.325	
10 Pt	643.2	575.2	506.2	438.2	
11 Pt ² / 1000	413.7	330.9	256.2	192.0	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.260	5.322	5.387	5.451	
14 FcQm	1.29	2.05	2.46	3.20	
15 L / H(FcQm) ²	1.7	4.2	6.1	10.3	
16 Fw = L / H(FcQm) ² (1-e ^a -s)	0.55	1.40	1.99	3.33	
17 Pw ² = Pt ² +Fw	414.3	332.3	258.2	195.4	
18 Ps ² = e ^{as} Pw ²	622.4	496.8	384.3	289.4	
19 Ps	788.9	704.8	619.9	537.9	
20 P = (Pt+Ps) / 2	716.1	640.0	563.0	488.1	
21 Pr = (P / Pcr)	1.07	0.96	0.84	0.73	
22 Tr = (T / Tcr)	1.49	1.49	1.49	1.49	
23 Z (Table XI)	0.894	0.905	0.915	0.926	

