

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT - ONE POINT BACK PRESSURE TEST FOR GAS FLOW

Form C-122 *CLSF*
File

Type Test		☒ Initial		☐ Annual		☐ Special		Test Date		01/07/1990	
Company				Connection							
Yates Petroleum Corp				Transwestern Pipeline Co							
Pool				Formation				Unit			
Atoka Morrow				Red Lake							
Completion Date		Total Depth		Plug Back TD		Elevation		Farm or Lease Name			
04/14/1989		10350		10216		3531		Pierre AGF State Com			
Csg Size	Wt	d	Set At	Perforations				Well No			
4.500	11.600	4.000	10350	From 10067		To 10076		1			
Tbg Size	Wt	d	Set At	Perforations				Unit	Sec	Twp	Rge
2.375	4.700	1.995	9998	From 10067		To 10076		A	26	18S	27E
Type Well				Packer Set At				County			
Single				9998				Eddy			
Producing Thru		Resv Temp - F		Mean Temp - F		Baro. Press - Pa		State			
Tubing		160 @ 10076		62		24.0		New Mexico			
L	H	Gg	%CO ₂	%N ₂	%H ₂ S	Prover	Meter Run	Taps			
9998	9998	0.614	0.660	0.140	0.000	0.000	2.000	Flange			

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	0.000	x	0.000	0	0.0	0	530	0			0
1	2.067	x	0.500	481	2.9	48	515	62			24
2	2.067	x	0.500	502	5.1	50	507	62			24
3	2.067	x	0.500	453	7.4	49	498	62			24
4	2.067	x	0.500	475	11.6	45	490	62			24
5		x									

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	hw/Pm	Pressure Pm	Flow Temp Factor Ft	Gravity Factor Fg	Super Compress Factor, Fpv	Rate of Flow Q, Mcfd
1	1.189	38.6	505.2	1.0117	1.276	1.050	62
2	1.189	51.9	526.2	1.0098	1.276	1.051	84
3	1.189	59.4	476.9	1.0108	1.276	1.046	95
4	1.189	76.2	498.9	1.0148	1.276	1.050	123
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	0.75	508	1.41	0.908	Specific Gravity Separator Gas	0.614	XXXXXXXXXX
2	0.78	510	1.42	0.905	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.614
3	0.71	509	1.42	0.913	Critical Pressure	674	PSIA
4	0.74	505	1.41	0.907	Critical Temperature	359	-R
5							

Pc	554.0	Pc'	306.9
NO	P _r	P _w	P _w '
1	290.5	539.1	290.6
2	282.0	531.2	282.2
3	272.5	522.3	272.8
4	264.2	514.5	264.7
5			

$(1) \frac{P_c'}{P_c' - P_w'} = 12.408$		$(2) \left[\frac{P_c'}{P_c' - P_w'} \right]^n = 6.084$	
$AOF = Q \frac{P_c'}{P_c' - P_w'} = 509$			

Absolute Open Flow	509	Mcf/d @ 15.025	Angle of Slope	36	Slope, n	0.717
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 01/07/1990

COMPANY Yates Petroleum Corp LEASE Pierre AGF State Com WELL NO. 1

LOCATION: Unit A Section 26 Township 18S Range 27E

L 9998 H 9998 L/H 1.000 G 0.614 %CO₂ 0.660 %N₂ 0.140 %H₂S 0.000

d 1.995 Fr 0.017777 GH 6138.8 Pcr 674.1 Tcr 359.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.062	0.084	0.095	0.123	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	620	620	620	620	
4 T = (Tw+Ts) / 2	570.7	570.7	570.7	570.7	
5 Z (Est.)	0.929	0.930	0.931	0.932	
6 TZ	529.9	530.5	531.1	531.7	
7 GH / TZ	11.585	11.572	11.558	11.546	
8 e ^{As} (Table XIV)	1.544	1.543	1.543	1.542	
9 1-e ^{As} (Table XIV)	0.352	0.352	0.352	0.351	
10 Pt	539.0	531.0	522.0	514.0	
11 Pt ² / 1000	290.5	282.0	272.5	264.2	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.420	9.430	9.441	9.452	
14 FcQm	0.59	0.79	0.90	1.16	
15 L / H(FcQm) ²	0.3	0.6	0.8	1.4	
16 Fw = L / H(FcQm) ² (1-e ^{As})	0.12	0.22	0.28	0.48	
17 Pw ² = Pt ² +Fw	290.6	282.2	272.8	264.7	
18 Ps ² = e ^{As} Pw ²	448.8	435.5	420.8	408.1	
19 Ps	669.9	659.9	648.7	638.8	
20 P = (Pt+Ps) / 2	604.5	595.5	585.3	576.4	
21 Pr = (P / Pcr)	0.90	0.88	0.87	0.86	
22 Tr = (T / Tcr)	1.59	1.59	1.59	1.59	
23 Z (Table XI)	0.929	0.930	0.931	0.932	

Company
Well
Location
10°3

Yates Petroleum Corp
Pierre AGF State Com #1
A 26 138 27E

County
Date
Eddy
01-07-1990

Q, Mold

10^2

Pc+Pw

10^1

10^1

10^2

10^3

