

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

Form C-122

File

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12/08/1993			
Company Yates Petroleum Corp				Connection Transwestern Pipeline Co					
Pool Abo				Formation Pecos Slope				Unit	
Completion Date 11/28/1993		Total Depth 4300		Plug Back TD 4240		Elevation 3852		Farm or Lease Name Cleo ANC Com	
Csg. Size 4.500	Wt. 10.500	d 4.052	Set At 4300	Perforations: From 3731 To 3998		Well No. 1			
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 3673	Perforations: From 3731 To 3998		Unit 1	Sec. 11	Twp. 6S	Rge. 25E
Type Well Single				Packer Set At 3673		County Chaves			
Producing Thru Tubing		Resv. Temp. °F 96 @ 3600		Mean Temp. °F 62		Baro. Press. - Pa 13.2		State New Mexico	
L 3673	H 3673	Gg 0.650	%CO ₂ 0.036	%N ₂ 5.086	%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
Sl.	0.000	x	0.000	0	0.0	0	575	0			0
1	2.067	x	1.000	110	5.0	45	490	62			24
2	2.067	x	1.000	110	17.0	48	363	62			24
3	2.067	x	1.000	104	25.5	47	237	62			24
4	2.067	x	1.000	110	34.0	48	110	62			24
5		x									

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	hwPm	Pressure Pm	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	4.946	24.8	123.2	1.0148	1.240	1.012	156
2	4.946	45.8	123.2	1.0117	1.240	1.012	287
3	4.946	54.5	116.9	1.0127	1.240	1.011	343
4	4.946	64.7	123.2	1.0117	1.240	1.012	406
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	505	1.41	0.977	Specific Gravity Separator Gas	0.650	XXXXXXXXXX
2	0.19	508	1.42	0.977	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.650
3	0.18	507	1.41	0.978	Critical Pressure	662	P.S.I.A.
4	0.19	508	1.42	0.977	Critical Temperature	358	°R
5							

Pc	588.2	Pc²	346.0	
NO	Pt²	Pw	Pw²	Pc² - Pw²
1.	253.2	503.5	253.5	92.5
2	141.5	377.6	142.6	203.4
3	62.6	253.3	64.2	281.8
4	15.2	132.1	17.4	328.5
5				

(1) $\frac{Pc^2}{Pc^2 - Pw^2} = 1.701$

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 429$

(2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.494$

Absolute Open Flow	429	Mcf @ 15.025	Angle of Slope	0 37	Slope, n	0.755
Remarks						
Approved By Commission		Conducted By: Dyke Dodson		Calculated By: Andrea Carpenter		Checked By:

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

DATE 12/08/1993

COMPANY Yates Petroleum Corp LEASE Cleo ANC Com WELL NO. 1

LOCATION: Unit I Section 11 Township 6S Range 25E

L 3673 H 3673 L/H 1.000 G 0.650 %CO₂ 0.036 %N₂ 5.086 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2388.6 P_{cr} 661.9 T_{cr} 358.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.156	0.287	0.343	0.406	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	556	556	556	556	
4 T = (Tw+Ts) / 2	538.7	538.7	538.7	538.7	
5 Z (Est.)	0.922	0.941	0.960	0.980	
6 TZ	496.4	506.8	517.2	527.7	
7 GH / TZ	4.812	4.713	4.618	4.526	
8 e ^{-s} (Table XIV)	1.198	1.193	1.189	1.185	
9 1-e ^{-s} (Table XIV)	0.165	0.162	0.159	0.156	
10 Pt	503.2	376.2	250.2	123.2	
11 Pt ² / 1000	253.2	141.5	62.6	15.2	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	8.825	9.009	9.194	9.381	
14 FcQm	1.38	2.59	3.15	3.81	
15 L / H(FcQm) ²	1.9	6.7	9.9	14.5	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	0.31	1.09	1.58	2.27	
17 Pw ² = Pt ² +Fw	253.5	142.6	64.2	17.4	
18 Ps ² = e ^{-s} Pw ²	303.6	170.2	76.3	20.7	
19 Ps	551.0	412.5	276.2	143.8	
20 P = (Pt+Ps) / 2	527.1	394.4	263.2	133.5	
21 Pr = (P / P _{cr})	0.80	0.60	0.40	0.20	
22 Tr = (T / T _{cr})	1.50	1.50	1.50	1.50	
23 Z (Table XI)	0.922	0.941	0.960	0.980	

