

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

Form C-122

*cl51
File*

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12/05/92	
Company Yates Petroleum Corp				Connection Gas Company of New Mexico			
Pool Strawn				Formation Burton Flat		Unit	
Completion Date 11/24/92		Total Depth 11100		Plug Back TD 10390		Elevation 3214	
Farm or Lease Name Aviette ALK State							
Csg. Size 5.500	Wt. 17.000	d 4.892	Set At 9458	Perforations From 10227 To 10294		Well No 1	
Tbg. Size 2.875	Wt. 6.500	d 2.441	Set At 10298	Perforations From 10227 To 10294		Unit Sec Twp. Rge. L 17 21S 27E	
Type Well Single				Packer Set At 10080		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 160 @ 10263		Mean Temp. °F 62		Baro. Press. - Pa 13.2	
State New Mexico							
L 10298	H 10298	Gg 0.626	%CO ₂ 0.425	%N ₂ 0.837	%H ₂ S 0.000	Prover 0.000	Meter Run 3.000
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	3450	0			0
1.	3.068	x	1.625	2300	6.0	41	2650	62			24
2.	3.068	x	1.625	2300	7.0	42	2533	62			24
3.	3.068	x	1.625	2197	7.6	42	2417	62			24
4.	3.068	x	1.625	2300	9.0	40	2300	62			24
5.		x									

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{hwP_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	13.240	117.8	2313.2	1.0188	1.264	1.200	2410
2.	13.240	127.2	2313.2	1.0178	1.264	1.198	2597
3.	13.240	130.0	2210.4	1.0178	1.264	1.199	2654
4.	13.240	144.3	2313.2	1.0198	1.264	1.202	2959
5.							

NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio 42	Mcf/bbl
1	3.44	501	1.38	0.694	A.P.I. Gravity of Liquid Hydrocarbons 59.100	Deg.
2	3.44	502	1.39	0.696	Specific Gravity Separator Gas 0.626	XXXXXXXXXX
3	3.29	502	1.39	0.696	Specific Gravity Flowing Fluid XXXXXXXXXX	0.694
4	3.44	500	1.38	0.692	Critical Pressure 672	P.S.I.A. 669
5					Critical Temperature 362	°R 384

Pc	3463.2	Pc'	11993.8
NO.	Pt'	Pw	Pw'
1.	7092.6	2674.1	7150.6
2.	6483.1	2559.2	6549.7
3.	5905.9	2444.3	5974.6
4.	5350.9	2331.4	5435.7
5.			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.203$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.710$	
AOF = Q		$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4440$	

Absolute Open Flow 4440	Mcf @ 15.025	Angle of Slope 0 34	Slope, n 0.679
Remarks:			

Approved By Commission:	Conducted By: Ed Perry	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 12/05/92

COMPANY Yates Petroleum Corp LEASE Aviette ALK State WELL NO. 1

LOCATION: Unit L Section 17 Township 21S Range 27E

L 10298 H 10298 L / H 1.000 G 0.694 %CO₂ 0.425 %N₂ 0.837 %H₂S 0.000

d 2.441 Fr 0.010495 GH 7145.8 P_{cr} 669.2 T_{cr} 383.9

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	2.410	2.597	2.654	2.959	
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.)	0.787	0.780	0.773	0.768	
6 TZ	449.3	445.0	441.4	438.4	
7 GH / TZ	15.906	16.057	16.191	16.301	
8 e ^s (Table XIV)	1.816	1.826	1.835	1.843	
9 1-e ^{-s} (Table XIV)	0.449	0.452	0.455	0.457	
10 Pt	2663.2	2546.2	2430.2	2313.2	
11 Pt ² / 1000	7092.6	6483.1	5905.9	5350.9	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	4.715	4.670	4.632	4.600	
14 FcQm	11.36	12.13	12.29	13.61	
15 L / H(FcQm) ²	129.2	147.1	151.1	185.3	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	58.00	66.54	68.76	84.76	
17 Pw ² = Pt ² +Fw	7150.6	6549.7	5974.6	5435.7	
18 Ps ² = e ^s Pw ²	12985.1	11961.0	10965.2	10017.3	
19 Ps	3603.5	3458.5	3311.4	3165.0	
20 P = (Pt+Ps) / 2	3133.3	3002.3	2870.8	2739.1	
21 Pr = (P / P _{cr})	4.68	4.49	4.29	4.09	
22 Tr = (T / T _{cr})	1.49	1.49	1.49	1.49	
23 Z (Table XI)	0.787	0.780	0.773	0.768	

Company
Well
Location
10^5

Yates Petroleum Corp
Aviette ALK State #1
L 17-21S-27E

County
Date

Eddy
12-05-92

Q, Mcfd

10^4

Pci-Pw?

10^3

10^3

10^4

AOF = 4440

10^5

