

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

Form C-122

dsf
File

RECEIVED

Type Test [X] Initial [] Annual [] Special					Test Date 1/10/91		NOV 14 1991	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company			O. C. D. ARTESIA OFFICE		
Pool Morrow			Formation Boyd			Unit		
Completion Date 1/10/91		Total Depth 10850.0'		Plug Back TD 8745.0'		Elevation 3657.0'		Farm or Lease Name Winston All
Csg Size 7.000"	Wt. 26.000#	d 6.276"	Set At 10850.0'	Perforations: From 8658.0' To 8710.0'		Well No. 1		
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 8570.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge E 14 19S 24E		
Type Well Single				Packer Set At 8600.0'		County Eddy		
Producing Thru Tubing		Resv. Temp. °F 162 @ 8520'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 8570.0'	H 8570.0'	Gg .638	%CO2 5.52	%N2 .35	%H2S 0.00	Prover 0.000"	Meter Run 2.000"	Taps Flange

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Orifice Size X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
SI	0.000 X 0.000	0	0.0	46	1600	0	0	0	0 hrs.
1.	2.067 X .875	250	46.9	45	1231	62	0	0	24 hrs.
2.	2.067 X .875	230	61.4	47	1180	62	0	0	24 hrs.
3.	2.067 X .875	225	72.2	46	1169	62	0	0	24 hrs.
4.	2.067 X .875	200	80.0	44	1130	62	0	0	24 hrs.
5.	0.000 X 0.000	0	0.0	0	0	0	0	0	0 hrs.

RATE OF FLOW CALCULATIONS

NO	Coefficient (24 HOUR)	√hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	3.729	111.10	263.20	1.015	1.252	1.023	539
2.	3.729	122.20	243.20	1.013	1.252	1.021	590
3.	3.729	131.14	238.20	1.014	1.252	1.021	634
4.	3.729	130.60	213.20	1.016	1.252	1.019	631
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1.	.38	505	1.41	.955	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.35	507	1.41	.959	Specific Gravity Separator Gas	.638	xxxxxxxxxxxxxx
3.	.34	506	1.41	.959	Specific Gravity Flowing Fluid	xxxxxx	.638
4.	.31	504	1.41	.963	Critical Pressure	694.0 PSIA	694.0 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	358.3°R	358.3°R

Pc 1613.2 Pc2 2602.4

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	$\frac{Pc2}{Pc2-Pw2} = 2.0196$	(2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.7188$
1.	1548.0	1245.3	1550.7	1051.7		
2.	1423.7	1194.5	1426.9	1175.5		
3.	1397.6	1183.8	1401.3	1201.2		
4.	1306.9	1144.8	1310.6	1291.9		
5.	0.0	0.0	0.0	0.0		

ROF = Q $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1085 \text{ Mcfd}$

Absolute Open Flow	1085 Mcfd @ 15.025	Angle of Slope, 0	38	Slope, n .771
Remarks:				

Approved By:	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

Adopted 9-1-65

DATE 11/5/91

COMPANY Yates Petroleum Corporation LEASE Winston All WELL NO. 1

LOCATION: Unit E Section 14 Township 19S Range 24E

L 8570.0 H 8570.0 L/H 1.000 G .638 %CO₂ 5.52 %N₂ .35 %H₂S 0.00

d 2.441 Fr .010495 GH 5467.7 Pcr 694.0 Tcr 358.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.539	.590	.634	.631	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	622.0	622.0	622.0	622.0	0.0
4 T=(Tw+Ts)/2	572.0	572.0	572.0	572.0	0.0
5 Z(Est.)	.860	.865	.865	.869	0.000
6 TZ	492.1	494.5	495.1	497.0	0.0
7 GH/TZ	11.112	11.057	11.044	11.001	0.000
8 e ^s (Table XIV)	1.517	1.514	1.513	1.511	0.000
9 1-e ^{-s} (Table XIV)	.341	.339	.339	.338	0.000
10 Pt	1244.2	1193.2	1182.2	1143.2	0.0
11 Pt ² /1000	1548.0	1423.7	1397.6	1306.9	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.164	5.190	5.196	5.216	0.000
14 FcQm	2.782	3.062	3.292	3.292	0.000
15 L/H(FcQm) ²	7.740	9.378	10.839	10.835	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.638	3.183	3.676	3.663	0.000
17 Pw ² =Pt ² +Fw	1550.7	1426.9	1401.3	1310.6	0.0
18 Ps ² =e ^s Pw ²	2352.3	2160.0	2120.3	1979.8	0.0
19 Ps	1533.7	1469.7	1456.1	1407.0	0.0
20 P=(Pt+Ps)/2	1389.0	1331.5	1319.2	1275.1	0.0
21 Pr=(P/Pcr)	2.00	1.92	1.90	1.84	0.00
22 Tr=(T/Tcr)	1.60	1.60	1.60	1.60	0.00
23 Z(Table XI)	.860	.865	.865	.869	0.000

Company	Yates Petroleum Corporation
Well	Winston RII No. 1
Location	E, 14-19S-24E
County	Eddy
Date	11/5/91

