

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

Form C-122

ckf
File

Type Test [x] Initial [] Annual [] Special				Test Date 1/15/86	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company		
Pool <u>E. Avalon</u> Bone Springs			Formation <u>Burton Flat Bone Springs</u>		Unit
Completion Date 1/19/84		Total Depth 5107.0'	Plug Back TD 5063.0'	Elevation 3295.0'	Farm or Lease Name Stonewall EP State
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 5100.0'	Perforations: From 4979.0' To 4983.0'	Well No. 7
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 4905.0'	Perforations: From 0.0' To 0.0'	Unit Sec Twp Rge D 30 20S 28E
Type Well Single				Packer Set At 4905.0'	
Producing Thru Tubing		Resv. Temp. °F 82 @ 3800'	Mean Temp. °F 62.0	Baro. Press. - Pa 13.2 psia.	State New Mexico
L 4905.0'	H 4905.0'	Gg .833	%CO2 9.69	%N2 1.80	%H2S 2.86
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	75	1525	0	0	0	0 hrs.
1.	4.026 X 2.500	7	8.0	75	1475	62	0	0	24 hrs.
2.	4.026 X 2.500	7	10.6	75	1464	62	0	0	24 hrs.
3.	4.026 X 2.500	8	11.7	75	1450	62	0	0	24 hrs.
4.	4.026 X 2.500	8	17.1	75	1437	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)	1/hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	32.639	12.71	20.20	.986	1.096	1.002	449
2.	32.639	14.63	20.20	.986	1.096	1.002	517
3.	32.639	15.75	21.20	.986	1.096	1.002	556
4.	32.639	19.04	21.20	.986	1.096	1.002	673
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.	.03	535	1.29	.996	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.03	535	1.29	.996	Specific Gravity Separator Gas	.833	xxxxxxxxxxxxxx
3.	.03	535	1.29	.996	Specific Gravity Flowing Fluid	xxxxxx	.833
4.	.03	535	1.29	.996	Critical Pressure	721.5 PSIA	721.5 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	415.3°R	415.3°R

Pc 1538.2 Pc2 2366.1				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	2214.7	1488.5	2215.7	150.4
2.	2182.1	1477.6	2183.3	182.7
3.	2141.0	1463.7	2142.4	223.7
4.	2103.1	1450.9	2105.1	260.9
5.	0.0	0.0	0.0	0.0

$$\frac{Pc2}{Pc2-Pw2} = \frac{9.0621}{(2)} \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 5.0448$$

$$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 3393 \text{ Mcfd}$$

Absolute Open Flow 3393 Mcfd @ 15.025 Angle of Slope, θ 36 Slope, n .734
Remarks:

Approved By:	Conducted By: Tracy Richardson	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 _____

COMPANY Yates Petroleum Corporation LEASE Stonewall EP State WELL NO. 7

LOCATION: Unit D Section 30 Township 20S Range 28E

L 4905.0 H 4905.0 L/H 1.000 G .833 %CO₂ 9.69 %N₂ 1.80 %H₂S 2.86

d 2.441 Fr .010495 GH 4085.9 Pcr 721.5 Tcr 415.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.449	.517	.556	.673	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	542.0	542.0	542.0	542.0	0.0
4 T=(Tw+Ts)/2	532.0	532.0	532.0	532.0	0.0
5 Z(Est.)	.628	.630	.632	.634	0.000
6 TZ	334.4	335.1	336.1	337.1	0.0
7 GH/TZ	12.220	12.192	12.156	12.121	0.000
8 e ^s (Table XIV)	1.581	1.579	1.577	1.575	0.000
9 1-e ^{-s} (Table XIV)	.368	.367	.366	.365	0.000
10 Pt	1488.2	1477.2	1463.2	1450.2	0.0
11 Pt ² /1000	2214.7	2182.1	2141.0	2103.1	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	3.509	3.519	3.530	3.540	0.000
14 FcQm	1.576	1.819	1.964	2.381	0.000
15 L/H(FcQm) ²	2.482	3.308	3.856	5.668	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.913	1.213	1.411	2.069	0.000
17 Pw ² =Pt ² +Fw	2215.7	2183.3	2142.4	2105.1	0.0
18 Ps ² =e ^s Pw ²	3503.6	3448.1	3378.7	3315.7	0.0
19 Ps	1871.8	1856.9	1838.1	1820.9	0.0
20 P=(Pt+Ps)/2	1680.0	1667.1	1650.7	1635.6	0.0
21 Pr=(P/Pcr)	2.33	2.31	2.29	2.27	0.00
22 Tr=(T/Tcr)	1.28	1.28	1.28	1.28	0.00
23 Z(Table XI)	.628	.630	.632	.634	0.000

Company	Yates Petroleum Corporation
Well	Stonewall EP State No. 7
Location	D, 30-20S-28E
County	Eddy
Date	

