

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

Form C-122

RECEIVED

Type Test [X] Initial [] Annual [] Special						Test Date 1/14/82		JAN 20 1983	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company				O. C. D. ARTESIA, OFFICE	
Pool Pecos Slope - Abo Gas				Formation Abo				Unit	
Completion Date 6/18/82		Total Depth 4186.0'		Plug Back TD 4155.0'		Elevation 3746.0'		Farm or Lease Name Cottonwood RchMKSt	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4182.0'	Perforations: From 3703.0' To 3792.0'				Well No. 2	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3635.0'	Perforations: From 0.0' To 0.0'				Unit Sec Twp Rge F 36 6S 25E	
Type Well Single						Packer Set At 3636.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 100 @ 3635'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 3635.0'	H 3635.0'	Gg .642	%CO2 .12	%N2 4.71	%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	0	1005	0	0	0	0 hrs.
1.	2.067 X 1.375	270	27.0	72	765	62	0	0	24 hrs.
2.	2.067 X 1.375	260	45.1	72	669	62	0	0	24 hrs.
3.	2.067 X 1.375	255	55.7	72	602	62	0	0	24 hrs.
4.	2.067 X 1.375	240	65.1	72	560	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.	10.204	87.44	283.20	.989	1.248	1.022	1125
2.	10.204	111.00	273.20	.989	1.248	1.021	1427
3.	10.204	122.22	268.20	.989	1.248	1.021	1571
4.	10.204	128.39	253.20	.989	1.248	1.019	1648
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.	.43	532	1.49	.958	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.		
2.	.41	532	1.49	.959	Specific Gravity Separator Gas .642 xxxxxxxxxxxxxxx		
3.	.41	532	1.49	.960	Specific Gravity Flowing Fluid xxxxxx .642		
4.	.38	532	1.49	.962	Critical Pressure 661.0 PSIA 661.0 PSIA		
5.	0.00	0	0.00	0.000	Critical Temperature 358.0°R 358.0°R		

Pc 1018.2 Pc² 1036.7	
NO	Pt² Pw² Pc²-Pw² (1) Pc²-Pw² (2)
1.	605.6 788.0 620.9 415.8
2.	465.4 700.3 490.4 546.3
3.	378.5 639.6 409.1 627.6
4.	328.6 602.1 362.5 674.2
5.	0.0 0.0 0.0 0.0

$$ROF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 2214 \text{ Mcfd}$$

Absolute Open Flow 2214 Mcfd @ 15.025 Angle of Slope, θ 34 Slope, n .685

Remarks: _____

Approved By:	Conducted By: David Weaver	Calculated By: Andie Alderson	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 1/18/83

COMPANY Yates Petroleum Corporation LEASE Cottonwood RechMKSt WELL NO. 2

LOCATION: Unit F Section 36 Township 6S Range 25E

L 3635.0 H 3635.0 L/H 1.000 G .642 %CO₂ .12 %N₂ 4.71 %H₂S 0.00

d 1.995 Fr .017777 GH 2333.7 Pcr 661.0 Tcr 358.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.125	1.427	1.571	1.648	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	560.0	560.0	560.0	560.0	0.0
4 T=(Tw+Ts)/2	541.0	541.0	541.0	541.0	0.0
5 Z(Est.)	.885	.898	.907	.912	0.000
6 TZ	478.7	485.6	490.5	493.6	0.0
7 GH/TZ	4.875	4.806	4.758	4.728	0.000
8 e ^s (Table XIV)	1.200	1.197	1.195	1.194	0.000
9 1-e ^s (Table XIV)	.167	.165	.163	.162	0.000
10 Pt	778.2	682.2	615.2	573.2	0.0
11 Pt ² /1000	605.6	465.4	378.5	328.6	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.514	8.635	8.721	8.775	0.000
14 FcQm	9.579	12.322	13.698	14.461	0.000
15 L/H(FcQm) ²	91.760	151.844	187.640	209.113	0.000
16 Fw=L/H(FcQm) ² (1-e ^s)	15.324	25.034	30.657	33.971	0.000
17 Pw ² =Pt ² +Fw	620.9	490.4	409.1	362.5	0.0
18 Ps ² =e ^s Pw ²	745.4	587.2	489.0	432.8	0.0
19 Ps	863.4	766.3	699.3	657.9	0.0
20 P=(Pt+Ps)/2	820.8	724.3	657.3	615.6	0.0
21 Pr=(P/Pcr)	1.24	1.10	.99	.93	0.00
22 Tr=(T/Tcr)	1.51	1.51	1.51	1.51	0.00
23 Z(Table XI)	.885	.898	.907	.912	0.000

Company	Yates Petroleum Corporation
Well	Cottonwood RchMKSt No. 2
Location	F, 36-6S-25E
County	Chaves
Date	1/18/83

