

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

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Form C-122

NOV 13 1984

O. C. D.

ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 9/2/84	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company		
Pool Pecos Slope			Formation Abo		Unit
Completion Date 12/7/83		Total Depth 4125.0'		Plug Back TD 4067.0'	Elevation 3599.4'
Farm or Lease Name Short "RM" Federal					
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4125.0'	Perforations: From 3625.0' To 3972.0'	
Well No. 2					
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3583.0'	Perforations: From 0.0' To 0.0'	
Unit Sec Twp Rge 0 27 7S 25E					
Type Well Single				Packer Set At 3583.0'	
Producing Thru Tubing				Baro. Press. - Pa 13.2 psia.	
Resv. Temp. °F 101 @ 3580'				State New Mexico	
L 3583.0'	H 3583.0'	Gg .649	%CO2 .04	%N2 6.17	%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	70	1010	0	0	0	0 hrs.
1.	2.067 X 1.000	153	10.1	70	936	62	0	0	24 hrs.
2.	2.067 X 1.000	155	19.0	70	894	62	0	0	24 hrs.
3.	2.067 X 1.000	155	65.6	70	654	62	0	0	24 hrs.
4.	2.067 X 1.000	197	98.0	70	500	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.	4.947	40.97	166.20	.991	1.241	1.012	252
2.	4.947	56.53	168.20	.991	1.241	1.012	348
3.	4.947	105.04	168.20	.991	1.241	1.012	647
4.	4.947	143.53	210.20	.991	1.241	1.015	887
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.	.25	530	1.49	.977	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.25	530	1.49	.977	Specific Gravity Separator Gas	.649	xxxxxxx
3.	.25	530	1.49	.977	Specific Gravity Flowing Fluid	xxxxxx	.649
4.	.32	530	1.49	.970	Critical Pressure	660.1 PSIA	660.1 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	354.8°R	354.8°R

Pc 1023.2 Pc2 1046.9

NO	Pt2	Pw	Pw2	Pc2-Pw2	(1) $\frac{Pc2}{Pc2-Pw2}$	(2) $\left[\frac{Pc2}{Pc2-Pw2}\right]^n$
1.	901.0	949.6	901.7	145.2	1.3537	1.2555
2.	823.0	908.0	824.5	222.5		
3.	445.2	671.1	450.3	596.6		
4.	263.4	522.8	273.3	773.6		
5.	0.0	0.0	0.0	0.0		

$$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1113 \text{ Mcfd}$$

Absolute Open Flow 1113 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .751
Remarks:

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

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Short "RM" Federal WELL NO. 2

LOCATION: Unit 0 Section 27 Township 7S Range 25E

L 3583.0 H 3583.0 L/H 1.000 G .649 %CO2 .04 %N2 6.17 %H2S 0.00

d 1.995 Fr .017777 GH 2325.4 Pcr 660.1 Tcr 354.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.252	.348	.647	.887	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	561.0	561.0	561.0	561.0	0.0
4 T=(Tw+Ts)/2	541.5	541.5	541.5	541.5	0.0
5 Z(Est.)	.868	.873	.904	.925	0.000
6 TZ	469.8	472.6	489.6	501.0	0.0
7 GH/TZ	4.949	4.920	4.750	4.642	0.000
8 e ^s (Table XIV)	1.204	1.202	1.195	1.190	0.000
9 1-e ^{-s} (Table XIV)	.169	.168	.163	.160	0.000
10 Pt	949.2	907.2	667.2	513.2	0.0
11 Pt ² /1000	901.0	823.0	445.2	263.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.359	8.408	8.707	8.908	0.000
14 FcQm	2.108	2.926	5.629	7.897	0.000
15 L/H(FcQm) ²	4.442	8.560	31.691	62.364	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.752	1.441	5.169	9.961	0.000
17 Pw ² =Pt ² +Fw	901.7	824.5	450.3	273.3	0.0
18 Ps ² =e ^s Pw ²	1085.5	991.4	538.1	325.3	0.0
19 Ps	1041.9	995.7	733.5	570.3	0.0
20 P=(Pt+Ps)/2	995.5	951.4	700.4	541.8	0.0
21 Pr=(P/Pcr)	1.51	1.44	1.06	.82	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.868	.873	.904	.925	0.000

Company	Yates Petroleum Corporation
Well	Short "RM" Federal No. 2
Location	0, 27-7S-25E
County	Chaves
Date	11/6/84

$P_c^2 - P_w^2$, THOUSANDS

