

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

RECEIVED BY JUN 12 1985 C-122 O. C. D. ARTESIA, OFFICE	<i>45P</i> <i>File</i>
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Type Test [x] Initial [] Annual [] Special				Test Date 2/9/85	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Pecos Slope <i>Also</i>				Formation Abo	
Completion Date 2/2/84		Total Depth 4225.0'		Plug Back TD 4146.0'	
				Elevation 3679.0'	
Farm or Lease Name Ruth XK Federal					
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4225.0'	Perforations: From 3666.0' To 3937.0'	
Well No. 1					
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3630.0'	Perforations: From 0.0' To 0.0'	
Unit Sec Twp Rge J 1 7S 25E					
Type Well Single				Packer Set At 3630.0'	
County Chaves					
Producing Thru Tubing		Resu. Temp. °F 104 @ 3625'		Baro. Press. - Pa 13.2 psia.	
State New Mexico					
L 3630.0'	H 3630.0'	Gg .638	%CO2 .01	%N2 4.98	%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	969	0	0	0	0 hrs.
1.	2.067 X 1.125	130	110.8	70	740	62	0	0	24 hrs.
2.	2.067 X 1.125	130	122.6	70	705	62	0	0	24 hrs.
3.	2.067 X 1.125	135	136.5	70	691	62	0	0	24 hrs.
4.	2.067 X 1.125	135	150.0	70	665	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.	6.397	125.96	143.20	.991	1.252	1.011	1010
2.	6.397	132.50	143.20	.991	1.252	1.011	1063
3.	6.397	142.23	148.20	.991	1.252	1.011	1141
4.	6.397	149.10	148.20	.991	1.252	1.011	1196
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.	.22	530	1.49	.978	A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
2.	.22	530	1.49	.978	Specific Gravity Separator Gas .638	xxxxxxxxxxxxxx
3.	.22	530	1.49	.978	Specific Gravity Flowing Fluid xxxxxx	.638
4.	.22	530	1.49	.978	Critical Pressure	662.4 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	354.6°R

Pc	982.2	Pc ²	964.7	
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²
1.	567.3	761.4	579.8	385.0
2.	515.8	727.8	529.7	435.1
3.	495.9	715.5	511.9	452.8
4.	460.0	691.1	477.6	487.1
5.	0.0	0.0	0.0	0.0

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.9868 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.6433$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1966 \text{ Mcfd}$$

Absolute Open Flow 1966 Mcfd @ 15.025 Angle of Slope, θ 36 Slope, n .723
Remarks:

Approved By:	Conducted By: David Weaver	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 6/12/85

COMPANY Yates Petroleum Corporation LEASE Ruth XK Federal WELL NO. 1

LOCATION: Unit J Section 1 Township 7S Range 25E

L 3630.0 H 3630.0 L/H 1.000 G .638 %CO₂ .01 %N₂ 4.98 %H₂S 0.00

d 1.995 Fr .017777 GH 2315.9 Pcr 662.4 Tcr 354.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.010	1.063	1.141	1.196	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	564.0	564.0	564.0	564.0	0.0
4 T=(Tw+Ts)/2	543.0	543.0	543.0	543.0	0.0
5 Z(Est.)	.894	.898	.900	.904	0.000
6 TZ	485.4	487.9	488.8	490.6	0.0
7 GH/TZ	4.771	4.747	4.738	4.720	0.000
8 e ^s (Table XIV)	1.196	1.195	1.194	1.194	0.000
9 1-e ^{-s} (Table XIV)	.164	.163	.163	.162	0.000
10 Pt	753.2	718.2	704.2	678.2	0.0
11 Pt ² /1000	567.3	515.8	495.9	460.0	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.633	8.673	8.689	8.725	0.000
14 FcQm	8.721	9.215	9.915	10.436	0.000
15 L/H(FcQm) ²	76.050	84.921	98.304	108.906	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	12.453	13.848	16.002	17.663	0.000
17 Pw ² =Pt ² +Fw	579.8	529.7	511.9	477.6	0.0
18 Ps ² =e ^s Pw ²	693.3	632.9	611.4	570.1	0.0
19 Ps	832.6	795.5	781.9	755.0	0.0
20 P=(Pt+Ps)/2	792.9	756.9	743.1	716.6	0.0
21 Pr=(P/Pcr)	1.20	1.14	1.12	1.08	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.894	.898	.900	.904	0.000

Company	Yates Petroleum Corporation
Well	Ruth XK Federal No. 1
Location	J, 1-7S-25E
County	Chaves
Date	6/12/85

