

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

Form O-122

APR 22 '88

Type Test [X] Initial [] Annual [] Special				Test Date 3/2/88	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool East-Eagle-Creek				Formation Morrow	
Completion Date 11/12/83		Total Depth 8785.0'		Elevation 3437.0'	
Csg Size 4.500" 9.500#		Set Rt 8785.0'		Perforations: From 8514.0' To 8531.0'	
Tbg Size 2.375" 4.700#		Set Rt 8469.0'		Perforations: From 0.0' To 0.0'	
Type Well Single				Packer Set At 18469.0'	
Producing Thru Tubing		Resv. Temp. °F 182 @ 8460'		Baro. Press. - Pa 13.2 psia.	
L 8469.0'		H 8469.0'		Gg .648	
		%CO2 1.12		%H2 .45	
				%H2S 0.00	
				Proven 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	40	2645	0	0	0	0 hrs.
1.	2.067 X .625	240	60.0	40	1767	62	0	0	24 hrs.
2.	2.067 X .625	260	70.6	40	1577	62	0	0	24 hrs.
3.	2.067 X .625	290	82.2	40	1417	62	0	0	24 hrs.
4.	2.067 X .625	295	90.0	40	1100	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.	1.866	123.26	253.20	1.020	1.242	1.027	299
2.	1.866	138.88	273.20	1.020	1.242	1.029	338
3.	1.866	157.87	303.20	1.020	1.242	1.032	385
4.	1.866	166.55	308.20	1.020	1.242	1.033	407
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	500	1.36	.949	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.41	500	1.36	.944	Specific Gravity Separator Gas	.648	xxxxxxx
3.	.45	500	1.36	.938	Specific Gravity Flowing Fluid	xxxxxx	.648
4.	.46	500	1.36	.937	Critical Pressure	674.4 PSIA	674.4 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	368.7°R	368.7°R

Pc 2658.2 Pc2 7066.0

NO	Pt2	Pw	Pw2	Pc2-Pw2(1)	Pc2	=	1.2157	(2)	$\left[\frac{Pc2}{Pc2-Pw2} \right]^n$	=	1.1604
1.	3169.1	1780.8	3171.4	3894.7							
2.	2528.7	1591.1	2531.6	4534.4							
3.	2045.5	1431.5	2049.3	5016.7							
4.	1239.2	1115.2	1243.6	5822.4							
5.	0.0	0.0	0.0	0.0							

$$ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 472 \text{ Mcfd}$$

Absolute Open Flow 472 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .761
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 4/22/88

COMPANY Yates Petroleum Corporation LEASE Merchant XT Com WELL NO. 1

LOCATION: Unit A Section 12 Township 8S Range 25E

L 8469.0 H 8469.0 L/H 1.000 G .648 %CO2 1.12 %N2 .45 %H2S 0.00

d 1.995 Fr .017777 GH 5487.9 Pcr 674.4 Tcr 368.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.299	.338	.385	.407	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	642.0	642.0	642.0	642.0	0.0
4 T=(Tw+Ts)/2	582.0	582.0	582.0	582.0	0.0
5 Z(Est.)	.818	.826	.836	.863	0.000
6 TZ	476.0	480.9	486.7	502.2	0.0
7 GH/TZ	11.529	11.412	11.276	10.928	0.000
8 e ^s (Table XIV)	1.541	1.534	1.526	1.506	0.000
9 1-e ^{-s} (Table XIV)	.351	.348	.345	.336	0.000
10 Pt	1780.2	1590.2	1430.2	1113.2	0.0
11 Pt ² /1000	3169.1	2528.7	2045.5	1239.2	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.462	8.549	8.652	8.928	0.000
14 FcQm	2.532	2.888	3.334	3.631	0.000
15 L/H(FcQm) ²	6.409	8.342	11.113	13.184	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.250	2.904	3.832	4.433	0.000
17 Pw ² =Pt ² +Fw	3171.4	2531.6	2049.3	1243.6	0.0
18 Ps ² =e ^s Pw ²	4886.6	3883.7	3127.8	1873.5	0.0
19 Ps	2210.6	1970.7	1768.6	1368.8	0.0
20 P=(Pt+Ps)/2	1995.4	1780.5	1599.4	1241.0	0.0
21 Pr=(P/Pcr)	2.96	2.64	2.37	1.84	0.00
22 Tr=(T/Tcr)	1.58	1.58	1.58	1.58	0.00
23 Z(Table XI)	.818	.826	.836	.863	0.000

Company	Yates Petroleum Corporation
Well	Merchant XT Com No. 1
Location	R, 12-8S-25E
County	Eddy
Date	4/22/88

$P_c^2 - P_w^2$, THOUSANDS

