

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

RECEIVED

SEP 18 '90

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 1/23/89		O. C. D.	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company		ARTESIA, OFFICE	
Pool Pecos Slope Abo						Formation Abo		Unit	
Completion Date 7/28/83		Total Depth 3550.0'		Plug Back TD 3496.0'		Elevation 4077.4'		Farm or Lease Name Jaquar XO Federal	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 3538.0'	Perforations: From 2946.0' To 3075.0'		Well No. 1			
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 2911.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge M 9 8S 23E			
Type Well Single						Packer Set At 2911.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 92 @ 2911'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 2911.0'	H 2911.0'	Gg .605	%CO2 .02	%N2 6.50	%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	51	1022	0	0	0	0 hrs.
1.	2.067 X .375	300	78.1	45	862	62	0	0	24 hrs.
2.	2.067 X .375	350	83.9	47	829	62	0	0	24 hrs.
3.	2.067 X .375	550	95.3	51	741	62	0	0	24 hrs.
4.	2.067 X .375	600	100.0	49	680	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.	.669	156.40	313.20	1.015	1.286	1.024	140
2.	.669	174.56	363.20	1.013	1.286	1.028	156
3.	.669	231.67	563.20	1.009	1.286	1.043	210
4.	.669	247.63	613.20	1.011	1.286	1.048	226
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.	.47	505	1.49	.953	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.
2.	.55	507	1.49	.946	Specific Gravity Separator Gas .605 xxxxxxxxxxxxxxx
3.	.85	511	1.51	.919	Specific Gravity Flowing Fluid xxxxxx .605
4.	.93	509	1.50	.910	Critical Pressure 661.0 PSIA 661.0 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature 339.4°R 339.4°R

Pc 1035.2 Pc2 1071.6				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	766.0	875.3	766.2	305.5
2.	709.3	842.3	709.5	362.1
3.	568.8	754.5	569.2	502.4
4.	480.5	693.6	481.0	590.6
5.	0.0	0.0	0.0	0.0

$\frac{Pc2}{Pc2-Pw2} = 1.8097 \quad (2) \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.5430$	
$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 348 \text{ Mcfd}$	

Absolute Open Flow	348 Mcfd @ 15.025	Angle of Slope, θ	36	Slope, n	.731
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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 3/25/90

COMPANY Yates Petroleum Corporation LEASE Jaguar XO Federal WELL NO. 1

LOCATION: Unit M Section 9 Township 8S Range 23E

L 2911.0 H 2911.0 L/H 1.000 G .605 %CO2 .02 %N2 6.50 %H2S 0.00

d 1.995 Fr .017777 GH 1761.2 Pcr 661.0 Tcr 339.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.140	.156	.210	.226	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	552.0	552.0	552.0	552.0	0.0
4 T=(Tw+Ts)/2	537.0	537.0	537.0	537.0	0.0
5 Z(Est.)	.894	.897	.907	.914	0.000
6 TZ	480.0	481.9	487.1	490.9	0.0
7 GH/TZ	3.669	3.655	3.615	3.588	0.000
8 e ^s (Table XIV)	1.147	1.147	1.145	1.144	0.000
9 1-e ^{-s} (Table XIV)	.129	.128	.127	.126	0.000
10 Pt	875.2	842.2	754.2	693.2	0.0
11 Pt ² /1000	766.0	709.3	568.8	480.5	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.535	8.566	8.662	8.728	0.000
14 FcQm	1.193	1.339	1.816	1.969	0.000
15 L/H(FcQm) ²	1.424	1.793	3.299	3.877	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.183	.230	.418	.488	0.000
17 Pw ² =Pt ² +Fw	766.2	709.5	569.2	481.0	0.0
18 Ps ² =e ^s Pw ²	879.1	813.8	651.9	550.3	0.0
19 Ps	937.6	902.1	807.4	741.8	0.0
20 P=(Pt+Ps)/2	906.4	872.1	780.8	717.5	0.0
21 Pr=(P/Pcr)	1.37	1.32	1.18	1.09	0.00
22 Tr=(T/Tcr)	1.58	1.58	1.58	1.58	0.00
23 Z(Table XI)	.894	.897	.907	.914	0.000

Company	Yates Petroleum Corporation
Well	Jaquar XO Federal No. 1
Location	M, 9-8S-23E
County	Chaves
Date	3/25/90

$P_c^2 - P_w^2$, THOUSANDS

