

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

Form O-123

CISF
File

Type Test [x] Initial [] Annual [] Special				Test Date 4/5/88	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool <u>WILDCAT WOLF CAMP</u> Undesignated				Formation Disco	
Completion Date 7/28/81		Total Depth 8931.0'		Plug Back TD 6620.0'	
				Elevation 3680.0'	
Csg Size 5.500"		Wt. 14.000#	d 5.012"	Set At 8931.0'	Perforations: From 6504.0' To 6535.0'
Tbg Size 2.375"		Wt. 4.700#	d 1.995"	Set At 6485.0'	Perforations: From 0.0' To 0.0'
Type Well Single				Packer Set At 6485.0'	
Producing Thru Tubing				Baro. Press. - Pa 13.2 psia.	
Resv. Temp. °F 160 @ 8479'		Mean Temp. °F 62.0		State New Mexico	
L 6485.0'	H 6485.0'	Gg .600	%CO2 .69	%N2 .57	%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	43	2025	0	0	0	0 hrs.
1.	2.067 X .625	280	9.0	43	1349	62	0	0	24 hrs.
2.	2.067 X .625	280	10.3	43	1119	62	0	0	24 hrs.
3.	2.067 X .625	270	14.2	43	1051	62	0	0	24 hrs.
4.	2.067 X .625	270	17.0	43	840	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.	1.866	51.37	293.20	1.017	1.291	1.026	129
2.	1.866	54.95	293.20	1.017	1.291	1.026	138
3.	1.866	63.41	283.20	1.017	1.291	1.025	159
4.	1.866	69.39	283.20	1.017	1.291	1.025	174
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	503	1.42	.950	A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
2.	.43	503	1.42	.950	Specific Gravity Separator Gas	.600
3.	.42	503	1.42	.952	Specific Gravity Flowing Fluid	xxxxxx .600
4.	.42	503	1.42	.952	Critical Pressure	674.0 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	353.3°R

Pc 2038.2 Pc2 4154.3

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	Pc2	=	1.2158	(2)	$\left[\frac{Pc2}{Pc2-Pw2} \right]^n$	=	1.1586
1.	1855.6	1362.3	1855.9	2298.3							
2.	1281.9	1132.4	1282.3	2872.0							
3.	1132.5	1064.4	1133.0	3021.2							
4.	728.0	853.6	728.6	3425.7							
5.	0.0	0.0	0.0	0.0							

$$ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 202 \text{ Mcfd}$$

Absolute Open Flow 202 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .754
Remarks:

Approved By:	Conducted By: Tracy Richardson	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN HEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 5/2/88

COMPANY Yates Petroleum Corporation LEASE Allison CO Federal WELL NO. 3

LOCATION: Unit N Section 15 Township 19S Range 24E

L 6485.0 H 6485.0 L/H 1.000 G .600 %CO₂ .69 %N₂ .57 %H₂S 0.00

d 1.995 Fr .017777 GH 3891.0 Pcr 674.0 Tcr 353.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.129	.138	.159	.174	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	620.0	620.0	620.0	620.0	0.0
4 T=(Tw+Ts)/2	571.0	571.0	571.0	571.0	0.0
5 Z(Est.)	.859	.877	.883	.903	0.000
6 TZ	490.3	500.5	503.9	515.4	0.0
7 GH/TZ	7.935	7.774	7.722	7.550	0.000
8 e ^s (Table XIV)	1.347	1.338	1.335	1.327	0.000
9 1-e ^{-s} (Table XIV)	.257	.253	.251	.246	0.000
10 Pt	1362.2	1132.2	1064.2	853.2	0.0
11 Pt ² /1000	1855.6	1281.9	1132.5	728.0	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.717	8.907	8.966	9.168	0.000
14 FcQm	1.125	1.230	1.428	1.597	0.000
15 L/H(FcQm) ²	1.267	1.514	2.039	2.552	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.326	.382	.512	.629	0.000
17 Pw ² =Pt ² +Fw	1855.9	1282.3	1133.0	728.6	0.0
18 Ps ² =e ^s Pw ²	2499.1	1715.7	1513.1	966.8	0.0
19 Ps	1580.9	1309.9	1230.1	983.3	0.0
20 P=(Pt+Ps)/2	1471.5	1221.0	1147.2	918.2	0.0
21 Pr=(P/Pcr)	2.18	1.81	1.70	1.36	0.00
22 Tr=(T/Tcr)	1.62	1.62	1.62	1.62	0.00
23 Z(Table XI)	.859	.877	.883	.903	0.000

Company	Yates Petroleum Corporation
Well	Allison CO Federal No. 3
Location	N, 15-19S-24E
County	Eddy
Date	5/2/88

