

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

Form O-122

clsf
File

Type Test [X] Initial [] Annual [] Special						Test Date 4/4/88			
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company			
Pool Boyd (MORFACU)						Formation Morrow			
Completion Date 11/22/82		Total Depth 9400.0'		Plug Back TD 9336.0'		Elevation 3662.0'		Farm or Lease Name Allison CO Federal	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set Rt 9390.0'	Perforations: From 8903.5' To 8939.0'				Well No. 8	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set Rt 8855.0'	Perforations: From 0.0' To 0.0'				Unit Sec Twp Rge I 14 19S 24E	
Type Well Single						Packer Set At 8855.0'		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 166 @ 0'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 8855.0'	H 8855.0'	Gg .588	%CO2 .71	%N2 .31	%H2S 0.00	Proven 0.000"	Meter Run 2.000"	Taps Flange	

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Proven 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	1020	0	0	0	24 hrs.
1.	2.067 X .875	250	24.9	43	522	62	0	0	24 hrs.
2.	2.067 X .875	240	27.6	43	491	62	0	0	24 hrs.
3.	2.067 X .875	235	32.5	43	482	62	0	0	24 hrs.
4.	2.067 X .875	220	34.0	43	430	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.	3.729	80.95	263.20	1.017	1.304	1.022	409
2.	3.729	83.60	253.20	1.017	1.304	1.022	422
3.	3.729	89.81	248.20	1.017	1.304	1.021	453
4.	3.729	89.04	233.20	1.017	1.304	1.020	449
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.	.39	503	1.44	.957	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.38	503	1.44	.958	Specific Gravity Separator Gas	.588	xxxxxxxxxxxxxx
3.	.37	503	1.44	.959	Specific Gravity Flowing Fluid	xxxxxx	.588
4.	.35	503	1.44	.962	Critical Pressure	675.0 PSIA	675.0 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	350.0°R	350.0°R

Pc 1033.2 Pc2 1067.5				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	286.4	539.5	291.1	776.4
2.	254.2	509.1	259.2	808.3
3.	245.2	501.0	251.0	816.5
4.	196.4	449.6	202.1	865.4
5.	0.0	0.0	0.0	0.0

$\frac{Pc2}{Pc2-Pw2} = \frac{1.2325}{\left[\frac{Pc2}{Pc2-Pw2} \right]^n} = 1.1963$	
$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 537 \text{ Mcfd}$	

Absolute Open Flow	537 Mcfd @ 15.025	Angle of Slope, θ	41	Slope, n	.858
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 Allison CO Federal WELL NO. 8

LOCATION: Unit I Section 14 Township 19S Range 24E

L 8855.0 H 8855.0 L/H 1.000 G .588 %CO₂ .71 %N₂ .31 %H₂S 0.00

d 1.995 Fr .017777 GH 5206.7 Pcr 675.0 Tcr 350.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.409	.422	.453	.449	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	626.0	626.0	626.0	626.0	0.0
4 T=(Tw+Ts)/2	574.0	574.0	574.0	574.0	0.0
5 Z(Est.)	.938	.942	.943	.949	0.000
6 TZ	538.6	540.6	541.1	544.4	0.0
7 GH/TZ	9.666	9.632	9.622	9.563	0.000
8 e ^s (Table XIV)	1.437	1.435	1.434	1.431	0.000
9 1-e ^{-s} (Table XIV)	.304	.303	.303	.301	0.000
10 Pt	535.2	504.2	495.2	443.2	0.0
11 Pt ² /1000	286.4	254.2	245.2	196.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	9.575	9.613	9.622	9.681	0.000
14 FcQm	3.919	4.059	4.363	4.347	0.000
15 L/H(FcQm) ²	15.360	16.477	19.040	18.892	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	4.670	4.994	5.766	5.692	0.000
17 Pw ² =Pt ² +Fw	291.1	259.2	251.0	202.1	0.0
18 Ps ² =e ^s Pw ²	418.3	371.9	360.0	289.3	0.0
19 Ps	646.8	609.9	600.0	537.8	0.0
20 P=(Pt+Ps)/2	591.0	557.0	547.6	490.5	0.0
21 Pr=(P/Pcr)	.88	.83	.81	.73	0.00
22 Tr=(T/Tcr)	1.64	1.64	1.64	1.64	0.00
23 Z(Table XI)	.938	.942	.943	.949	0.000

Company	Yates Petroleum Corporation
Well	Allison CQ Federal No. 8
Location	I, 14-19S-24E
County	Eddy
Date	4/22/88

