

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

Form O-122

SEP 18 '90

Type Test [x] Initial [] Annual [] Special					Test Date 6/29/88		SEP 18 '90	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			O. C. D. ARTESIA, OFFICE	
Pool Morrow				Formation Kennedy Farms			Unit	
Completion Date 2/15/86		Total Depth 8890.0'		Plug Back TD 8832.0'		Elevation 3362.0'		Farm or Lease Name Box ACH
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 8890.0'	Perforations: From 8619.0' To 8639.0'			Well No. 1	
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 8565.0'	Perforations: From 0.0' To 0.0'			Unit Sec Twp Rge L 4 18S 26E	
Type Well Single				Packer Set At 8565.0'			County Eddy	
Producing Thru Tubing		Resv. Temp. °F 188 @ 8629'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 8565.0'	H 8565.0'	Gg .628	%CO2 .41	%N2 .28	%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	92	2760	0	0	0	0 hrs.
1.	2.067 X .500	240	60.0	99	2490	62	0	0	24 hrs.
2.	2.067 X .500	230	72.0	95	2456	62	0	0	24 hrs.
3.	2.067 X .500	230	80.0	97	2406	62	0	0	24 hrs.
4.	2.067 X .500	220	97.3	92	2390	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)	$\sqrt{hwP_m}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	1.189	123.26	253.20	.964	1.262	1.017	181
2.	1.189	132.33	243.20	.968	1.262	1.017	195
3.	1.189	139.48	243.20	.966	1.262	1.016	205
4.	1.189	150.63	233.20	.971	1.262	1.016	223
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	559	1.54	.967	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.
2.	.36	555	1.53	.968	Specific Gravity Separator Gas .628 xxxxxxxxxxxxxxxx
3.	.36	557	1.53	.968	Specific Gravity Flowing Fluid xxxxxx .628
4.	.35	552	1.52	.969	Critical Pressure 672.3 PSIA 672.3 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature 363.8°R 363.8°R

Pc	2773.2	Pc ²	7690.6	
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ² (1)
1.	6266.0	2503.3	6266.3	1424.3
2.	6096.9	2469.3	6097.3	1593.3
3.	5852.5	2419.3	5852.9	1837.7
4.	5775.4	2403.3	5775.8	1914.8
5.	0.0	0.0	0.0	0.0

$$\frac{P_c^2}{P_c^2 - P_w^2} = \frac{4.0109}{(2)} \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.6339$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 588 \text{ Mcfd}$$

Absolute Open Flow 588 Mcfd @ 15.025 Angle of Slope, 0 35 Slope, n .699
 Remarks:

Approved By:	Conducted By: Ed Perry	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 09/17/90

COMPANY Yates Petroleum Corporation LEASE Box ACH WELL NO. 1

LOCATION: Unit L Section 4 Township 18S Range 26E

L 8565.0 H 8565.0 L/H 1.000 G .628 %CO2 .41 %N2 .28 %H2S 0.00

d 2.441 Fr .010495 GH 5378.8 Pcr 672.3 Tcr 363.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.181	.195	.205	.223	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	648.0	648.0	648.0	648.0	0.0
4 T=(Tw+Ts)/2	585.0	585.0	585.0	585.0	0.0
5 Z(Est.)	.830	.830	.829	.828	0.000
6 TZ	485.8	485.4	484.7	484.5	0.0
7 GH/TZ	11.072	11.082	11.098	11.102	0.000
8 e ^s (Table XIV)	1.515	1.515	1.516	1.516	0.000
9 1-e ^{-s} (Table XIV)	.340	.340	.340	.341	0.000
10 Pt	2503.2	2469.2	2419.2	2403.2	0.0
11 Pt ² /1000	6266.0	6096.9	5852.5	5775.4	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.099	5.094	5.087	5.085	0.000
14 FcQm	.925	.995	1.045	1.133	0.000
15 L/H(FcQm) ²	.855	.990	1.092	1.284	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.290	.337	.372	.437	0.000
17 Pw ² =Pt ² +Fw	6266.3	6097.3	5852.9	5775.8	0.0
18 Ps ² =e ^s Pw ²	9491.3	9238.9	8873.7	8758.3	0.0
19 Ps	3080.8	3039.6	2978.9	2959.4	0.0
20 P=(Pt+Ps)/2	2792.0	2754.4	2699.0	2681.3	0.0
21 Pr=(P/Pcr)	4.15	4.10	4.01	3.99	0.00
22 Tr=(T/Tcr)	1.61	1.61	1.61	1.61	0.00
23 Z(Table XI)	.830	.830	.829	.828	0.000

Company	Yates Petroleum Corporation
Well	Box ACH No. 1
Location	L, 4-18S-26E
County	Eddy
Date	09/17/90

