

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

c/sr
Form C-~~file~~
RECEIVED

MAY 20 1983

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3/8/83		MAY 20 1983	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		O. C. D.	
Pool Pecos Slope - Abo				Formation Abo		Unit ARTESIA, OFFICE	
Completion Date 4/12/82		Total Depth 4100.0'		Plug Back TD 4044.0'		Elevation 3995.0'	
Csg Size Wt. 4.500" 9.500#		Set At 4100.0'		Perforations: From 3678.0' To 3847.0'		Farm or Lease Name Rowland "RN"	
Tbg Size Wt. 2.875" 6.500#		Set At 3841.0'		Perforations: From 0.0' To 0.0'		Well No. 2	
Type Well Single				Packer Set At 3785.0'		Unit Sec Top Rge L 13 SS 24E	
Producing Thru Tubing		Resu. Temp. °F 96 @ 3621'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 3841.0'		H 3841.0'		Gg .663		%CO2 1.26	
				%N2 6.51		%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	69	997	0	0	0	0 hrs.
1.	2.067 X .625	145	73.0	69	750	62	0	0	24 hrs.
2.	2.067 X .625	150	45.1	69	800	62	0	0	24 hrs.
3.	2.067 X .625	140	41.0	69	843	62	0	0	24 hrs.
4.	2.067 X .625	160	25.1	69	880	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)	PwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	1.866	107.46	158.20	.991	1.228	1.011	247
2.	1.866	85.79	163.20	.991	1.228	1.012	197
3.	1.866	79.25	153.20	.991	1.228	1.011	182
4.	1.866	65.93	173.20	.991	1.228	1.013	152
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Fr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio Dry Mcf/bbl.
1.	.24	529	1.48	.978	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.
2.	.25	529	1.48	.977	Specific Gravity Separator Gas .663
3.	.23	529	1.48	.979	Specific Gravity Flowing Fluid .663
4.	.26	529	1.48	.975	Critical Pressure 664.4 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature 356.5°R

Pc 1010.2	Pc2 1020.5				
NO	Ft2	Pw	Pw2	Pc2-Pw2 (1)	Pc2 = 2.3300 (2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.8399$
1.	582.5	763.4	582.8	437.8	
2.	661.3	813.3	661.5	359.0	
3.	733.1	856.3	733.2	287.3	
4.	797.8	893.3	797.9	222.6	
5.	0.0	0.0	0.0	0.0	ROF = 0 $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 454$ Mcfd

Absolute Open Flow 454 Mcfd @ 15.025 Angle of Slope, 0 36 Slope, n .721
Remarks:

Approved By:	Conducted By: David Weaver	Calculated By: Andie Alderson	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN HEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 05/19/83

COMPANY Yates Petroleum Corporation LEASE Rowland "RN" WELL NO. 2

LOCATION: Unit L Section 13 Township 5S Range 24E

L 3841.0 H 3841.0 L/H 1.000 G .663 XCO2 1.26 XN2 6.51 XH2S 0.00

d 2.441 Fr .010495 GH 2546.6 Pcr 664.4 Tcr 356.5

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.247	.197	.182	.152	0.000
2 Tw(W.H.%R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.%R)	556.0	556.0	556.0	556.0	0.0
4 T=(Tw+Ts)/2	539.0	539.0	539.0	539.0	0.0
5 Z(Est.)	.888	.881	.875	.870	0.000
6 T2	478.5	474.9	471.7	469.1	0.0
7 GH/T2	5.322	5.363	5.398	5.429	0.000
8 e ³ (Table XIV)	1.221	1.223	1.224	1.226	0.000
9 1-e ⁻³ (Table XIV)	.181	.182	.183	.184	0.000
10 Pt	763.2	813.2	856.2	893.2	0.0
11 Pt ² /1000	582.5	661.3	733.1	797.8	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrT2	5.026	4.984	4.951	4.923	0.000
14 FcQm	1.241	.983	.901	.747	0.000
15 L/H(FcQm) ²	1.540	.966	.812	.558	0.000
16 Fw=L/H(FcQm) ² (1-e ⁻³)	.278	.176	.149	.103	0.000
17 Pw ² =Pt ² +Fw	582.8	661.5	733.2	797.9	0.0
18 Ps ² =e ³ Pw ²	711.4	808.8	897.7	978.1	0.0
19 Ps	843.4	899.3	947.5	989.0	0.0
20 P=(Pt+Ps)/2	803.3	856.3	901.8	941.1	0.0
21 Pr=(P/Pcr)	1.21	1.29	1.36	1.42	0.00
22 Tr=(T/Tcr)	1.51	1.51	1.51	1.51	0.00
23 Z(Table XI) Z	.888	.881	.875	.870	0.000

Company	Yates Petroleum Corporation
Well	Rowland "RN No. 2
Location	L. 13-58-24E
County	Chaves
Date	05/19/83

$P_c^2 - P_w^2$, THOUSANDS

