

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

RECEIVED C-122

SEP 18 '80

45P
File

Type Test [x] Initial [] Annual [] Special					Test Date 7/26/88			
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company			
Pool Atoka Morrow					Formation Richard Knob		Unit	
Completion Date 4/12/85		Total Depth 8500.0'		Plug Back TD 8441.0'		Elevation 3552.0'		Farm or Lease Name Powell Kissinger BS
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 8500.0'	Perforations: From 8160.0' To 8367.0'		Well No. 2		
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 8094.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge 3 33 17S 25E		
Type Well Single					Packer Set At 8094.0'		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 184 @ 8358'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 8094.0'	H 8094.0'	Gg .665	%CO2 .18	%N2 .66	%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	96	2010	0	0	0	0 hrs.
1.	2.067 X .625	160	13.1	89	909	62	0	0	24 hrs.
2.	2.067 X .625	160	15.5	93	696	62	0	0	24 hrs.
3.	2.067 X .625	140	20.4	96	582	62	0	0	24 hrs.
4.	2.067 X .625	120	25.0	95	120	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.	1.866	47.63	173.20	.973	1.226	1.013	107
2.	1.866	51.81	173.20	.970	1.226	1.013	116
3.	1.866	55.90	153.20	.967	1.226	1.011	125
4.	1.866	57.71	133.20	.968	1.226	1.009	129
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	Mcfd/bbl.
1.	.26	549	1.46	.974	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.26	553	1.47	.975	Specific Gravity Separator Gas	.665	xxxxxxxxxxxxxx
3.	.23	556	1.48	.979	Specific Gravity Flowing Fluid	xxxxx	.665
4.	.20	555	1.48	.982	Critical Pressure	669.4 PSIA	669.4 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	375.3°R	375.3°R

Pc 2023.2 Pc² 4093.3

NO	Pt ²	Pw	Pw ²	Pc ² -Pw ² (1)	$\frac{Pc^2}{Pc^2-Pw^2} = 1.0040$	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 1.0032$
1.	850.5	922.3	850.6	3242.8		
2.	503.0	709.3	503.1	3590.2		
3.	354.3	595.3	354.4	3738.9		
4.	17.7	133.9	17.9	4075.4		
5.	0.0	0.0	0.0	0.0		

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 129 \text{ Mcfd}$$

Absolute Open Flow 129 Mcfd @ 15.025 Angle of Slope, 0 39 Slope, n .798

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 Powell Kissinger BS WELL NO. 2

LOCATION: Unit 0 Section 33 Township 17S Range 25E

L 8094.0 H 8094.0 L/H 1.000 G .665 %CO2 .18 %N2 .66 %H2S 0.00

d 2.441 Fr .010495 GH 5382.5 Pcr 669.4 Tcr 375.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.107	.116	.125	.129	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	644.0	644.0	644.0	644.0	0.0
4 T=(Tw+Ts)/2	583.0	583.0	583.0	583.0	0.0
5 Z(Est.)	.875	.901	.916	.981	0.000
6 TZ	510.0	525.5	534.3	571.8	0.0
7 GH/TZ	10.553	10.243	10.074	9.413	0.000
8 e ^S (Table XIV)	1.485	1.468	1.459	1.423	0.000
9 1-e ^{-S} (Table XIV)	.327	.319	.315	.297	0.000
10 Pt	922.2	709.2	595.2	133.2	0.0
11 Pt ² /1000	850.5	503.0	354.3	17.7	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.353	5.515	5.608	6.001	0.000
14 FcQm	.575	.642	.701	.774	0.000
15 L/H(FcQm) ²	.331	.412	.492	.599	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-S})	.108	.132	.155	.178	0.000
17 Pw ² =Pt ² +Fw	850.6	503.1	354.4	17.9	0.0
18 Ps ² =e ^S Pw ²	1263.5	738.7	517.1	25.5	0.0
19 Ps	1124.1	859.5	719.1	159.7	0.0
20 P=(Pt+Ps)/2	1023.1	784.3	657.1	146.5	0.0
21 Pr=(P/Pcr)	1.53	1.17	.98	.22	0.00
22 Tr=(T/Tcr)	1.55	1.55	1.55	1.55	0.00
23 Z(Table XI)	.875	.901	.916	.981	0.000

Company	Yates Petroleum Corporation
Well	Powell Kissinger BS No. 2
Location	O, 33-17S-25E
County	Eddy
Date	09/17/90

$P_c^2 - P_w^2$, THOUSANDS

