

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

RECEIVED BY

NOV 13 1984 Form C-122

C. C. D.
ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 8/18/84	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Pecos Slope <i>Abco</i>				Unit	
Completion Date 12/23/82		Total Depth 4200.0'		Plug Back TD 4160.0'	
				Elevation 3601.0'	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4200.0'	Perforations: From 3702.0' To 4071.0'	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3660.0'	Perforations: From 0.0' To 0.0'	
Type Well Single				Packer Set At 3660.0'	
Producing Thru Tubing		Resv. Temp. °F 102 @ 3657'		Baro. Press. - Pa 13.2 psia.	
L 3660.0'		H 3660.0'		State New Mexico	
Gg .659		%CO2 .04		%H2 7.35	
%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	70	989	0	0	0	0 hrs.
1.	2.067 X 1.000	270	19.9	70	907	62	0	0	24 hrs.
2.	2.067 X 1.000	260	108.9	70	749	62	0	0	24 hrs.
3.	2.067 X 1.000	230	128.0	70	703	62	0	0	24 hrs.
4.	2.067 X 1.000	200	180.0	70	650	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)	√hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	4.947	75.07	283.20	.991	1.232	1.022	463
2.	4.947	172.49	273.20	.991	1.232	1.021	1063
3.	4.947	176.44	243.20	.991	1.232	1.018	1085
4.	4.947	195.90	213.20	.991	1.232	1.016	1201
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	530	1.49	.958	A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
2.	.42	530	1.49	.960	Specific Gravity Separator Gas	.659
3.	.37	530	1.49	.964	Specific Gravity Flowing Fluid	.659
4.	.32	530	1.49	.969	Critical Pressure	657.8 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	354.8°R

Pc	1002.2	Pc²	1004.4
NO	Pt²	Pw	Pw²
1.	846.8	921.6	849.4
2.	580.9	771.5	595.2
3.	512.9	726.5	527.9
4.	439.8	677.0	458.3
5.	0.0	0.0	0.0

$$(1) \frac{Pc^2}{Pc^2 - Pw^2} = 1.8404 \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.5872$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1907 \text{ Mcfd}$$

Absolute Open Flow 1907 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .757
Remarks:

Approved By:	Conducted By: David Weaver	Calculated By: Andie Carpenter	Checked By:
--------------	-------------------------------	-----------------------------------	-------------

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Morton "SZ" Fed WELL NO. 4

LOCATION: Unit P Section 10 Township 8S Range 25E

L 3660.0 H 3660.0 L/H 1.000 G .659 %CO₂ .04 %N₂ 7.35 %H₂S 0.00

d 1.995 Fr .017777 GH 2411.9 Pcr 657.8 Tcr 354.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.463	1.063	1.085	1.201	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	562.0	562.0	562.0	562.0	0.0
4 T=(Tw+Ts)/2	542.0	542.0	542.0	542.0	0.0
5 Z(Est.)	.871	.891	.897	.904	0.000
6 TZ	472.1	482.8	486.1	489.9	0.0
7 GH/TZ	5.109	4.996	4.962	4.924	0.000
8 e ^s (Table XIV)	1.211	1.206	1.204	1.203	0.000
9 1-e ^{-s} (Table XIV)	.174	.171	.170	.169	0.000
10 Pt	920.2	762.2	716.2	663.2	0.0
11 Pt ² /1000	846.8	580.9	512.9	439.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.392	8.587	8.645	8.711	0.000
14 FcQm	3.885	9.127	9.376	10.464	0.000
15 L/H(FcQm) ²	15.096	83.303	87.909	109.496	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.632	14.225	14.920	18.455	0.000
17 Pw ² =P _t ² +Fw	849.4	595.2	527.9	458.3	0.0
18 Ps ² =e ^s Pw ²	1028.8	717.7	635.8	551.2	0.0
19 Ps	1014.3	847.2	797.3	742.4	0.0
20 P=(Pt+Ps)/2	967.2	804.7	756.8	702.8	0.0
21 Pr=(P/Pcr)	1.47	1.22	1.15	1.07	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.871	.891	.897	.904	0.000

Company	Yates Petroleum Corporation
Well	Morton "SZ" Fed No. 4
Location	P, 10-8S-25E
County	Chaves
Date	11/6/84

