

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

RECEIVED BY

Form C-122

NOV 13 1984

O. C. D.

ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 9/3/84	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company		
Pool Pecos Slope <i>ABO</i>			Formation ABO		Unit
Completion Date 4/28/83		Total Depth 4200.0'	Plug Back TD 4107.0'	Elevation 3682.4'	Farm or Lease Name Spool "SU" Com ✓
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4190.0'	Perforations: From 3598.0' To 3841.0'	Well No. 4
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3534.0'	Perforations: From 0.0' To 0.0'	Unit Sec Twp Rge K 22 7S 25E
Type Well Single				Packer Set At 3534.0'	County Chaves
Producing Thru Tubing	Resv. Temp. °F 102 @ 3530'	Mean Temp. °F 62.0	Baro. Press. - Pa 13.2 psia.	State New Mexico	
L 3534.0'	H 3534.0'	Gg .651	%CO2 .09	%N2 6.08	%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	1010	0	0	0	0 hrs.
1.	2.067 X 1.250	134	15.0	70	950	62	0	0	24 hrs.
2.	2.067 X 1.250	162	41.2	70	892	62	0	0	24 hrs.
3.	2.067 X 1.250	163	46.2	70	858	62	0	0	24 hrs.
4.	2.067 X 1.250	176	89.2	70	737	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.	8.134	46.99	147.20	.991	1.239	1.010	474
2.	8.134	84.96	175.20	.991	1.239	1.013	859
3.	8.134	90.22	176.20	.991	1.239	1.013	912
4.	8.134	129.91	189.20	.991	1.239	1.014	1315
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.	.22	530	1.49	.980	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.27	530	1.49	.975	Specific Gravity Separator Gas	.651	xxxxxxxxxxxxxx
3.	.27	530	1.49	.975	Specific Gravity Flowing Fluid	xxxxxx	.651
4.	.29	530	1.49	.973	Critical Pressure	660.4 PSIA	660.4 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	355.7°R	355.7°R

Pc	1023.2	Pc2	1046.9				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	Pc2	Pc2-Pw2 (2)	Pc2
1.	927.8	964.6	930.4	116.6			
2.	819.4	910.0	828.1	218.9			
3.	759.0	876.8	768.9	278.1			
4.	562.8	764.0	583.7	463.3			
5.	0.0	0.0	0.0	0.0			

$$\frac{Pc^2}{Pc^2 - Pw^2} = \frac{2.2748}{(2)} \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.8387$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 2418 \text{ Mcfd}$$

Absolute Open Flow 2418 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .741
Remarks:

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

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Spool "SU" Com WELL NO. 4

LOCATION: Unit K Section 22 Township 7S Range 25E

L 3534.0 H 3534.0 L/H 1.000 G .651 %CO₂ .09 %N₂ 6.08 %H₂S 0.00

d 1.995 Fr .017777 GH 2300.6 Pcr 660.4 Tcr 355.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.474	.859	.912	1.315	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.)	.865	.872	.876	.892	0.000
6 TZ	469.0	472.7	475.1	483.3	0.0
7 GH/TZ	4.906	4.867	4.843	4.760	0.000
8 e ^s (Table XIV)	1.202	1.200	1.199	1.195	0.000
9 1-e ^{-s} (Table XIV)	.168	.167	.166	.163	0.000
10 Pt	963.2	905.2	871.2	750.2	0.0
11 Pt ² /1000	927.8	819.4	759.0	562.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.337	8.404	8.445	8.596	0.000
14 FcQm	3.952	7.220	7.705	11.305	0.000
15 L/H(FcQm) ²	15.615	52.126	59.371	127.802	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.624	8.695	9.860	20.884	0.000
17 Pw ² =Pt ² +Fw	930.4	828.1	768.9	583.7	0.0
18 Ps ² =e ^s Pw ²	1118.3	993.9	922.0	697.7	0.0
19 Ps	1057.5	996.9	960.2	835.3	0.0
20 P=(Pt+Ps)/2	1010.4	951.1	915.7	792.7	0.0
21 Pr=(P/Pcr)	1.53	1.44	1.39	1.20	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.865	.872	.876	.892	0.000

Company	Yates Petroleum Corporation
Well	Spool "SU" Com No. 4
Location	K, 22-7S-25E
County	Chaves
Date	11/6/84

