

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

RECEIVED
NOV 08 1984
O. C. D.
ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 8/21/84	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company		
Pool Pecos Slope <i>Also</i>			Formation Abo		
Completion Date 12/16/83		Total Depth 4300.0'		Plug Back TD 4235.0'	
				Elevation 3675.0'	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4300.0'	Perforations: From 3756.0' To 4028.0'	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3709.0'	Perforations: From 0.0' To 0.0'	
Type Well Single				Packer Set At 3709.0'	
Producing Thru Tubing		Resv. Temp. °F 104 @ 3705'		Mean Temp. °F 62.0	
				Baro. Press. - Pa 13.2 psia.	
L 3709.0'		H 3709.0'	Gg .648	%CO2 .02	%N2 5.67
				%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	950	0	0	0	0 hrs.
1.	2.067 X 1.125	170	12.2	70	883	62	0	0	24 hrs.
2.	2.067 X 1.125	170	24.9	70	827	62	0	0	24 hrs.
3.	2.067 X 1.125	210	44.8	70	752	62	0	0	24 hrs.
4.	2.067 X 1.125	260	75.0	70	590	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.	6.397	47.28	183.20	.991	1.242	1.013	377
2.	6.397	67.54	183.20	.991	1.242	1.013	539
3.	6.397	100.00	223.20	.991	1.242	1.017	800
4.	6.397	143.14	273.20	.991	1.242	1.021	1150
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.	.28	530	1.49	.974	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.
2.	.28	530	1.49	.974	Specific Gravity Separator Gas .648
3.	.34	530	1.49	.967	Specific Gravity Flowing Fluid .648
4.	.41	530	1.49	.959	Critical Pressure 660.9 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature 355.9°R

Pc 963.2 Pc2 927.8				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	803.2	897.2	804.9	122.8
2.	705.9	842.3	709.5	218.2
3.	585.5	770.4	593.6	334.2
4.	363.9	617.2	380.9	546.8
5.	0.0	0.0	0.0	0.0

$$\frac{Pc^2}{Pc^2 - Pw^2} = 1.7015 \quad (2) \quad \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.4878$$

$$ROF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1711 \text{ Mcfd}$$

Absolute Open Flow 1711 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .748
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 (P_w) C-122D

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Caudill "RZ" WELL NO. 5

LOCATION: Unit C Section 17 Township 6S Range 26E

L 3709.0 H 3709.0 L/H 1.000 G .648 %CO₂ .02 %N₂ 5.67 %H₂S 0.00

d 1.995 Fr .017777 GH 2403.4 P_{cr} 660.9 T_{cr} 355.9

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Q _m	.377	.539	.800	1.150	0.000
2 T _w (W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 T _s (B.H.°R)	564.0	564.0	564.0	564.0	0.0
4 T=(T _w +T _s)/2	543.0	543.0	543.0	543.0	0.0
5 Z(Est.)	.874	.881	.891	.912	0.000
6 T _Z	474.6	478.4	483.6	495.3	0.0
7 GH/T _Z	5.064	5.024	4.970	4.853	0.000
8 e ^s (Table XIV)	1.209	1.207	1.205	1.200	0.000
9 1-e ^{-s} (Table XIV)	.173	.172	.170	.166	0.000
10 P _t	896.2	840.2	765.2	603.2	0.0
11 P _t ² /1000	803.2	705.9	585.5	363.9	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 F _c =FrT _Z	8.436	8.505	8.602	8.806	0.000
14 F _c Q _m	3.181	4.581	6.884	10.130	0.000
15 L/H(F _c Q _m) ²	10.120	20.990	47.386	102.611	0.000
16 F _w =L/H(F _c Q _m) ² (1-e ^{-s})	1.750	3.604	8.053	17.069	0.000
17 P _w ² =P _t ² +F _w	804.9	709.5	593.6	380.9	0.0
18 P _s ² =e ^s P _w ²	973.3	856.6	715.1	456.9	0.0
19 P _s	986.5	925.5	845.6	676.0	0.0
20 P=(P _t +P _s)/2	941.4	882.9	805.4	639.6	0.0
21 P _r =(P/P _{cr})	1.42	1.34	1.22	.97	0.00
22 T _r =(T/T _{cr})	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.874	.881	.891	.912	0.000

Company	Yates Petroleum Corporation
Well	Caudill "RZ" No. 5
Location	C, 17-6S-26E
County	Chaves
Date	11/6/84

