

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

Form C-122

RECEIVED BY

JAN 9 1985

O. C. D.

ARTESIA, OFFICE

Type Test									
[x] Initial [] Annual [] Special 9/22/84									
Company					Connection				
Yates Petroleum Corporation					Transwestern Pipeline Company				
Pool					Formation				
Pecos Slope					Abo				
Completion Date			Total Depth		Plug Back TD		Elevation		Farm or Lease Name
2/22/83			4250.0'		4210.0'		3750.0'		Thorpe "MI" Federal
Csg Size		Wt.	d	Set At	Perforations:				Well No.
4.500"		9.500#	4.090"	4250.0'	From 3618.0' To 3784.0'				9
Tbg Size		Wt.	d	Set At	Perforations:				Unit Sec Twp Rge
2.375"		4.700#	1.995"	3568.0'	From 0.0' To 0.0'				E 22 7S 25E
Type Well					Packer Set At			County	
Single					3568.0'			Chaves	
Producing Thru			Resv. Temp. °F		Mean Temp. °F		Baro. Press. - Pa		State
Tubing			90 @ 3565'		62.0		13.2 psia.		New Mexico
L	H	Gg	%CO2	%N2	%H2S	Prover	Meter Run	Taps	
3568.0'	3568.0'	.645	.02	6.57	0.00	0.000"	2.000"	Flange	
FLOW DATA					TUBING DATA		CASING DATA		Duration
NO	Prover Orifice Size X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	of Flow
SI	0.000 X 0.000	0	0.0	70	934	0	0	0	0 hrs.
1.	2.067 X 1.000	209	14.2	70	760	62	0	0	24 hrs.
2.	2.067 X 1.000	240	19.0	70	641	62	0	0	24 hrs.
3.	2.067 X 1.000	270	22.4	70	573	62	0	0	24 hrs.
4.	2.067 X 1.000	284	28.0	70	430	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	56.17	222.20	.991	1.245	1.016	348		
2.	4.947	69.36	253.20	.991	1.245	1.019	431		
3.	4.947	79.65	283.20	.991	1.245	1.021	496		
4.	4.947	91.22	297.20	.991	1.245	1.022	569		
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.	.34	530	1.50	.969	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.				
2.	.38	530	1.50	.964	Specific Gravity Separator Gas .645 xxxxxxxxxxxxxx				
3.	.43	530	1.50	.959	Specific Gravity Flowing Fluid xxxxxx .645				
4.	.45	530	1.50	.957	Critical Pressure 659.5 PSIA 659.5 PSIA				
5.	0.00	0	0.00	0.000	Critical Temperature 352.4°R 352.4°R				
Pc 947.2 Pc2 897.2									
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	(2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.1569$				
1.	597.8	774.1	599.3	297.9					
2.	428.0	655.9	430.2	467.0					
3.	343.6	588.8	346.6	550.5	ROF = Q $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 658$ Mcfd				
4.	196.4	447.8	200.5	696.7					
5.	0.0	0.0	0.0	0.0					
Absolute Open Flow					658 Mcfd @ 15.025		Angle of Slope, θ		30
Remarks:					Slope, n .578				

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

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

Adopted 9-1-65

DATE 12/28/84

COMPANY Yates Petroleum Corporation LEASE Thorpe "MI" Federal WELL NO. 9

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

L 3568.0 H 3568.0 L/H 1.000 G .645 %CO₂ .02 %N₂ 6.57 %H₂S 0.00

d 1.995 Fr .017777 GH 2301.4 Pcr 659.5 Tcr 352.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.348	.431	.496	.569	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	550.0	550.0	550.0	550.0	0.0
4 T=(Tw+Ts)/2	536.0	536.0	536.0	536.0	0.0
5 Z(Est.)	.889	.905	.914	.935	0.000
6 TZ	476.3	485.0	490.1	501.0	0.0
7 GH/TZ	4.832	4.745	4.696	4.593	0.000
8 e ^s (Table XIV)	1.199	1.195	1.193	1.188	0.000
9 1-e ^{-s} (Table XIV)	.166	.163	.161	.158	0.000
10 Pt	773.2	654.2	586.2	443.2	0.0
11 Pt ² /1000	597.8	428.0	343.6	196.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.472	8.625	8.712	8.908	0.000
14 FcQm	2.950	3.718	4.323	5.068	0.000
15 L/H(FcQm) ²	8.704	13.824	18.686	25.688	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.442	2.253	3.017	4.064	0.000
17 Pw ² =Pt ² +Fw	599.3	430.2	346.6	200.5	0.0
18 Ps ² =e ^s Pw ²	718.3	514.0	413.4	238.2	0.0
19 Ps	847.5	716.9	643.0	488.0	0.0
20 P=(Pt+Ps)/2	810.3	685.6	614.6	465.6	0.0
21 Pr=(P/Pcr)	1.23	1.04	.93	.71	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.889	.905	.914	.935	0.000

Company	Yates Petroleum Corporation
Well	Thorpe "MI" Federal No. 9
Location	E, 22-7S-25E
County	Chaves
Date	12/28/84

