

45F file

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

Form C-122

RECEIVED

Type Test [x] Initial [] Annual [] Special						Test Date 11/22/82		FEB 3 1983	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company				O. C. D.	
Pool Pecos Slope - Abo Pool				Formation Abo				Unit ARTESIA, OFFICE	
Completion Date 5/3/82		Total Depth 4400.0'		Plug Back TD 4394.0'		Elevation 3801.4'		Farm or Lease Name Teckla "ND" Federal	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4395.0'	Perforations: From 3744.0' To 3997.0'		Well No. 3			
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3690.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge 24 6S 25E			
Type Well Single				Packer Set At 3690.0'		County Chaves			
Producing Thru Tubing		Resv. Temp. °F 100 @ 3685'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 3690.0'	H 3690.0'	Gg .635	%CO2 .05	%N2 4.74	%H2S 0.00	Proven 0.000"	Meter Run 2.000"	Taps Flange	
FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Proven 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	72	996	0	0	0	0 hrs.
1.	2.067 X 1.250	400	9.3	72	928	62	0	0	24 hrs.
2.	2.067 X 1.250	395	11.8	72	916	62	0	0	24 hrs.
3.	2.067 X 1.250	390	14.8	72	903	62	0	0	24 hrs.
4.	2.067 X 1.250	380	16.0	72	890	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	61.99	413.20	.989	1.255	1.032	645		
2.	8.134	69.40	408.20	.989	1.255	1.031	722		
3.	8.134	77.25	403.20	.989	1.255	1.031	804		
4.	8.134	79.32	393.20	.989	1.255	1.030	824		
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.	.62	532	1.50	.940	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.				
2.	.62	532	1.50	.941	Specific Gravity Separator Gas .635 xxxxxxxxxxxxxxxx				
3.	.61	532	1.50	.941	Specific Gravity Flowing Fluid xxxxxx .635				
4.	.59	532	1.50	.943	Critical Pressure 663.1 PSIA 663.1 PSIA				
5.	0.00	0	0.00	0.000	Critical Temperature 354.2°R 354.2°R				
Pc 1009.2 Pc2 1018.5									
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	$\frac{Pc^2}{Pc^2-Pw^2} = 5.9392$ (2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 3.7711$				
1.	885.9	943.8	890.8	127.7	$AOF = Q \left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 3030 \text{ Mcfd}$				
2.	863.4	932.5	869.6	148.8					
3.	839.4	920.4	847.1	171.3					
4.	815.8	907.7	823.9	194.6					
5.	0.0	0.0	0.0	0.0					

Absolute Open Flow 3030 Mcfd @ 15.025 Angle of Slope, 8 37 Slope, n .745
Remarks:

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

Adopted 9-1-65

DATE 2/1/83

COMPANY Yates Petroleum Corporation LEASE Teckla "MD" Federal WELL NO. 3

LOCATION: Unit A Section 24 Township 6S Range 25E

L 3690.0 H 3690.0 L/H 1.000 G .635 %O₂ .05 %N₂ 4.74 %H₂S 0.00

d 1.995 Fr .017777 GH 2343.2 For 663.1 Tcr 354.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.645	.722	.804	.824	0.000
2 Tw(W.H.*R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.*R)	560.0	560.0	560.0	560.0	0.0
4 T=(Tw+Ts)/2	541.0	541.0	541.0	541.0	0.0
5 Z(Est.)	.869	.871	.872	.874	0.000
6 TZ	470.3	471.1	471.9	472.8	0.0
7 GH/TZ	4.982	4.974	4.965	4.956	0.000
8 e ³ (Table XIV)	1.205	1.205	1.205	1.204	0.000
9 1-e ⁻³ (Table XIV)	.170	.170	.170	.170	0.000
10 Pt	941.2	929.2	916.2	903.2	0.0
11 Pt ² /1000	885.9	863.4	839.4	815.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.361	8.381	8.389	8.405	0.000
14 FcQm	5.395	6.053	6.741	6.929	0.000
15 L/H(FcQm) ²	29.108	36.634	45.441	48.007	0.000
16 Fw=L/H(FcQm) ² (1-e ⁻³)	4.960	6.229	7.720	8.142	0.000
17 Pw ² =Pt ² +Fw	890.8	869.6	847.1	823.9	0.0
18 Ps ² =e ³ Pw ²	1073.8	1047.8	1020.5	992.2	0.0
19 Ps	1036.3	1023.6	1010.2	996.1	0.0
20 P=(Pt+Ps)/2	988.7	976.4	963.2	949.6	0.0
21 Pr=(P/For)	1.49	1.47	1.45	1.43	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.869	.871	.872	.874	0.000

Company	Yates Petroleum Corporation
Well	Teckla "MD" Federal No. 3
Location	R, 24-6S-25E
County	Chaves
Date	2/1/83

$P_0^2 - P_w^2$, THOUSANDS

