

clsf
File

NEW MEXICO OIL CONSERVATION COMMISSION Form O-122
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

APR 22 '88

Type Test ☒ Initial ☐ Annual ☐ Special										Test Date 3/2/88		O. C. D.	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company					ARTESIA OFFICE			
Pool West Atoka (Morrow)					Formation Morrow					Unit			
Completion Date 8/31/84			Total Depth 8980.0'		Plug Back TD 8927.0'		Elevation 3398.0'		Farm or Lease Name Torrington ZK Com				
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 8984.0'	Perforations: From 8718.0' To 8735.0'				Well No. 1					
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 8659.0'	Perforations: From 0.0' To 0.0'				Unit Sec Twp Rge J 8 18S 26E					
Type Well Single										Packer Set At 8659.0'		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 184 @ 8726'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico					
L 8659.0'	H 8659.0'	Gg .658	%CO2 3.61	%N2 .49	%H2S 0.00	Prover 0.000"	Meter Run 2.000"	Taps Flange					
FLOW DATA										TUBING DATA		CASING DATA	
NO	Prover Orifice Size X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	Duration of Flow				
SI	0.000 X 0.000	0	0.0	40	2750	0	0	0	0 hrs.				
1.	4.026 X 1.000	280	19.3	40	2090	62	0	0	24 hrs.				
2.	4.026 X 1.000	280	24.1	40	2007	62	0	0	24 hrs.				
3.	4.026 X 1.000	255	28.1	40	1921	62	0	0	24 hrs.				
4.	4.026 X 1.000	240	61.0	40	1140	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.	4.753	75.22	293.20	1.020	1.233	1.330	463						
2.	4.753	84.06	293.20	1.020	1.233	1.330	518						
3.	4.753	86.81	268.20	1.020	1.233	1.028	533						
4.	4.753	124.28	253.20	1.020	1.233	1.026	762						
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	500	1.36	.942	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.								
2.	.43	500	1.36	.942	Specific Gravity Separator Gas .658 xxxxxxxxxxxxxxxx								
3.	.39	500	1.36	.947	Specific Gravity Flowing Fluid xxxxxx .658								
4.	.37	500	1.36	.950	Critical Pressure 684.8 PSIA 684.8 PSIA								
5.	0.00	0	0.00	0.000	Critical Temperature 367.7°R 367.7°R								
Pc 2763.2 Pc2 7635.3													
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	$\frac{Pc2}{Pc2-Pw2} = 1.2115$ (2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.1523$								
1.	4423.5	2103.7	4425.4	3209.9	$ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 878 \text{ Mcfd}$								
2.	4081.2	2020.8	4083.6	3551.6									
3.	3741.1	1934.9	3743.7	3891.6									
4.	1329.9	1155.6	1335.5	6299.8									
5.	0.0	0.0	0.0	0.0									
Absolute Open Flow					878 Mcfd @ 15.025			Angle of Slope, 0		36		Slope, n .739	
Remarks:													

Approved By:	Conducted By: Tracy Richardson	Calculated By: Andrea Carpenter	Checked By:
--------------	-----------------------------------	------------------------------------	-------------

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

Adopted 9-1-65

DATE 4/22/88

COMPANY Yates Petroleum Corporation LEASE Tonnington 2K Com WELL NO. 1

LOCATION: Unit J Section 8 Township 18S Range 26E

L 8659.0 H 8659.0 L/H 1.000 G .658 %O2 3.61 %N2 .49 %H2S 0.00

d 2.441 Fr .010495 GH 5697.6 Pcr 684.8 Tcr 367.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.463	.518	.533	.762	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	644.0	644.0	644.0	644.0	0.0
4 T=(Tw+Ts)/2	583.0	583.0	583.0	583.0	0.0
5 Z(Est.)	.815	.816	.817	.863	0.000
6 TZ	475.3	475.7	476.6	502.9	0.0
7 GH/TZ	11.987	11.976	11.955	11.329	0.000
8 e ^s (Table XIV)	1.568	1.567	1.566	1.529	0.000
9 1-e ^{-s} (Table XIV)	.362	.362	.361	.346	0.000
10 Pt	2103.2	2020.2	1934.2	1153.2	0.0
11 Pt ² /1000	4423.5	4081.2	3741.1	1329.9	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	4.988	4.993	5.002	5.278	0.000
14 FcQm	2.311	2.584	2.666	4.022	0.000
15 L/H(FcQm) ²	5.339	6.678	7.109	16.176	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.933	2.416	2.569	5.599	0.000
17 Pw ² =Pt ² +Fw	4425.4	4083.6	3743.7	1335.5	0.0
18 Ps ² =e ^s Pw ²	6937.0	6398.7	5861.4	2042.3	0.0
19 Ps	2633.8	2529.6	2421.0	1429.1	0.0
20 P=(Pt+Ps)/2	2368.5	2274.9	2177.6	1291.2	0.0
21 Pr=(P/Pcr)	3.46	3.32	3.18	1.89	0.00
22 Tr=(T/Tcr)	1.59	1.59	1.59	1.59	0.00
23 Z(Table XI)	.815	.816	.817	.863	0.000

Company	Yates Petroleum Corporation
Well	Torrington 2K Com No. 1
Location	J, 8-18S-26E
County	Eddy
Date	4/22/88

$P_c^2 - P_w^2$, THOUSANDS

