

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

45F
File
RECEIVED
Form O-122

APR 22 '88

Type Test [X] Initial [] Annual [] Special					Test Date 3/3/88			
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company		O. C. D. ARTESIA, OFFICE	
Pool Penasco Draw <i>Permo Penn</i>					Formation Permo Penn		Unit	
Completion Date 3/8/82		Total Depth 8750.0'		Plug Back TD 6820.0'		Elevation 3679.5'		Farm or Lease Name Anderson OS State
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 8276.0'	Perforations: From 6387.0' To 6792.0'		Well No. 2		
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 6333.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge J 14 18S 24E		
Type Well Single					Packer Set At 6339.0'		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 178 @ 8165'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 6333.0'	H 6333.0'	Gg .684	%CO2 .75	%N2 1.56	%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	40	1300	0	0	0	0 hrs.
1.	2.067 X .750	260	29.9	40	1011	62	0	0	24 hrs.
2.	2.067 X .750	260	38.1	40	963	62	0	0	24 hrs.
3.	2.067 X .750	260	46.7	40	938	62	0	0	24 hrs.
4.	2.067 X .750	260	53.0	40	850	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 P _m	Flow Temp Factor Ft.	Gravity Factor F _g	Super Compress. Fact. F _{pv}	Rate of Flow Q, Mcfd
1.	2.709	90.38	273.20	1.020	1.209	1.032	312
2.	2.709	102.02	273.20	1.020	1.209	1.032	352
3.	2.709	112.95	273.20	1.020	1.209	1.032	389
4.	2.709	120.33	273.20	1.020	1.209	1.032	415
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.	.41	500	1.32	.939	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.		
2.	.41	500	1.32	.939	Specific Gravity Separator Gas .684 xxxxxxxxxxxxxxxx		
3.	.41	500	1.32	.939	Specific Gravity Flowing Fluid xxxxxx .684		
4.	.41	500	1.32	.939	Critical Pressure 669.7 PSIA 669.7 PSIA		
5.	0.00	0	0.00	0.000	Critical Temperature 378.1°R 378.1°R		

Pc 1313.2 Pc2 1724.5

NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²	(1) $\frac{Pc^2}{Pc^2-Pw^2}$	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n$
1.	1049.0	1025.2	1051.1	673.4	1.7779	1.5511
2.	953.0	977.6	955.7	768.8		
3.	904.8	953.0	908.1	816.4		
4.	745.1	865.4	749.0	975.5		
5.	0.0	0.0	0.0	0.0		

AOF = 0 $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 643 \text{ Mcfd}$

Absolute Open Flow 643 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .763

Remarks:

Approved By:	Conducted By: Tracy Richardson	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 4/22/88

COMPANY Yates Petroleum Corporation LEASE Anderson CS State WELL NO. 2

LOCATION: Unit J Section 14 Township 18S Range 24E

L 6333.0 H 6333.0 L/H 1.000 G .684 %CO₂ .75 %N₂ 1.56 %H₂S 0.00

d 1.995 Fr .017777 GH 4331.8 Pcr 669.7 Tcr 378.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.312	.352	.389	.415	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	638.0	638.0	638.0	638.0	0.0
4 T=(Tw+Ts)/2	580.0	580.0	580.0	580.0	0.0
5 Z(Est.)	.859	.864	.867	.878	0.000
6 TZ	498.0	501.3	503.1	509.4	0.0
7 GH/TZ	8.698	8.641	8.611	8.504	0.000
8 e ^s (Table XIV)	1.386	1.383	1.381	1.376	0.000
9 1-e ^{-s} (Table XIV)	.278	.277	.276	.273	0.000
10 Pt	1024.2	976.2	951.2	863.2	0.0
11 Pt ² /1000	1049.0	953.0	904.8	745.1	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.854	8.912	8.943	9.056	0.000
14 FcQm	2.759	3.135	3.482	3.757	0.000
15 L/H(FcQm) ²	7.610	9.826	12.127	14.112	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.118	2.719	3.347	3.853	0.000
17 Pw ² =Pt ² +Fw	1051.1	955.7	908.1	749.0	0.0
18 Ps ² =e ^s Pw ²	1456.4	1321.4	1254.2	1030.3	0.0
19 Ps	1206.8	1149.5	1119.9	1015.0	0.0
20 P=(Pt+Ps)/2	1115.5	1062.9	1035.6	939.1	0.0
21 Pr=(P/Pcr)	1.67	1.59	1.55	1.40	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.859	.864	.867	.878	0.000

Company	Yates Petroleum Corporation
Well	Anderson CS State No. 2
Location	J, 14-18S-24E
County	Eddy
Date	4/22/88

$P_c^2 - P_w^2$, THOUSANDS

