

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

Form C-122

clsf File

Type Test [X] Initial [] Annual [] Special					Test Date 2/3/88	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company	
Pool Wildcat <u>PENN</u>					Unit Penn	
Completion Date 11/23/87		Total Depth 6400.0'		Plug Back TD 6346.0'		Elevation 3958.4'
Farm or Lease Name Sandlewood AEW St						
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 6400.0'	Perforations: From 6247.0' To 6270.0'		Well No. 1
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 6380.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge N 31 8S 27E
Type Well Single					Packer Set At 6380.0'	
Producing Thru Tubing		Resv. Temp. °F 140 @ 6259'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.
State New Mexico						
L 6380.0'	H 6380.0'	Gg .627	%CO2 1.22	%N2 3.35	%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	40	1750	0	0	0	0 hrs.
1.	2.067 X 1.125	220	16.9	40	1283	62	0	0	24 hrs.
2.	2.067 X 1.125	220	25.8	40	1167	62	0	0	24 hrs.
3.	2.067 X 1.125	215	29.9	40	1022	62	0	0	24 hrs.
4.	2.067 X 1.125	215	36.0	40	880	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)	1/hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	6.397	62.78	233.20	1.020	1.263	1.021	528
2.	6.397	77.57	233.20	1.020	1.263	1.021	652
3.	6.397	82.60	228.20	1.020	1.263	1.021	695
4.	6.397	90.64	228.20	1.020	1.263	1.021	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.	A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
1.	.35	500	1.41	.959	Specific Gravity Separator Gas .627	xxxxxx	xxxxxx
2.	.35	500	1.41	.959	Specific Gravity Flowing Fluid	xxxxxx	.627
3.	.34	500	1.41	.960	Critical Pressure	670.7 PSIA	670.7 PSIA
4.	.34	500	1.41	.960	Critical Temperature	353.5°R	353.5°R
5.	0.00	0	0.00	0.000			

Pc 1763.2 Pc² 3108.9

NO	Pt ²	Pw	Pw ²	Pc ² -Pw ² (1)	$\frac{Pc^2}{Pc^2-Pw^2} = 1.3503$	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 1.2585$
1.	1680.1	1296.9	1682.0	1426.9		
2.	1392.9	1181.4	1395.8	1713.1		
3.	1071.6	1036.8	1075.0	2033.9		
4.	797.8	895.5	801.9	2306.9		
5.	0.0	0.0	0.0	0.0		

$$AOF = Q \left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 959 \text{ Mcfd}$$

Absolute Open Flow 959 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .766
Remarks:

Approved By:	Conducted By: David Weaver	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 4/26/88

COMPANY Yates Petroleum Corporation LEASE Sandlewood AEW St WELL NO. 1

LOCATION: Unit N Section 31 Township 8S Range 27E

L 6380.0 H 6380.0 L/H 1.000 G .627 %CO₂ 1.22 %N₂ 3.35 %H₂S 0.00

d 2.441 Fr .010495 GH 4000.3 Pcr 670.7 Tcr 353.5

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.528	.652	.695	.762	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	600.0	600.0	600.0	600.0	0.0
4 T=(Tw+Ts)/2	561.0	561.0	561.0	561.0	0.0
5 Z(Est.)	.852	.862	.876	.890	0.000
6 TZ	478.0	483.6	491.2	499.5	0.0
7 GH/TZ	8.368	8.273	8.143	8.009	0.000
8 e ^s (Table XIV)	1.369	1.364	1.357	1.350	0.000
9 1-e ^{-s} (Table XIV)	.269	.267	.263	.259	0.000
10 Pt	1296.2	1180.2	1035.2	893.2	0.0
11 Pt ² /1000	1680.1	1392.9	1071.6	797.8	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.017	5.075	5.155	5.242	0.000
14 FcQm	2.649	3.311	3.580	3.995	0.000
15 L/H(FcQm) ²	7.019	10.964	12.820	15.956	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.890	2.924	3.374	4.140	0.000
17 Pw ² =Pt ² +Fw	1682.0	1395.8	1075.0	801.9	0.0
18 Ps ² =e ^s Pw ²	2302.0	1903.5	1458.9	1082.9	0.0
19 Ps	1517.3	1379.7	1207.9	1040.6	0.0
20 P=(Pt+Ps)/2	1406.7	1279.9	1121.5	966.9	0.0
21 Pr=(P/Pcr)	2.10	1.91	1.67	1.44	0.00
22 Tr=(T/Tcr)	1.59	1.59	1.59	1.59	0.00
23 Z(Table XI)	.852	.862	.876	.890	0.000

Company	Yates Petroleum Corporation
Well	Sandlewood REW St. No. 1
Location	N, 31-8S-27E
County	Chaves
Date	4/26/88

