

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

Form C-122

OCT 24 '90

Type Test [x] Initial [] Annual [] Special					Test Date 5/3/90	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company	
Pool Permo Penn					Formation Undes Eagle Creek	
Completion Date 3/19/89		Total Depth 8450.0'		Plug Back TD 8400.0'		Elevation 3609.5'
Farm or Lease Name New Deal AFD Fed					Well No. 1	
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 8450.0'	Perforations: From 6525.0' To 6599.0'		Unit Sec Twp Rge H 6 18S 25E
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 6444.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge H 6 18S 25E
Type Well Single					Packer Set At 6444.0'	
Producing Thru Tubing					Baro. Press. - Pa 13.2 psia.	
Resv. Temp. °F 120 @ 6490'					Mean Temp. °F 62.0	
L 6444.0'					H 6444.0'	
Gg .676					%CO2 .09	
%N2 1.09					%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	76	1275	0	0	0	0 hrs.
1.	2.067 X .750	195	12.1	86	1078	62	0	0	24 hrs.
2.	2.067 X .750	195	20.3	79	983	62	0	0	24 hrs.
3.	2.067 X .750	200	25.6	76	834	62	0	0	24 hrs.
4.	2.067 X .750	205	40.0	79	750	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.	2.709	50.19	208.20	.976	1.216	1.017	164
2.	2.709	65.01	208.20	.982	1.216	1.018	214
3.	2.709	73.88	213.20	.985	1.216	1.019	244
4.	2.709	93.42	218.20	.982	1.216	1.019	308
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	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	.31	546	1.44	.966	0.000	0.000	0.000	0.000	667.9 PSIA	377.9°R
2.	.31	539	1.43	.965	0.000	0.000	0.000	0.000	667.9 PSIA	377.9°R
3.	.32	536	1.42	.963	0.000	0.000	0.000	0.000	667.9 PSIA	377.9°R
4.	.33	539	1.43	.963	0.000	0.000	0.000	0.000	667.9 PSIA	377.9°R
5.	0.00	0	0.00	0.000	0.000	0.000	0.000	0.000	667.9 PSIA	377.9°R

Pc 1288.2 Pc2 1659.5

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	Pc2	Pc2-Pw2	Pc2	Pc2-Pw2
1.	1190.7	1091.3	1190.9	468.6	1.5413	1.3876	1.5413	1.3876
2.	992.4	996.4	992.7	666.7				
3.	717.7	847.5	718.2	941.3				
4.	582.5	763.7	583.2	1076.3				
5.	0.0	0.0	0.0	0.0				

$$ROF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 428 \text{ Mcfd}$$

Absolute Open Flow 428 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .757

Approved By:	Conducted By: Ed Perry	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 10/24/90

COMPANY Yates Petroleum Corporation LEASE New Deal AFD Fed WELL NO. 1

LOCATION: Unit H Section 6 Township 18S Range 25E

L 6444.0 H 6444.0 L/H 1.000 G .676 %CO₂ .09 %N₂ 1.09 %H₂S 0.00

d 2.441 Fr .010495 GH 4356.1 Pcr 667.9 Tcr 377.9

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.164	.214	.244	.308	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	580.0	580.0	580.0	580.0	0.0
4 T=(Tw+Ts)/2	551.0	551.0	551.0	551.0	0.0
5 Z(Est.)	.817	.831	.854	.868	0.000
6 TZ	450.0	457.7	470.5	478.1	0.0
7 GH/TZ	9.680	9.518	9.258	9.112	0.000
8 e ^s (Table XIV)	1.438	1.429	1.415	1.407	0.000
9 1-e ^{-s} (Table XIV)	.304	.300	.293	.289	0.000
10 Pt	1091.2	996.2	847.2	763.2	0.0
11 Pt ² /1000	1190.7	992.4	717.7	582.5	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	4.723	4.804	4.938	5.017	0.000
14 FcQm	.775	1.029	1.207	1.546	0.000
15 L/H(FcQm) ²	.601	1.059	1.456	2.390	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.183	.318	.427	.692	0.000
17 Pw ² =Pt ² +Fw	1190.9	992.7	718.2	583.2	0.0
18 Ps ² =e ^s Pw ²	1712.0	1418.5	1016.3	820.7	0.0
19 Ps	1308.4	1191.0	1008.1	905.9	0.0
20 P=(Pt+Ps)/2	1199.8	1093.6	927.7	834.6	0.0
21 Pr=(P/Pcr)	1.80	1.64	1.39	1.25	0.00
22 Tr=(T/Tcr)	1.46	1.46	1.46	1.46	0.00
23 Z(Table XI)	.817	.831	.854	.868	0.000

Company	Yates Petroleum Corporation
Well	New Deal AFD Fed No. 1
Location	H, 6-18S-25E
County	Eddy
Date	10/24/90

$P_c^2 - P_w^2$, THOUSANDS

