

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

Form C-122

c/5P
File

Type Test [x] Initial [] Annual [] Special						Test Date 3/2/88	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company	
Pool Pecos Slope ABO						Formation Abo	
Completion Date 5/18/87		Total Depth 4106.0'		Plug Back TD 4016.0'		Elevation 3770.9'	
Farm or Lease Name Wheeler AEE Federal						Well No. 1	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4106.0'	Perforations: From 3652.0' To 3656.0'		Unit Sec Twp Rge P 25 7S 24E	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3605.0'	Perforations: From 0.0' To 0.0'			
Type Well Single						Packer Set At 3605.0'	
Producing Thru Tubing		Resv. Temp. °F 105 @ 3654'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 3605.0'		H 3605.0'		Gg .660	%CO2 .03	%N2 9.87	%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	990	0	0	0	0 hrs.
1.	2.067 X 1.125	145	12.8	40	814	62	0	0	24 hrs.
2.	2.067 X 1.125	140	22.0	40	684	62	0	0	24 hrs.
3.	2.067 X 1.125	135	34.8	40	619	62	0	0	24 hrs.
4.	2.067 X 1.125	130	45.0	40	540	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.	6.397	45.00	158.20	1.020	1.231	1.013	366
2.	6.397	58.06	153.20	1.020	1.231	1.013	472
3.	6.397	71.81	148.20	1.020	1.231	1.012	584
4.	6.397	80.27	143.20	1.020	1.231	1.012	652
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.	.24	500	1.44	.974	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.23	500	1.44	.975	Specific Gravity Separator Gas	.660	xxxxxx
3.	.23	500	1.44	.976	Specific Gravity Flowing Fluid	xxxxxx	.660
4.	.22	500	1.44	.977	Critical Pressure	653.5 PSIA	653.5 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	348.1°R	348.1°R

Pc 1003.2 Pc2 1006.4			
NO	Pt2	Pw	Pw2
1.	684.3	828.2	685.9
2.	486.1	699.2	488.9
3.	399.7	635.7	404.1
4.	306.0	558.2	311.6
5.	0.0	0.0	0.0

$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 857 \text{ Mcfd}$	
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Absolute Open Flow	857 Mcfd @ 15.025	Angle of Slope, θ	37	Slope, n	.744
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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 4/27/88

COMPANY Yates Petroleum Corporation LEASE Wheeler AEE Federal WELL NO. 1

LOCATION: Unit P Section 25 Township 7S Range 24E

L 3605.0 H 3605.0 L/H 1.000 G .660 %CO₂ .03 %N₂ 9.87 %H₂S 0.00

d 1.995 Fr .017777 GH 2379.3 Pcr 653.5 Tcr 348.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.366	.472	.584	.652	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	565.0	565.0	565.0	565.0	0.0
4 T=(Tw+Ts)/2	543.5	543.5	543.5	543.5	0.0
5 Z(Est.)	.892	.907	.915	.925	0.000
6 TZ	484.5	493.1	497.5	502.9	0.0
7 GH/TZ	4.910	4.825	4.783	4.731	0.000
8 e ^s (Table XIV)	1.202	1.198	1.196	1.194	0.000
9 1-e ^{-s} (Table XIV)	.168	.166	.164	.163	0.000
10 Pt	827.2	697.2	632.2	553.2	0.0
11 Pt ² /1000	684.3	486.1	399.7	306.0	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.618	8.765	8.843	8.940	0.000
14 FcQm	3.155	4.138	5.162	5.831	0.000
15 L/H(FcQm) ²	9.957	17.126	26.650	34.001	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.674	2.835	4.376	5.527	0.000
17 Pw ² =Pt ² +Fw	685.9	488.9	404.1	311.6	0.0
18 Ps ² =e ^s Pw ²	824.5	585.9	483.4	372.0	0.0
19 Ps	908.0	765.4	695.3	609.9	0.0
20 P=(Pt+Ps)/2	867.6	731.3	663.7	581.6	0.0
21 Pr=(P/Pcr)	1.33	1.12	1.02	.89	0.00
22 Tr=(T/Tcr)	1.56	1.56	1.56	1.56	0.00
23 Z(Table XI)	.892	.907	.915	.925	0.000

Company	Yates Petroleum Corporation
Well	Wheeler AEE Federal No. 1
Location	P, 25-7S-24E
County	Chaves
Date	4/27/88

