

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

Form C-122

RECEIVED

OCT 29 1991

Type Test [X] Initial [] Annual [] Special					Test Date 9/26/89		O. C. D. ARTESIA OFFICE	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company				
Pool Abo				Formation Pecos Slope				Unit
Completion Date 7/15/89		Total Depth 4166.0'		Plug Back TD 4081.0'		Elevation 3870.0'		Farm or Lease Name Geneva UI Com
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4164.0'	Perforations: From 3550.0' To 3866.0'				Well No. 1
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3456.0'	Perforations: From 0.0' To 0.0'				Unit Sec Twp Rge C 20 6S 25E
Type Well Single					Packer Set At 3456.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 92 @ 4166'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 3456.0'	H 3456.0'	Gg .646	%CO2 .02	%N2 4.89	%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	75	885	0	0	0	0 hrs.
1.	2.067 X 1.250	110	28.0	78	600	62	0	0	24 hrs.
2.	2.067 X 1.250	110	35.3	81	510	62	0	0	24 hrs.
3.	2.067 X 1.250	115	45.3	75	444	62	0	0	24 hrs.
4.	2.067 X 1.250	115	50.0	76	390	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.	8.134	58.73	123.20	.983	1.244	1.009	590
2.	8.134	65.95	123.20	.980	1.244	1.009	660
3.	8.134	76.21	128.20	.986	1.244	1.010	768
4.	8.134	80.06	128.20	.985	1.244	1.010	806
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.	.19	538	1.51	.982	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.19	541	1.51	.982	Specific Gravity Separator Gas	.646	xxxxxxxxxxxxxx
3.	.19	535	1.50	.981	Specific Gravity Flowing Fluid	xxxxxx	.646
4.	.19	536	1.50	.981	Critical Pressure	662.3 PSIA	662.3 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	357.5°R	357.5°R

Pc	898.2	Pc ²	806.8				
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.	376.0	616.5	380.1	426.6	1.2756		1.2121
2.	273.7	528.2	279.0	527.8			
3.	209.0	465.0	216.2	590.6			
4.	162.6	413.0	170.5	636.2			
5.	0.0	0.0	0.0	0.0			

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 977 \text{ Mcfd}$$

Absolute Open Flow 977 Mcfd @ 15.025 Angle of Slope, θ 38 Slope, n .790
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 10/25/91

COMPANY Yates Petroleum Corporation LEASE Geneva UI Com WELL NO. 1

LOCATION: Unit C Section 20 Township 6S Range 25E

L 3456.0 H 3456.0 L/H 1.000 G .646 %CO₂ .02 %N₂ 4.89 %H₂S 0.00

d 1.995 Fr .017777 GH 2232.6 Pcr 662.3 Tcr 357.5

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.590	.660	.768	.806	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	552.0	552.0	552.0	552.0	0.0
4 T=(Tw+Ts)/2	537.0	537.0	537.0	537.0	0.0
5 Z(Est.)	.907	.920	.930	.938	0.000
6 TZ	487.0	494.1	499.3	503.7	0.0
7 GH/TZ	4.585	4.519	4.471	4.433	0.000
8 e ^s (Table XIV)	1.188	1.185	1.183	1.181	0.000
9 1-e ^{-s} (Table XIV)	.158	.156	.154	.153	0.000
10 Pt	613.2	523.2	457.2	403.2	0.0
11 Pt ² /1000	376.0	273.7	209.0	162.6	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.660	8.786	8.878	8.955	0.000
14 FcQm	5.107	5.800	6.816	7.216	0.000
15 L/H(FcQm) ²	26.084	33.645	46.458	52.066	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	4.119	5.243	7.170	7.973	0.000
17 Pw ² =Pt ² +Fw	380.1	279.0	216.2	170.5	0.0
18 Ps ² =e ^s Pw ²	451.4	330.5	255.7	201.4	0.0
19 Ps	671.9	574.9	505.6	448.8	0.0
20 P=(Pt+Ps)/2	642.5	549.0	481.4	426.0	0.0
21 Pr=(P/Pcr)	.97	.83	.73	.64	0.00
22 Tr=(T/Tcr)	1.50	1.50	1.50	1.50	0.00
23 Z(Table XI)	.907	.920	.930	.938	0.000

Company	Yates Petroleum Corporation
Well	Geneva UI Com No. 1
Location	C, 20-6S-25E
County	Chaves
Date	10/25/91

