

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

Form C-122

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Type Test [x] Initial [] Annual [] Special						Test Date 3-8-83		MAY 11 1983	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company		O. C. D.	
Pool Pecos Slope Abo						Formation Abo		Unit ARTESIA, OFFICE	
Completion Date 3-29-82		Total Depth 4272.0'		Plug Back TD 4217.0'		Elevation 3754.0'		Farm or Lease Name George "QJ" Fed	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4272.0'	Perforations: From 3839.0' To 3846.0'		Well No. 4			
Tbg Size 2.875"	Wt. 6.400#	d 2.441"	Set At 3794.0'	Perforations: From 0.0' To 0.0'		Unit Sec A 35		Twp Rge 6S 25E	
Type Well Single						Packer Set At 3800.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 105 @ 0'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 3794.0'	H 3794.0'	Gg .667	%CO2 2.63	%N2 5.48	%H2S 0.00	Prover 2.000"	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	2.067 X 1.000	0	0.0	50	996	62	0	0	0 hrs.
1.	2.067 X 1.000	110	19.0	48	860	48	0	0	24 hrs.
2.	2.067 X 1.000	110	28.0	50	770	48	0	0	24 hrs.
3.	2.067 X 1.000	110	56.0	60	580	60	0	0	24 hrs.
4.	2.067 X 1.000	105	74.0	62	440	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.	4.947	48.38	123.20	1.012	1.224	1.010	300
2.	4.947	58.73	123.20	1.010	1.224	1.010	353
3.	4.947	83.06	123.20	1.000	1.224	1.009	518
4.	4.947	93.52	118.20	.998	1.224	1.008	570
5.	0.000	0.00	0.00	0.000	0.000	0.000	3

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1.	.18	508	1.42	.980	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.18	510	1.42	.980	Specific Gravity Separator Gas	.667	xxxxxxx
3.	.18	520	1.45	.982	Specific Gravity Flowing Fluid	.667	xxxxx
4.	.18	522	1.46	.983	Critical Pressure	671.9 PSIA	671.9 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	358.4°R	358.4°R

Pc 1009.2 Pc2 1018.5				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	762.5	873.4	762.9	255.6
2.	613.4	783.6	614.0	404.5
3.	351.9	594.2	353.1	665.4
4.	205.4	454.9	207.0	811.5
5.	0.0	0.0	0.0	0.0

$$\frac{Pc^2}{Pc^2 - Pw^2} = \frac{1.2491}{(2)} \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = \frac{1.1315}{}$$

$$ROF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 645 \text{ Mcfd}$$

Absolute Open Flow 645 Mcfd @ 15.025 Angle of Slope, 0 29 Slope, n .555
Remarks:

Approved By:	Conducted By: David Weaver	Calculated By: Jim Brown	Checked By:
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Adopted 9-1-65

DATE 5/11/83

COMPANY Yates Petroleum Corporation LEASE George "QJ" Fed WELL NO. 4LOCATION: Unit A Section 35 Township 6S Range 25EL 3794.0 H 3794.0 L/H 1.000 G .667 %CO₂ 2.63 %N₂ 5.48 %H₂S 0.00d 2.441 Fr .010495 GH 2530.6 Pcr 671.9 Tcr 358.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.300	.363	.508	.570	0.000
2 Tw(W.H.°R)	508.0	508.0	520.0	522.0	0.0
3 Ts(B.H.°R)	565.0	565.0	565.0	565.0	0.0
4 T=(Tw+Ts)/2	536.5	536.5	542.5	543.5	0.0
5 Z(Est.)	.869	.882	.913	.934	0.000
6 TZ	466.4	473.2	495.4	507.5	0.0
7 GH/TZ	5.426	5.348	5.108	4.986	0.000
8 e ^s (Table XIV)	1.226	1.222	1.211	1.206	0.000
9 1-e ^{-s} (Table XIV)	.184	.182	.174	.171	0.000
10 Pt	873.2	783.2	593.2	453.2	0.0
11 Pt ² /1000	762.5	613.4	351.9	205.4	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	4.895	4.966	5.201	5.327	0.000
14 FcQm	1.466	1.802	2.641	3.038	0.000
15 L/H(FcQm) ²	2.150	3.247	6.973	9.228	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.396	.590	1.215	1.574	0.000
17 Pw ² =Pt ² +Fw	762.9	614.0	353.1	207.0	0.0
18 Ps ² =e ^s Pw ²	935.0	750.4	427.6	249.5	0.0
19 Ps	967.0	866.2	653.9	499.5	0.0
20 P=(Pt+Ps)/2	920.1	824.7	623.6	476.4	0.0
21 Pr=(P/Pcr)	1.37	1.23	.93	.71	0.00
22 Tr=(T/Tcr)	1.50	1.50	1.51	1.52	0.00
23 Z(Table XI)	.869	.882	.913	.934	0.000

Company	Yates Petroleum Corporation
Well	George "QJ" Fed No. 4
Location	R, 35-6S-25E
County	Chaves
Date	5/11/83

