

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

Form C-122

RECEIVED

JUL 13 1983

Type Test [x] Initial [] Annual [] Special				Test Date 5/22/83		JUL 13 1983	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		O. C. D.	
Pool Pecos Slope				Formation Abo		ARTESIA, OFFICE	
Completion Date 3/27/82		Total Depth 4100.0'		Plug Back TD 3947.0'		Elevation 3649.5'	
Farm or Lease Name Williamson "LC" Fed				Well No. 4			
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4076.0'	Perforations: From 3613.0' To 3781.0'		Unit Sec Twp Rge M 9 8S 25E	
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 3625.0'	Perforations: From 0.0' To 0.0'			
Type Well Single				Packer Set At 3625.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 94 @ 3625'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
State New Mexico							
L 3625.0'	H 3625.0'	Gg .672	%CO2 1.44	%N2 9.84	%H2S 0.00	Prover 0.000"	Meter Run 2.000"
Taps Flange							

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Size	Orifice 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	0	957	0	0	0	0 hrs.
1.	2.067	X .625	95	11.0	70	746	62	0	0	24 hrs.
2.	2.067	X .625	100	14.0	70	530	62	0	0	24 hrs.
3.	2.067	X .625	100	18.0	70	459	62	0	0	24 hrs.
4.	2.067	X .625	120	22.0	70	328	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.	1.366	34.50	108.20	.991	1.220	1.008	78
2.	1.366	39.81	113.20	.991	1.220	1.008	91
3.	1.366	45.14	113.20	.991	1.220	1.008	103
4.	1.366	54.13	133.20	.991	1.220	1.010	123
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.	.16	530	1.52	.984	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.17	530	1.52	.984	Specific Gravity Separator Gas	.672	xxxxxxxxxxxxxx
3.	.17	530	1.52	.984	Specific Gravity Flowing Fluid	xxxxxx	.672
4.	.20	530	1.52	.981	Critical Pressure	659.3	PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	349.8°R	349.8°R

Pc	970.2	Pc2	941.3				
NO	Pt2	Pw	Pw2	Pc2-Pw2	(1)	Pc2	(2)
1.	576.4	759.2	576.4	364.9	$\frac{Pc2}{Pc2-Pw2} = 1.1412$	$\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.1412$	
2.	295.1	543.2	295.1	646.2			
3.	223.0	472.3	223.0	718.3			
4.	116.4	341.3	116.5	824.8			
5.	0.0	0.0	0.0	0.0			

$$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 141 \text{ Mcfd}$$

Absolute Open Flow 141 Mcfd @ 15.025 Angle of Slope, 0 45 Slope, n1.000
Remarks: _____

Approved By:	Conducted By: David Weaver	Calculated By: Andie Carpenter	Checked By:
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Adopted 9-1-65

DATE 7/15/83

COMPANY Yates Petroleum Corporation LEASE Williamson "LC" Fed WELL NO. 4

LOCATION: Unit M Section 9 Township 8S Range 25E

L 3625.0 H 3625.0 L/H 1.000 G .672 %CO₂ 1.44 %N₂ 9.84 %H₂S 0.00

d 2.441 Fr .010495 GH 2436.0 Pcr 659.3 Tcr 349.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.078	.091	.103	.123	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	554.0	554.0	554.0	554.0	0.0
4 T=(Tw+Ts)/2	538.0	538.0	538.0	538.0	0.0
5 Z(Est.)	.895	.923	.933	.952	0.000
6 TZ	481.3	496.8	502.1	512.2	0.0
7 GH/TZ	5.061	4.903	4.851	4.756	0.000
8 e ^s (Table XIV)	1.209	1.202	1.200	1.195	0.000
9 1-e ^{-s} (Table XIV)	.173	.168	.166	.163	0.000
10 Pt	759.2	543.2	472.2	341.2	0.0
11 Pt ² /1000	576.4	295.1	223.0	116.4	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.054	5.214	5.270	5.376	0.000
14 FcQm	.396	.472	.541	.663	0.000
15 L/H(FcQm) ²	.157	.223	.292	.439	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.027	.037	.049	.072	0.000
17 Pw ² =Pt ² +Fw	576.4	295.1	223.0	116.5	0.0
18 Ps ² =e ^s Pw ²	696.8	354.7	267.5	139.2	0.0
19 Ps	834.7	595.5	517.2	373.1	0.0
20 P=(Pt+Ps)/2	797.0	569.4	494.7	357.2	0.0
21 Pr=(P/Pcr)	1.21	.86	.75	.54	0.00
22 Tr=(T/Tcr)	1.54	1.54	1.54	1.54	0.00
23 Z(Table XI)	.895	.923	.933	.952	0.000

Company	Yates Petroleum Corporation
Well	Williamson "LC" Fed No. 4
Location	M, 9-8S-25E
County	Chaves
Date	7/15/83

