

NEW MEXICO OIL CONSERVATION COMMISSION -
MULTIPOINT JD ONE POINT BACK PRESSURE TEST FOR WELL

Form C-122

C/SF

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 03/11/2000			
Company Yates Petroleum Corp				Connection Agave Energy Company			
Pool Pecos Slope				Formation Abo			
Completion Date 03/08/2000		Total Depth 4120		Plug Back TD 4074		Elevation 3699	
Csg. Size 4.500	Wt. 10.500	d 4.052	Set At 5153	Perforations: From 3611 To 3848		Farm/Lease Name Reinauer RC Federal	
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 3990	Perforations: From 3611 To 3848		Well No.	
Type Well Single				Packer Set At 4260		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 110 @ 4300		Mean Temp. °F 62		Baro. Press. - Pa 13.2	
						State New Mexico	
L 5153	H 5153	Gg 0.680	%CO ₂ 0.065	%N ₂ 17.250	%H ₂ S 0.000	Prover 0.000	Meter Run 2.000
						Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow
Sl.	0.000	x	0.000	0	0.0	0	260	0			0
1.	2.067	x	0.750	105	22.0	60	130	60			24
2.	2.067	x	0.750	105	23.0	60	122	60			24
3.	2.067	x	0.750	105	24.0	60	113	60			24
4.	2.067	x	0.750	105	25.0	60	105	60			24
5.		x									

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	$\sqrt{hwP_m}$	Pressure P _m	Flow Temp Factor Ft	Gravity Factor F _g	Super Compress. Factor, F _{ov}	Rate of Flow Q, Mcfd
1.	2.709	51.0	118.2	1.0000	1.213	1.008	169
2.	2.709	52.1	118.2	1.0000	1.213	1.008	173
3.	2.709	53.3	118.2	1.0000	1.213	1.008	176
4.	2.709	54.4	118.2	1.0000	1.213	1.008	180
5.							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	0.18	520	1.56	0.983	0	
2.	0.18	520	1.56	0.983	0.000	Deg.
3.	0.18	520	1.56	0.983	0.680	XXXXXXXXXX
4.	0.18	520	1.56	0.983	XXXXXXXXXX	0.680
5.						

P _c 273.2	P _c 74.6
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NO	P _t	P _w	P _w ²	P _c ² - P _w ²
1.	20.5	145.1	21.1	53.6
2.	18.3	137.4	18.9	55.8
3.	15.9	128.6	16.5	58.1
4.	14.0	120.9	14.6	60.0
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.338$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 203$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.178$

Absolute Open Flow	203	Mcf/d @ 15.025	Angle of Slope θ	29	Slope, n	0.562
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Remarks:

Approved By Commission:	Conducted By: Bob Anderson	Calculated By: Katie Brunson	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 03/11/2000

COMPANY Yates Petroleum Corp LEASE Reinauer RC Federal WELL NO. 2

LOCATION: Unit G Section 20 Township 7S Range 25E

L 5153 H 5153 L/H 1.000 G 0.680 %CO₂ 0.065 %N₂ 17.250 %H₂S 0.000

d 1.995 Fr 0.017777 GH 3504.0 Pcr 640.6 Tcr 334.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.169	0.173	0.176	0.180	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	570	570	570	570	
4 T = (Tw+Ts) / 2	544.7	544.7	544.7	544.7	
5 Z (Est.)	0.982	0.983	0.984	0.985	
6 TZ	534.8	535.3	535.9	536.5	
7 GH / TZ	6.552	6.545	6.538	6.532	
8 e ^s (Table XIV)	1.279	1.278	1.278	1.278	
9 1-e ^{-s} (Table XIV)	0.218	0.218	0.217	0.217	
10 Pt	143.2	135.2	126.2	118.2	
11 Pt ² / 1000	20.5	18.3	15.9	14.0	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.507	9.517	9.527	9.537	
14 FcQm	1.61	1.64	1.68	1.72	
15 L / H(FcQm) ²	2.6	2.7	2.8	2.9	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	0.56	0.59	0.61	0.64	
17 Pw ² = Pt ² +Fw	21.1	18.9	16.5	14.6	
18 Ps ² = e ^s Pw ²	26.9	24.1	21.1	18.7	
19 Ps	164.1	155.3	145.4	136.6	
20 P = (Pt+Ps) / 2	153.7	145.2	135.8	127.4	
21 Pr = (P / Pcr)	0.24	0.23	0.21	0.20	
22 Tr = (T / Tcr)	1.63	1.63	1.63	1.63	
23 Z (Table XI)	0.982	0.983	0.984	0.985	

Company: Yates Petroleum Corp
Well: Reinauer RC Federal #2
Location: G 20-7S-25E

County: Chaves
Date: 03-11-2000

