

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

Form C-122

C/SF

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3/11/2000	
Company YATES PETROLEUM CORPORATION			Connection AGAVE ENERGY		
Pool PECOS SLOPE			Formation ABO		Unit
Completion Date 2/25/2000		Total Depth 4119		Plug Back TD 4063	Elevation 3829
Farm or Lease Name REINAUER RC FED					
Csg. Size 4.500	Wt. 10.500	d 4.000	Set At 4119	Perforations: From 3634 To 3886	
Well No. 3					
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 3621	Perforations: From 3634 To 3886	
Unit Sec. Twp. Rge. I 20 7S 25E					
Type Well Single				Packer Set At 3621	
Country CHAVES					
Producing Thru Tubing		Resv. Temp. °F 100 @ 4119		Mean Temp. °F 62	
				Baro. Press. - Pa 13.2	
State NEW MEXICO					
L 4119	H 4119	Gg 0.698	%CO ₂ 0.062	%N ₂ 2.000	%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	
Sl.	0.000	x	0.000	0	0.0	0	200	0			0
1.	2.067	x	0.750	120	20.0	60	140	60			24
2.	2.067	x	0.750	120	22.0	60	133	60			24
3.	2.067	x	0.750	120	24.0	60	127	60			24
4.	2.067	x	0.750	120	26.0	60	120	60			24
5.		x									

RATE OF FLOW CALCULATIONS

NO	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	2.709	51.6	133.2	1.0000	1.197	1.014	170
2.	2.709	54.1	133.2	1.0000	1.197	1.014	178
3.	2.709	56.5	133.2	1.0000	1.197	1.014	186
4.	2.709	58.8	133.2	1.0000	1.197	1.014	194
5.							

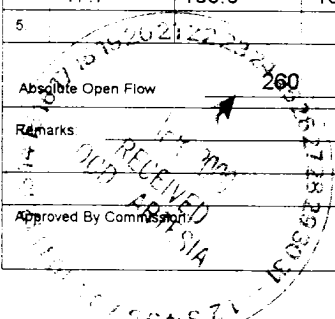
NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl
					0	
1.	0.20	520	1.36	0.972	A.P.I. Gravity of Liquid Hydrocarbons	0.000
2.	0.20	520	1.36	0.972	Specific Gravity Separator Gas	0.698
3.	0.20	520	1.36	0.972	Specific Gravity Flowing Fluid	0.698
4.	0.20	520	1.36	0.972	Critical Pressure	665 P.S.I.A.
5.					Critical Temperature	383 °R

Pc	Pc'	Pw	Pw'	Pc' - Pw'
213.2	45.5			
NO	Pc'	Pw	Pw'	Pc' - Pw'
1.	23.5	154.7	23.9	21.5
2.	21.4	147.9	21.9	23.6
3.	19.7	142.2	20.2	25.2
4.	17.7	135.5	18.3	27.1
5.				

(1) $\frac{Pc'}{Pc' - Pw'} = 1.801$ (2) $\left[\frac{Pc'}{Pc' - Pw'} \right]^n = 1.398$

AOF = Q $\left[\frac{Pc'}{Pc' - Pw'} \right]^n = 260$

Absolute Open Flow 260 Mcfd @ 15.025		Angle of Slope θ 30	Slope, n 0.569
Remarks			
Approved By Commission		Conducted By: BOB ANDERSON	Calculated By: MYKOL RENO
		Checked By: PINSON MCWHORTER	



WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 3/11/2000

COMPANY YATES PETROLEUM CORPORATION LEASE REINAUER RC FED WELL NO. 3

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

L 4119 H 4119 L / H 1.000 G 0.698 %CO₂ 0.062 %N₂ 2.000 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2875.1 Pcr 665.5 Tcr 382.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.170	0.178	0.186	0.194	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	560	560	560	560	
4 T = (Tw+Ts) / 2	539.7	539.7	539.7	539.7	
5 Z (Est.)	0.969	0.971	0.972	0.973	
6 TZ	523.2	523.9	524.6	525.3	
7 GH / TZ	5.495	5.487	5.481	5.473	
8 e ^s (Table XIV)	1.229	1.228	1.228	1.228	
9 1-e ^{-s} (Table XIV)	0.186	0.186	0.186	0.186	
10 Pt	153.2	146.2	140.2	133.2	
11 Pt ² / 1000	23.5	21.4	19.7	17.7	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.301	9.314	9.325	9.338	
14 FcQm	1.58	1.66	1.73	1.81	
15 L / H(FcQm) ²	2.5	2.8	3.0	3.3	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	0.46	0.51	0.56	0.61	
17 Pw ² = Pt ² +Fw	23.9	21.9	20.2	18.3	
18 Ps ² = e ^s Pw ²	29.4	26.9	24.8	22.5	
19 Ps	171.5	164.0	157.6	150.1	
20 P = (Pt+Ps) / 2	162.3	155.1	148.9	141.6	
21 Pr = (P / Pcr)	0.24	0.23	0.22	0.21	
22 Tr = (T / Tcr)	1.41	1.41	1.41	1.41	
23 Z (Table XI)	0.969	0.971	0.972	0.973	