

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 3/10/2000	
Company YATES PETROLEUM CORPORATION				Connection AGAVE ENERGY		
Pool Wildcat				Formation Morrow		Unit
Completion Date 1/19/2000		Total Depth 10098		Plug Back TD 10088		Elevation 4517
Farm or Lease Name Big Freddy Unit						
Csg. Size 4.500	Wt. 11.600	d 4.000	Set At 9854	Perforations: From 9932 To 9942		Well No. 2
Tbg. Size 2.375	Wt. 4.600	d 2.041	Set At 9854	Perforations: From 9932 To 9942		Unit Sec. Twp. Rge. F 10 23S 22E
Type Well Single				Packer Set At 9854		County EDDY
Producing Thru Tubing		Resv. Temp. °F 152 @ 9854		Mean Temp. °F 62		Baro. Press. - Pa 13.2
State NEW MEXICO						
L 5702	H 5702	Gg 0.585	%CO ₂ 0.671	%N ₂ 0.257	%H ₂ S 0.000	Prover 0.000
Meter Run 3.000					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	800	0			0
1.	3.068	x	1.000	700	12.0	60	750	60			24
2	3.068	x	1.000	700	18.0	60	733	60			24
3	3.068	x	1.000	700	25.0	60	717	60			24
4	3.068	x	1.000	700	32.0	60	700	60			24
5		x									

RATE OF FLOW CALCULATIONS

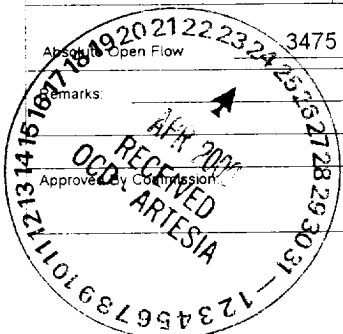
NO	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.789	92.5	713.2	1.0000	1.307	1.058	613
2	4.789	113.3	713.2	1.0000	1.307	1.058	751
3	4.789	133.5	713.2	1.0000	1.307	1.058	884
4	4.789	151.1	713.2	1.0000	1.307	1.058	1001
5							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl
					0	
					A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
1	1.06	520	1.49	0.894	Specific Gravity Separator Gas	0.585 xxxxxxxxxxxx
2	1.06	520	1.49	0.894	Specific Gravity Flowing Fluid	xxxxxxxxxxx 0.585
3	1.06	520	1.49	0.894	Critical Pressure	675 P.S.I.A. 675 P.S.I.A.
4	1.06	520	1.49	0.894	Critical Temperature	349 °R 349 °R
5						

NO	Pc	Pw	Pw²	Pc² - Pw²	(1) $\frac{Pc²}{Pc² - Pw²} =$	(2) $\left[\frac{Pc²}{Pc² - Pw²} \right]^n =$
	813.2	661.3			5.727	3.929
1	582.5	767.1	588.5	72.8		
2	556.8	752.3	565.9	95.4		
3	533.2	738.8	545.8	115.5		
4	508.7	724.5	524.9	136.4		
5						

Absolute Open Flow	3475	Mcf @ 15.025	Angle of Slope θ	38	Slope, n	0.784
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Remarks:		
Conducted By: TGR Pumping	Calculated By: MYKOL RENO	Checked By: PINSON MCWHORTER



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

DATE 3/10/2000

COMPANY YATES PETROLEUM CORPORATION LEASE Big Freddy Unit WELL NO. 2

LOCATION: Unit F Section 10 Township 23S Range 22E

L 5702 H 5702 L/H 1.000 G 0.585 %CO₂ 0.671 %N₂ 0.257 %H₂S 0.000

d 2.041 Fr 0.016749 GH 3335.7 P_{cr} 675.0 T_{cr} 349.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.613	0.751	0.884	1.001	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	612	612	612	612	
4 T = (Tw+Ts) / 2	565.7	565.7	565.7	565.7	
5 Z (Est.)	0.913	0.915	0.916	0.918	
6 TZ	516.4	517.3	518.2	519.1	
7 GH / TZ	6.459	6.448	6.437	6.426	
8 e ^s (Table XIV)	1.274	1.274	1.273	1.273	
9 1-e ^s (Table XIV)	0.215	0.215	0.214	0.214	
10 Pt	763.2	746.2	730.2	713.2	
11 Pt ² / 1000	582.5	556.8	533.2	508.7	
12 Fr (Table XV)	0.016749	0.016749	0.016749	0.016749	
13 Fc = FrTZ	8.650	8.665	8.679	8.695	
14 FcQm	5.30	6.50	7.68	8.70	
15 L / H(FcQm) ²	28.1	42.3	58.9	75.7	
16 Fw = L / H(FcQm) ² (1-e ^s)	6.04	9.08	12.64	16.21	
17 Pw ² = Pt ² +Fw	588.5	565.9	545.8	524.9	
18 Ps ² = e ^s Pw ²	749.8	720.7	694.9	667.9	
19 Ps	865.9	848.9	833.6	817.2	
20 P = (Pt+Ps) / 2	814.6	797.6	781.9	765.2	
21 Pr = (P / P _{cr})	1.21	1.18	1.16	1.13	
22 Tr = (T / T _{cr})	1.62	1.62	1.62	1.62	
23 Z (Table XI)	0.913	0.915	0.916	0.918	

Company: YATES PETROLEUM CORPORATION
Well: Big Freddy Unit #2
Location: F 10-23S-22E

County: EDDY
Date: 3-10-2000

