

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIF T AND ONE POINT BACK PRESSURE TEST F GAS WELL

Form C-122

0151

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4/09/1999			
Company Yates Petroleum Corp				Connection Agave Energy 30-015-30464					
Pool Logan Draw Morrow				Formation Morrow Logan Draw Morrow				Unit OCC-ARIESIA	
Completion Date 3/27/1999		Total Depth 9370		Plug Back TD 9307		Elevation 3422		Farm or Lease Name Dobsequis ASQ Fed Com	
Csg. Size 4.500	Wt 11.600	d 4.000	Set At 9370	Perforations: From 9076 To 9097		Well No. 1			
Tbg. Size 2.375	Wt 4.600	d 1.995	Set At 9005	Perforations: From 9076 To 9097		Unit P		Sec. 30	Twp. 17S
Type Well Single				Packer Set At 9015		County Eddy			
Producing Thru Tubing		Resv. Temp. °F 154 @ 8975		Mean Temp. °F 62		Baro. Press. - Pa 13.2		State New Mexico	
L 9370	H 9370	Gg 0.620	%CO ₂ 0.552	%N ₂ 0.440	%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
SI.	0.000	x	0.000	0	0.0	0	2510	0			0
1.	2.067	x	1.375	1900	11.0	60	2350	60			24
2.	2.067	x	1.375	1900	28.0	60	2200	60			24
3.	2.067	x	1.375	1900	48.0	60	2050	60			24
4.	2.067	x	1.375	1900	70.0	60	1900	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.	10.200	145.1	1913.2	1.0000	1.270	1.160	2180
2.	10.200	231.5	1913.2	1.0000	1.270	1.160	3479
3.	10.200	303.0	1913.2	1.0000	1.270	1.160	4555
4.	10.200	366.0	1913.2	1.0000	1.270	1.160	5501
5.							

NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	2.84	520	1.44	0.743	0	
2.	2.84	520	1.44	0.743	0.000	
3.	2.84	520	1.44	0.743	0.620	XXXXXXX
4.	2.84	520	1.44	0.743	0.620	XXXXXXX
5.						

NO.	Pc	Pw	Pwf	Pc ² - Pw ²	(1) $\frac{Pc^2}{Pc^2 - Pw^2} =$	(2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n =$
1.	5584.7	2388.4	5704.4	662.2	4.003	3.432
2.	4898.3	2280.7	5201.5	1165.0		
3.	4256.8	2185.4	4776.2	1590.4		
4.	3660.3	2102.0	4418.3	1948.3		
5.						

Absolute Open Flow		15632	Mcf @ 15.025	Angle of Slope θ	42	Slope, n	0.889
Remarks:							
Approved By Commission:		Conducted By Tony Vasquez		Calculated By Mykol Reno		Checked By Pinson McWhorter	

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

DATE 4/09/1999

COMPANY Yates Petroleum Corp LEASE Dosequis ASQ Fed Com WELL NO. 1

LOCATION: Unit P Section 30 Township 17S Range 27E

L 9370 H 9370 L/H 1.000 G 0.620 %CO₂ 0.552 %N₂ 0.440 %H₂S 0.000

d 1.995 Fr 0.017777 GH 5809.4 Pcr 673.0 Tcr 360.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	2.180	3.479	4.555	5.501	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	614	614	614	614	
4 T = (Tw+Ts) / 2	566.7	566.7	566.7	566.7	
5 Z (Est.)	0.810	0.807	0.807	0.807	
6 TZ	458.7	457.5	457.1	457.5	
7 GH / TZ	12.664	12.698	12.709	12.699	
8 e ^s (Table XIV)	1.607	1.610	1.611	1.610	
9 1-e ^{-s} (Table XIV)	0.378	0.379	0.379	0.379	
10 Pt	2363.2	2213.2	2063.2	1913.2	
11 Pt ² / 1000	5584.7	4898.3	4256.8	3660.3	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	8.155	8.133	8.126	8.132	
14 FcQm	17.78	28.29	37.01	44.73	
15 L / H(FcQm) ²	316.2	800.5	1370.0	2001.0	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	119.64	303.27	519.37	757.93	
17 Pw ² = Pt ² +Fw	5704.4	5201.5	4776.2	4418.3	
18 Ps ² = e ^s Pw ²	9168.4	8373.9	7692.1	7113.9	
19 Ps	3027.9	2893.8	2773.5	2667.2	
20 P = (Pt+Ps) / 2	2695.6	2553.5	2418.3	2290.2	
21 Pr = (P / Pcr)	4.01	3.79	3.59	3.40	
22 Tr = (T / Tcr)	1.57	1.57	1.57	1.57	
23 Z (Table XI)	0.810	0.807	0.807	0.807	

