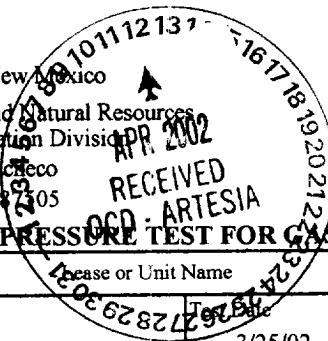


Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacific
Santa Fe, NM 87505

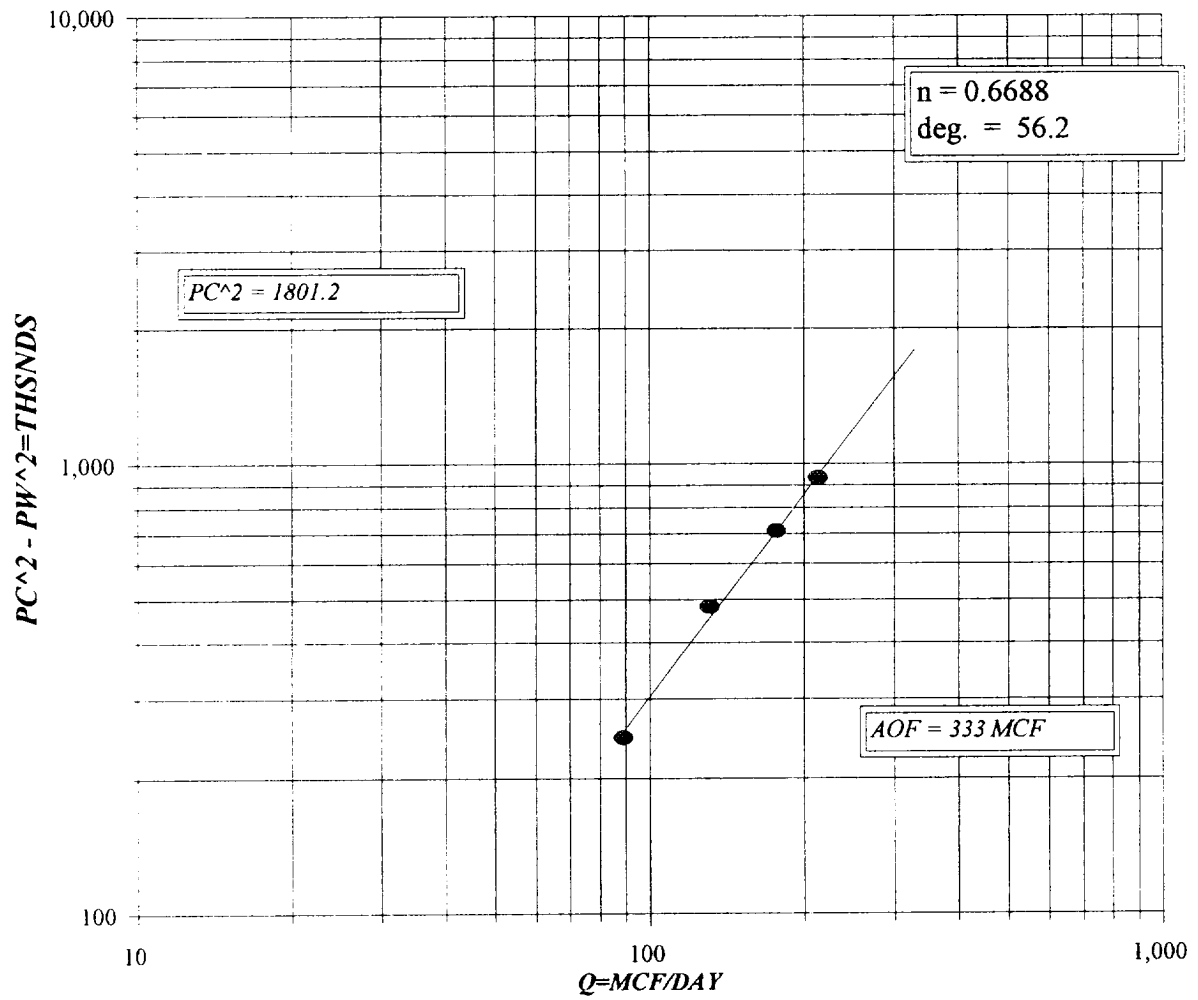
Form C-122
Revised October, 1999



MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator YATES DRILLING COMPANY				Lease or Unit Name MILLENNIUM 34 FED. COM.			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3/25/02		Well No. 1	
Completion Date 1/16/02		Total Depth 11430		Plug Back TD 11397		Elevation 3531 GL	
Unit Ltr - Sec - TWP - Rge M 34 17 29							
Csg. Size 3 1/2	Wt. d	Set At 11429	Perforations: From: 10874 To: 10919		County EDDY		
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 9437	Perforations: From: OPEN To: ENDED		Pool GRAYBURG MORROW	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 9385		Formation MORROW	
Producing Thru Tbg. Size		Reservoir Temp. °F 182.7 @ 10874		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
Connection AGAVE							
L 10874	H 10874	Gg 0.678	%CO ₂ 0.806	%N ₂ 0.767	%H ₂ S N/A	Prover N/A	Meter Run 2.067
						Taps FLG	
FLOW DATA				TUBING DATA		CASING DATA	
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h _w	Temp. °F	Press p.s.i.g.	Temp. °F
							Duration of Flow
SI						1329	PKR
1	2 X	0.375	241	41	50	1234	"
2	2 X	0.375	242	100	62	1136	"
3	2 X	0.375	242	177	74	1032	"
4	2 X	0.375	243	248	77	919	"
5							
RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 Hour)		$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress Factor F _{pv}
							Rate of Flow Q, Mcfd
1							89
2							131
3	MEASURED		BY	TOTAL		FLOW	METER
4							177
5							214
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY GAS Mcf/bbl.		
1					A.P. I. Gravity of Liquid Hydrocarbons DRY Deg.		
2					Specific Gravity Separator Gas 0.678 XXXXXXXX		
3		N/A			Specific Gravity Flowing Fluid XXXXXX		
4					Critical Pressure 669 P.S.I.A. P.S.I.A.		
5					Critical Temperature 382 R. R.		
P _c 1342.2		P _{c2} 1801.2					
No.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.933$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.554$		
1		1247.2	1555.6	245.9			
2		1149.3	1320.9	480.6			
3		1045.4	1092.8	708.7			
4		932.5	869.6	931.9			
5							
Absolute Open Flow 333				Mcf/d @ 15.025	Angle of Slope (°): 56.2	Slope n: 0.6688	
Remarks: NO FLUID PRODUCED							
Approved By Division:		Conducted By: JARREL SERVICES, INC.		Calculated By: BM		Checked By: BM	

YATES DRILLING COMPANY
MILLENNIUM 34 FED. COM. # 1



COMPANY : YATES DRILLING CO. LEASE : M. 34 FED. COM. WELL NO. : 1 PC = 1342.2 PC2 = 1801.5 *
 UNIT : M SECTION : 34 TOWNSHIP : 17 *
 L : 10874 H : 10874 L/H : 1 G/GMIX : 0.678 Pt2 = 1555.5 Pw = 1247.2 *
 %CO2 : 0.806 %N2 : 0.767 H2S : DATE : 3-25-02 1320.7 1149.3 *
 d : 2.441 Fr : 0.010763 GH : 7372.6 RANGE : 2 1092.4 1045.4 *
 869.0 932.5 *
 =====

VOL 1 : 89 PSIA 1 : 1247.2 RESV.TEMP 182.7 Pc2-Pw2= 245.9 Pw2 = 1555.6 *
 VOL 2 : 131 PSIA 2 : 1149.2 480.6 1320.9 *
 VOL 3 : 177 PSIA 3 : 1045.2 SHUT-IN PR= 1342.2 708.7 1092.8 *
 VOL 4 : 214 PSIA 4 : 932.2 931.9 869.6 *
 *

PCR : 669 n = 0.669 ✓ *
 TCR : 382 *

Pc2/(Pc2-Pw2) = 7.326 *
 3.748 *
 2.542 *
 1.933 ✓ *

LINE		RATE 1		RATE 2		RATE 3		RATE 4		
		1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND	
1	QM	0.089	0.089	0.131	0.131	0.177	0.177	0.214	0.214	
2	TW	534	534	534	534	534	534	534	534	[Pc2/Pc2-Pw2]n = 3.788
3	Ts	642.7	642.7	642.7	642.7	642.7	642.7	642.7	642.7	2.420
4	T	588.4	588.4	588.4	588.4	588.4	588.4	588.4	588.4	1.866
	PR (est)	1.86		1.72		1.56		1.39		1.554 ✓
5	Z(est)	0.826	0.808	0.835	0.818	0.846	0.829	0.858	0.843	
6	TZ	486.0	475.7	491.5	481.3	497.8	487.9	505.0	495.7	AOF= Q 0.337
7	GH/TZ	15.170	15.499	14.999	15.317	14.810	15.110	14.598	14.872	0.317
8	eS	1.766	1.788	1.755	1.776	1.743	1.762	1.729	1.747	0.330
9	1-e-S	0.434	0.441	0.430	0.437	0.426	0.433	0.422	0.427	0.333 ✓
10	Pt	1247.2	1247.2	1149.2	1149.2	1045.2	1045.2	932.2	932.2	
11	Pt2 /1000	1555.5	1555.5	1320.7	1320.7	1092.4	1092.4	869.0	869.0	
12	Fr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	
13	Fc=FrTZ	5.231	5.120	5.291	5.180	5.358	5.252	5.436	5.336	
14	FcQm	0.47	0.46	0.69	0.68	0.95	0.93	1.16	1.14	
15	L/H(FcQm)	0.2	0.2	0.5	0.5	0.9	0.9	1.4	1.3	
16	Fw	0.094027	0.091521	0.206637	0.201245	0.383278	0.373740	0.570436	0.5573249	
17	Pw2	1555.6	1555.6	1320.9	1320.9	1092.8	1092.8	869.6	869.6	
18	Ps2	2747.6	2781.7	2318.1	2345.9	1904.3	1925.9	1503.3	1518.8	
19	Ps	1657.6	1667.8	1522.5	1531.6	1380.0	1387.8	1226.1	1232.4	
20	P	1452.4	1457.5	1335.9	1340.4	1212.6	1216.5	1079.1	1082.3	
21	Pr	2.17	2.18	2.00	2.00	1.81	1.82	1.61	1.62	
22	Tr	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	
23	Z	0.808	0.808	0.818	0.818	0.829	0.829	0.843	0.842	FORM C122-D

FORM C122-D



Laboratory Services, Inc.

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Jarrel Services Inc.
Attention: Mr. Donnie Dickerson
P. O. Box 1230
Hobbs, New Mexico 88240

SAMPLE:
IDENTIFICATION: Millenium 34 Fed. Com. #1
COMPANY: Yates Drilling Co.
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 3/25/02
ANALYSIS DATE: 3/26/02
PRESSURE - PSIG
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Donnie Dickerson
ANALYSIS BY: Vickie Biggs

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H ₂ S)		
Nitrogen (N ₂)	0.767	
Carbon Dioxide (CO ₂)	0.806	
Methane (C ₁)	85.889	
Ethane (C ₂)	6.914	1.845
Propane (C ₃)	2.923	0.804
I-Butane (IC ₄)	0.395	0.129
N-Butane (NC ₄)	0.842	0.265
I-Pentane (IC ₅)	0.257	0.094
N-Pentane (NC ₅)	0.281	0.102
Hexane Plus (C ₆ +)	0.926	0.402
	100.000	3.641
BTU/CU.FT. - DRY	1169	MOLECULAR WT. 19.6778
AT 14.650 DRY	1166	
AT 14.650 WET	1145	
AT 14.73 DRY	1172	
AT 14.73 WET	1152	
SPECIFIC GRAVITY -		
CALCULATED	0.678	
MEASURED		