

DELIVERABILITY TEST REPORT

Operator Yates Petroleum Corporation						Lease or Unit Name RL Burns ATL											
Type Test ☐ Initial ☐ Annual ☒ Special						Test Date 7/17/07			Well No 1								
Completion Date 6/16/2000			Total Depth 12593'			Plug Back TD 12225'			Elevation 3985'			Unit Ltr - Sec - TWP - Rge P 11 16S 35E					
Csg Size 5.500		Wt 17.00		d 4.892		Set At 12593'		Perforations. From 12204' To 12211'				County Lea					
Thg Size 2.875		Wt 6.500		d 2.441		Set At 11700'		Perforations From To.				Pool North Shoebar Atoka Gas and Townsend Morrow					
Type Well - Single - Bradenhead - G G or G O Multiple Single						Packer Set At 11700'			Formation Atoka and Morrow								
Producing Thru Tubing		Reservoir Temp °F 187		Mean Annual Temp °F 60		Baro. Press - P _a 13.2			Connection Agave Energy Company								
L 11700'		H 12004'		Gg 0.689		%CO ₂ 0.635		%N ₂ 0.976		%H ₂ S 0.000		Prover 0.000		Meter Run 4.029		Taps Flange	

FLOW DATA							TUBING DATA		CASING DATA		Duration Of Flow
No	Prover Line Size	X	Onifice Size	Press p s i g.	Diff h _w	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	700	60			
1	4.026	X	0.625	37.0	66.0	85.5	100	60			24 hr.

RATE OF FLOW CALCULATIONS							
No	COEFFICIENT (24 HOUR)	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	1.845	58.7	52.2	0.9763	1.205	1.004	125
No	P _r	Temp °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>N/A</u> Mcf/bbl		
1	0.0747	546	1.432	0.991	A P. I Gravity of Liquid Hydrocarbons <u>60.0</u> Deg		
P _d <u>42</u>				Specific Gravity Separator Gas <u>0.689</u> XXXXXXXXXX			
P _d ² <u>1.764</u>				Specific Gravity Flowing Fluid <u>XXXXXX</u> N/A			
P _c <u>713.2</u> P _c ² <u>508.7</u>				Critical Pressure <u>672</u> P S I A N/A P S I A			
P _r _____ P _r ² _____				Critical Temperature <u>384</u> R N/A R			

No	P _i	P _i ²	P _c ² - P _i ²	P _w	P _w ²	P _c ² - P _w ²	P _s	P _s ²	P _r ² - P _s ²
1				114.3	13.06	495.6			

$$\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right] = \left[\frac{506.9}{495.6} \right] = 1.023$$

$$\text{Log} \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right] = 0.00988$$

$$\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 1.016$$

$$n \text{ Log} \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right] = 0.00716$$

$$\text{Deliv} = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = (125) (1.016)$$

Deliv 127 Mcfd

n 0.7245

Previous back-pressure test

Commission Chris Williams 10/10/07

Company George Freeman

Others _____

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

DATE 7/17/2007

COMPANY Yates Petroleum Corporation LEASE R.L. Burns ATL WELL NO. 1

LOCATION: Unit P Section 11 Township 16S RANGE 35E

L 11700 H 12004 L/H 0.974 G 0.689 %CO2 0.635 %N2 0.976 %H2S 0.000

d 2.441 Fr 0.010763 GH 8271 Pcr 672 Tcr 384

LINE	1 st Trial	2 nd Trial	3 rd Trial	4 th Trial	5 th Trial
1 Qm	125	125			
2 Tw(W.H.*R)	520	520			
3 Ts(B.H.*R)	647	647			
4 T = (Tw + Ts) / 2	583.5	583.5			
5 Z (Est.)	0.981	0.981			
6 TZ	572.7	572.5			
7 GH / TZ	14.44	14.45			
8 e ^s (Table XIV)	1.719	1.719			
9 1-e ^{-s} (Table XIV)	0.418	0.418			
10 Pt	113.2	113.2			
11 Pt ² / 1000	12.814	12.814			
12 Fr (Table XV)	0.010763	0.010763			
13 Fc = FrTZ	6.164	6.162			
14 FcQm	0.773	0.773			
15 L / H(FcQm) ²	0.583	0.583			
16 Fw = L/H(FcQm) ² (1-e ^{-s})	0.2438	0.2437			
17 Pw ² = Pt ² + Fw	13.058	13.058			
18 Ps ² = e ^s Pw ²	22.44	22.45			
19 Ps	149.8	149.8			
20 P = (Pt + Ps) / 2	131.5	131.5			
21 Pr = (P / Pcr)	0.196	0.196			
22 Tr = (T / Tcr)	1.520	1.520			
23 Z (Table XI)	0.981	0.981			

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 Pacheco
Santa Fe, NM 87505

Form C-122
Revised October, 1999

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator YATES PET.					Lease or Unit Name R.L.BURNS				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 6/23/03		Well No 1		
Completion Date		Total Depth		Plug Back TD 12140		Elevation		Unit Ltr - Sec - TWP - Rge 22 15 35	
Csg Size 5 1/2	Wt 17	d 4.892	Set At		Perforations: From: 12004 To: 12050		County LEA		
Tbg Size 2 7/8	Wt 6.5	d 2.441	Set At 11700		Perforations: From: To:		Pool		
Type Well-Single-Bradenhead-G G or G O. Multiple SINGLE					Packer Set At 11700		Formation		
Producing Thru Tubing		Reservoir Temp °F 187		Mean Annual Temp. °F 60		Baro. Press -P _a 13.2		Connection SALES	
L 11700	H 11700	Gg 0.823	%CO ₂ 10.652	%N ₂ 1.389	%H ₂ S N/A	Prover N/A	Meter Run 4.026	Taps FLG	

FLOW DATA				TUBING DATA			CASING DATA		Duration of Flow	
No.	Prover Line Size	Orifice Size	Press p.s.i.g	Diff. h _w	Temp. °F	Press p.s.i.g	Temp. °F	Press p.s.i.g		Temp. °F
1						601.2	N/A	PKR	N/A	
2	4.026 X 1.375		98	0.8	86	570				1 HR
3	4.026 X 1.375		102	1.7	92	550				1 HR
4	4.026 X 1.375		101	4.4	94	509				1 HR
5	4.026 X 1.375		101	7.4	94	463				1 HR

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							49
2							94
3	TOTAL	FLOW	METER				150
4							188
5							

No	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	N/A	Mcfbbl
1					A P I. Gravity of Liquid Hydrocarbons	N/A	Deg
2					Specific Gravity Separator Gas	0.823	XXXXXXX
3	TOTAL	FLOW	METER		Specific Gravity Flowing Fluid	N/A	XXXXXX
4					Critical Pressure	622	P.S.I.A.
5					Critical Temperature	411	R.

P _c	601.2	P ₂	361.4
No	P _r ²	P _w	P _w ²
1		583.2	340.2
2		563.3	317.3
3		522.5	273
4		476.7	227.3
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{2.694}{\quad}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{2.05}{\quad}$

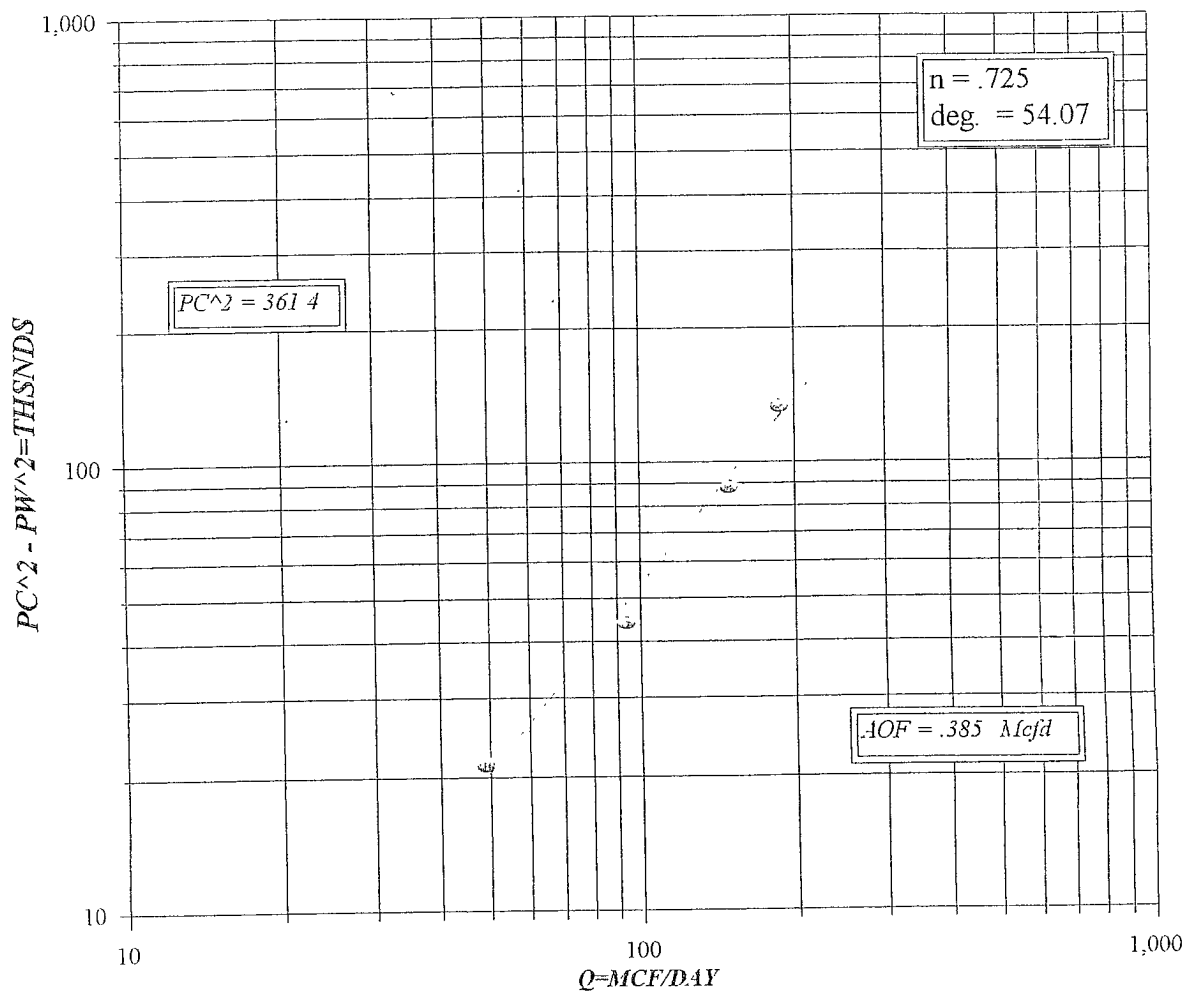
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{0.385}{\quad}$

Absolute Open Flow	0.385	Mcf @ 15 025	Angle of Slope (.)	54.07	Slope n	0.7245
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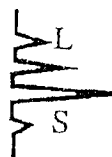
Remarks * NO LIQUID MADE DURING TEST.

Approved By Division <i>Chris Williams</i> 10/10/07	Conducted By: PRO WELL TESTING	Calculated By: MERV BUECKER	Checked By: MB
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YATES PET.
R.L. BURNS #1



COMPANY UNIT	YATES PETR	LEASE SECTION	R L BURNS	WELL NO	TOWNSHIP	15	1	Pc =	601 2	Pc2 =	361 4
L	11700	H	11700	1	G/GMIX	0 823	6/23/03	Pt2 =	340 1	Pw =	383 2
%CO2	10 652	%N2	1 389	H2S		DATE			317 2		563 3
d	2 441	Fr	0 010763	GH	8197 0	RANGE	35		272 7		522 5
									226 8		476 7
VOL 1	49	PSIA 1	553 2	RESV TEMP	187 0			Pc2 Pw2 =	21 3	Fw2 =	340 2
VOL 2	94	PSIA 2	563 2						44 1		317 3
VOL 3	150	PSIA 3	522 2	SHUT-IN PRE =	601 2				88 4		273 0
VOL 4	188	PSIA 4	476 2						134 2		227 3
		PCR	622							n =	0 725
		TCR	411								
LINE	RATE 1		RATE 2		RATE 3		RATE 4		Pc2/(Pc2-Pw2) =	16 981	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND		8 191	
1 QM	0 049	0 049	0 094	0 094	0 150	0 150	0 188	0 188		4 087	
2 TW	534	534	534	534	534	534	534	534		2 694	
3 Ts	647 0	647 0	647 0	647 0	647 0	647 0	647 0	647 0	[Pc2/Pc2-Pw2]n =	7 782	
4 T	590 5	590 5	590 5	590 5	590 5	590 5	590 5	590 5		4 589	
PR (est)	0 94		0 91		0 84		0 77			2 773	
5 (est)	0 871	0 854	0 875	0 858	0 882	0 866	0 890	0 876		2 050	
6 TZ	514 5	504 1	516 6	506 5	520 8	511 5	525 6	517 2	AOI = Q	0 381	
7 GH/TZ	15 932	16 261	15 868	16 183	15 739	16 025	15 595	15 850		0 431	
8 eS	1 817	1 840	1 813	1 835	1 804	1 824	1 795	1 812		0 416	
9 eS	0 450	0 457	0 448	0 455	0 446	0 452	0 443	0 448		0 385	
10 Pt	553 2	583 2	563 2	563 2	522 2	522 2	476 2	476 2			
11 Pt2 /1000	310 1	340 1	317 2	317 2	272 7	272 7	226 8	226 8			
12 Fr	0 010763	0 010763	0 010763	0 010763	0 010763	0 010763	0 010763	0 010763			
13 Fc=PTZ	5 537	5 426	5 560	5 452	5 606	5 505	5 657	5 566			
14 FcQm	0 27	0 27	0 52	0 51	0 84	0 83	1 06	1 05			
15 L/H(FcQm)2	0 1	0 1	0 3	0 3	0 7	0 7	1 1	1 1			
16 Fw	0 0331151	0 0322669	0 1224901	0 1194746	0 3151718	0 3080514	0 5008717	0 49068075			
17 Pw2	340 2	340 2	317 3	317 3	273 0	273 0	227 3	227 3			
18 Ps2	618 2	625 9	575 3	582 2	492 6	497 9	407 9	411 8			
19 Ps	786 3	791 1	758 5	763 0	701 9	705 6	638 6	641 7			
20 P	684 7	687 2	660 9	663 1	612 0	613 9	557 4	558 9			
21 Pr	1 10	1 10	1 06	1 07	0 98	0 99	0 90	0 90			
22 Tr	1 44	1 44	1 44	1 44	1 44	1 44	1 44	1 44			
23 Z	0 854	0 853	0 858	0 857	0 866	0 866	0 876	0 876	FORM C122 D		



Laboratory Services, Inc.

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE:
IDENTIFICATION: R. L. Burns
COMPANY: Yates Petroleum
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 7/20/04 1:15 pm
ANALYSIS DATE: 7/21/04
PRESSURE - PSIG 40
SAMPLE TEMP. °F 102
ATMOS. TEMP. °F 100

GAS (XX) LIQUID ()
SAMPLED BY J. Rice
ANALYSIS BY: Vickie Biggs

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	0.976	
Carbon Dioxide (CO2)	0.635	
Methane (C1)	82.937	
Ethane (C2)	8.947	2.387
Propane (C3)	3.824	1.051
I-Butane (IC4)	0.617	0.201
N-Butane (NC4)	1.217	0.383
I-Pentane (IC5)	0.274	0.100
N-Pentane (NC5)	0.218	0.079
Hexane Plus (C6+)	0.355	0.154
	100.000	4.355
BTU/CU.FT. - DRY	1189	MOLECULAR WT. 19.9819
AT 14.650 DRY	1185	
AT 14.650 WET	1164	
AT 14.73 DRY	1191	
AT 14.73 WET	1171	
SPECIFIC GRAVITY -		
CALCULATED	0.689	
MEASURED		

MARTIN YATES, III
1912-1985

FRANK W. YATES
1936-1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118
TELEPHONE (505) 748-1471

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30-025-24559

September 7, 2007

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
District I
1625 N. French Dr,
Hobbs, New Mexico 88240

Attention: Donna Mull

Enclosed please find a Deliverability Test Report for the R. L. Burns ATL #1 well, located at P-11-16S-35E, which was tested on July 17, 2007. The following listed items are attached:

- Deliverability Test Report Form
- Worksheet for Calculation of Static Column Wellhead Pressure
- Copy of latest Multipoint Back Pressure Test Report dated June 23, 2003
- Gas sample compositional analysis.

Please contact me if you have any questions or need further information. My office phone number is 505-748-4211.

Sincerely,

George Freeman
Senior Reservoir Engineer

Per R-11310
dm

Enclosures

