

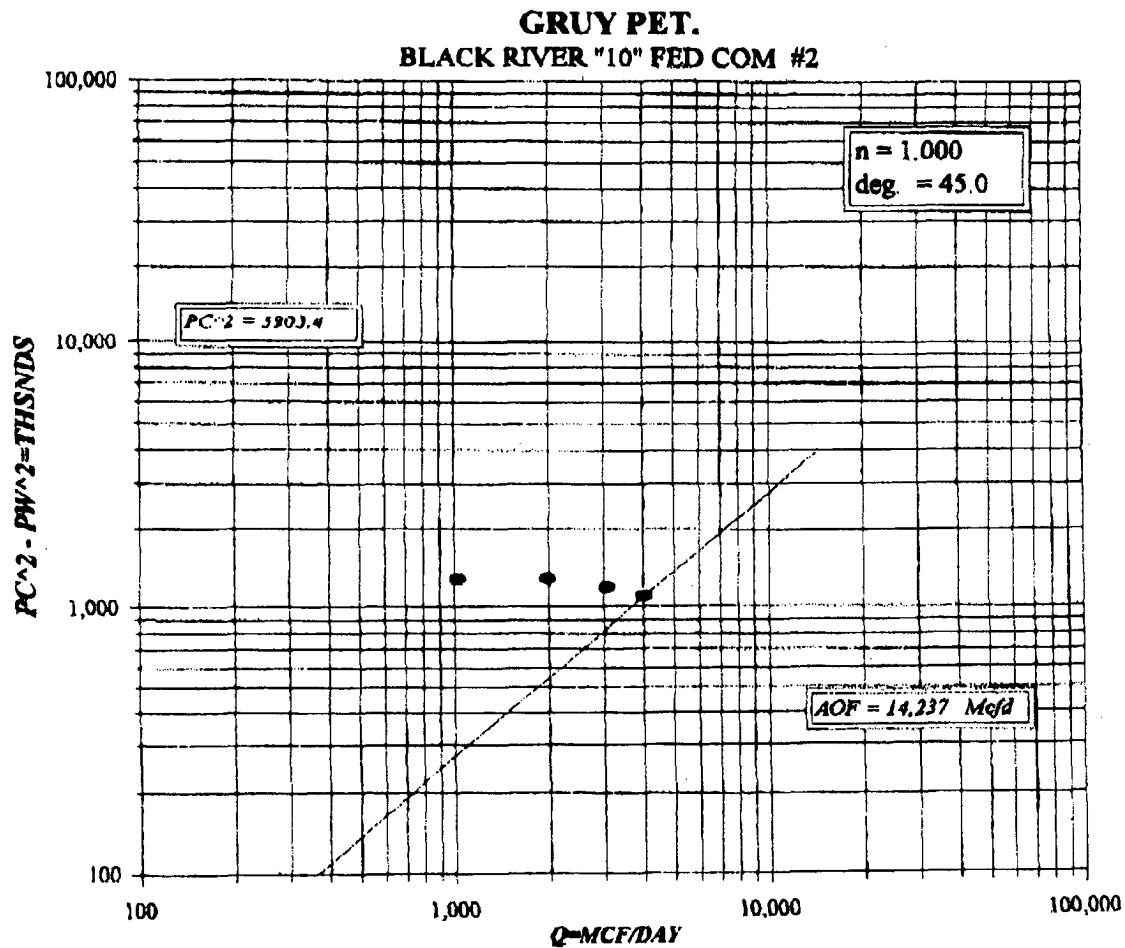
Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87503

Form C-122
Revised October, 1999

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator GRUY PET MANAGEMENT CO.				Lease or Unit Name BLACK RIVER "10" FED COM																																																																										
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 7/11/03		Well No. 2																																																																								
Completion Date 6/27/03		Total Depth 11968		Plug Back TD 11520		Elevation 3340 GL																																																																								
Csg. Size 5 1/2		Wt. 17		d 4.892		Set At 11968																																																																								
Tbg. Size 2 3/8		Wt. 4.7		d 1.995		Set At 11239																																																																								
Type Well-Single-Bradfordhead-G.G. or G.O. Multiple SINGLE				Packer Set At 11239		Formation MORROW																																																																								
Producing thru Tubing		Reservoir Temp. °F 185		Mean Annual Temp. °F 60		Baro. Press. -P _a 13.2																																																																								
I. 11239		H 112369		Gg 0.587		%CO ₂ 1.463																																																																								
				%N ₂ 0.601		%H ₂ S N/A																																																																								
				Prover N/A		Meter Run 4.026																																																																								
						Type FLG																																																																								
<table border="1"> <thead> <tr> <th colspan="4">FLOW DATA</th> <th colspan="2">TUBING DATA</th> <th colspan="2">CASING DATA</th> <th rowspan="2">Duration of Flow</th> </tr> <tr> <th>No.</th> <th>Prover Line Size</th> <th>Orifice x Size</th> <th>Press. p.s.i.g.</th> <th>Diff. h_w</th> <th>Temp. °F</th> <th>Press. p.s.i.g.</th> <th>Temp. °F</th> </tr> </thead> <tbody> <tr> <td>S1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1936</td> <td>N/A</td> <td>PKR</td> </tr> <tr> <td>1</td> <td></td> <td>4.026 X 2.375</td> <td>211</td> <td>3.4</td> <td>76</td> <td>1594</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>4.026 X 2.375</td> <td>224</td> <td>12.3</td> <td>91</td> <td>1557</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>4.026 X 2.375</td> <td>236</td> <td>26.9</td> <td>67</td> <td>1521</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>4.026 X 2.375</td> <td>246</td> <td>44</td> <td>66</td> <td>1461</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								FLOW DATA				TUBING DATA		CASING DATA		Duration of Flow	No.	Prover Line Size	Orifice x Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	S1						1936	N/A	PKR	1		4.026 X 2.375	211	3.4	76	1594			2		4.026 X 2.375	224	12.3	91	1557			3		4.026 X 2.375	236	26.9	67	1521			4		4.026 X 2.375	246	44	66	1461			5								
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RATE OF FLOW CALCULATIONS																																																																														
No.	COEFFICIENT (24 Hour)		$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress Factor F _{pv}	Rate of Flow Q, Mcfd																																																																						
1								1033																																																																						
2								1988																																																																						
3	TOTAL		FLOW	METER				3075																																																																						
4								4040																																																																						
5																																																																														
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio																																																																									
1					N/A																																																																									
2	TOTAL	FLOW	METER		A.P.I. Gravity of Liquid Hydrocarbons																																																																									
3					N/A																																																																									
4					Specific Gravity Separator Gas																																																																									
5					0.587																																																																									
					Specific Gravity Flowing Fluid																																																																									
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					P.S.I.A.																																																																									
					Critical Temperature																																																																									
					346																																																																									
					R.																																																																									
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P _c	1078.2	P _w	3905.4																																																																											
No.	P _r ²	P _w ²	P _w ²	P _c ² -P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{3.524}{\frac{P_c^2}{P_c^2 - P_w^2}}$																																																																									
1		1619.8	2623.8	1281.6	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{3.524}{\frac{P_c^2}{P_c^2 - P_w^2}}$																																																																									
2		1617.6	2616.5	1288.9																																																																										
3		1647.7	2715	1190.4																																																																										
4		1672.5	2797.2	1108.2																																																																										
5																																																																														
Absolute Open Flow					14.237	Mcfd @ 15.025		Angle of Slope (°)																																																																						
						45		Slope n:																																																																						
						1																																																																								
Remarks: * NO LIQUID MADE DURING TEST.																																																																														
Approved By Division			Conducted By: PRO WELL TESTING		Calculated By: MERV BUECKER		Checked By: MB																																																																							



JUL-14-2003 09:21 AM PROWELLTESTING

5053920508

P. 05

CL220 FORM IMPORTED FROM SYMPHONY ON 9-9-01

COMPANY

UNIT

1

WCO2

0

ORUT PET. MANAGE. CO

M

11929

1.463

1.098

LEASE

SECTION

M

Fr

0.016189

BLACK RIVER 10 FED CORRAL NO.

10

L/M

M2E

GM

0197.0

TOWNSHIP

246

S/OMIX

DATE

RANGE

01/09/00

258

Pc = 1976.2

Pc2 = 3005.4

Pw2 = 2588.1

2468.9

2383.9

2175.3

VOL 1

1033

PSIA 1

1807.2

RECV. TEMP

186.0

SHUT-IN PREI =

1976.3

Pc2-Pw2 =

1281.6

1888.9

1190.4

1108.2

PCR

678

TCR

346

n =

1.000

Pc2/(Pc2-Pw2) =

3.047

0.030

3.281

3.524

LINE

RATE 1

RATE 2

RATE 3

RATE 4

Pc2/Pc2-Pw2=n

ACF = Q

1ST

2ND

1ST

2ND

1ST

2ND

1ST

2ND

1ST

2ND

1

QM

1.033

1.033

1.088

1.088

9.078

9.078

4.080

4.080

2

TY

534

534

534

534

534

534

534

534

3

Y

648.0

648.0

648.0

648.0

648.0

648.0

648.0

648.0

4

Y

591.0

591.0

591.0

591.0

591.0

591.0

591.0

591.0

5

PR (act)

2.29

2.29

2.27

2.27

2.18

2.18

6

TCR

0.859

0.860

0.861

0.850

0.852

0.850

0.845

0.881

7

TZ

507.8

502.3

508.7

502.6

809.6

502.6

511.2

502.8

8

GH/TZ

18.142

16.310

16.114

16.309

16.095

16.310

16.306

16.304

9

ad

1.892

1.844

1.830

1.843

1.828

1.843

1.825

1.843

10

La-E

0.454

0.458

0.454

0.458

0.452

0.458

0.452

0.457

11

P1

1807.2

1807.2

1870.2

1577.7

1534.2

1634.2

1474.2

1474.2

12

P2 11000

2183.1

2183.1

2183.1

2183.1

2183.1

2183.1

2173.3

2173.3

13

P2 0101818

0.01818

0.01818

0.01818

0.01818

0.01818

0.01818

0.01818

0.01818

14

FracFr/2

0.233

0.133

0.249

0.139

0.264

0.138

0.295

0.142

15

FracQ

0.54

0.49

0.489

0.17

0.249

0.17

0.255

0.08

16

L/M(FracQ)/2

91.0

89.0

238.1

330.1

811.6

799.8

1410.1

1364.0

17

Fw

41.312043

40.742766

169.36479

151.01329

267.71192

361.26417

637.23657

623.699629

18

Pw2

2624.4

2624.8

2618.8

2616.5

2721.5

2716.0

2810.8

2787.2

19

Pc2

4807.5

4838.4

4792.9

4828.2

4974.8

5005.0

5127.9

5188.2

20

Pc

2102.0

2199.6

2189.1

2186.7

2280.4

2287.2

2264.5

2270.5

21

P

1890.6

1903.4

1979.7

1882.3

1882.3

1885.7

1878.4

1878.4

22

Pr

2.81

2.82

2.78

2.79

2.79

2.78

2.77

2.77

23

Tr

1.71

1.71

1.71

1.71

1.71

1.71

1.71

1.71

24

Z

0.860

0.850

0.850

0.850

0.850

0.850

0.851

0.861

FORM C112-D

JUL-14-2003 09:20 AM PROWELL TESTING

5053920508

P. 04

**Laboratory Services, Inc.**4018 Fleets Drive
Hobbs, New Mexico 88240

Telephone: (505) 387-3713

FOR:Pro Well Testing & Wireline
P. O. Box 791
Hobbs, New Mexico 88241**SAMPLE:**IDENTIFICATION: Black River 10 #2
COMPANY: Gruy Petroleum
LEASE:
PLANT:**SAMPLE DATA:**DATE SAMPLED: 7/11/03 12:00 pm
ANALYSIS DATE: 7/11/03
PRESSURE - PSIG 250
SAMPLE TEMP. °F 77
ATMOB. TEMP. °FGAS (XX) LIQUID ()
SAMPLED BY: J. Rice
ANALYSIS BY: Vickie Biggs**REMARKS:****COMPONENT ANALYSIS**

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H ₂ S)		
Nitrogen (N ₂)	0.601	
Carbon Dioxide (CO ₂)	1.463	
Methane (C ₁)	93.524	
Ethane (C ₂)	1.919	0.512
Propane (C ₃)	0.253	0.070
i-Butane (iC ₄)	0.036	0.012
n-Butane (nC ₄)	0.036	0.011
i-Pentane (iC ₅)	0.020	0.007
n-Pentane (nC ₅)	0.015	0.005
Hexane Plus (C ₆ +)	0.133	0.058
	100.000	0.675

BTU/CU.FT. - DRY 1016
 AT 14.650 DRY 1018
 AT 14.650 WET 994
 AT 14.73 DRY 1018
 AT 14.73 WET 1000

MOLECULAR WT. 17.0180

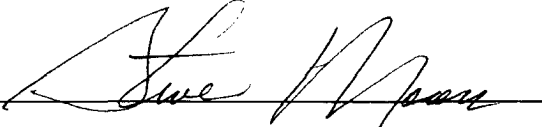
SPECIFIC GRAVITY -
 CALCULATED 0.587
 MEASURED

OPERATOR: GRUY PETROLEUM
WELL/LEASE: BLACK RIVER 10 FED. COM. 2
COUNTY: EDDY

080-0015

STATE OF NEW MEXICO
DEVIATION REPORT

208	1
440	1 1/4
957	1 1/2
1,237	1
1,523	3/4
1,809	3/4
2,126	3/4
2,611	1/2
3,198	1/2
3,523	1/2
4,000	1/4
4,500	1
5,000	3/4
5,534	3/4
5,776	3/4
6,276	3/4
6,833	3/4
7,266	3/4
7,746	3/4
8,226	1
8,699	1 1/4
8,930	1 1/4
9,400	3/4
9,900	1 1/2
10,385	1 3/4
10,876	2
11,439	2
11,950	1

By: 

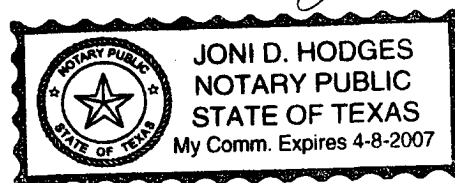
STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on this 2nd day of May, 2003, by Steve Moore on behalf of Patterson-UTI Drilling Company LP, LLLP.


Notary Public for Midland County, Texas

My Commission Expires: 4/08/2007



DISTRICT I
P.O. Box 1880, Hobbs, NM 88241-1880

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0710

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 73960	Pool Name Carlsbad, South Morrow
Property Code	Property Name BLACK RIVER 10 FEDERAL COM.	Well Number 2
OGRID No. 162683	Operator Name GRUY PETROLEUM MANAGEMENT CO.	Elevation 3347'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	10	24-S	26-E		1160'	SOUTH	1400'	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill Y	Consolidation Code C	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

1330 Blackriver 10 Fed. Com 1 990 3349.5' 3345.6' 1400' 3351.3' 3340.6' 1160' Blackriver 10 Fed Com 2	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Zeno Farris</i> Signature Zeno Farris Printed Name Mgr. Operations, Admin. Title 01-14-03 Date SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JANUARY 7, 2003 Date Surveyed Signature & Seal of Professional Surveyor RONALD J. EIDSON 1/08/03 03.11.00116 Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641
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