

**COUNTY:** **HARDING**

**LEGAL LOCATION:** **SWNE 23-21N-3E**

**API NO:** **40 063 05037.01**

**PERMIT NO:** **1759**

**WELL NAME:** **WBRRU #32-23**

**OPERATOR:** **CONTINENTAL RESOURCES INC**

**PERMIT ISSUED:** **07/29/2005**

**PERMIT CLOSED:**

**FILE LOCATION:** **21N-3E-23 SWNE**

**TARGET CODES:**

**WELL HISTORY / CHECKLIST**

**PERMIT TO DRILL / INTENT TO DRILL**

**WELL INSPECTION / SCOUT REPORTS**

**OPERATOR'S TECHNICAL REPORTS / MAPS**

**ADMINISTRATIVE / SUNDRY REPORTS**

**CORRESPONDENCE**

**MISCELLANEOUS**

# **WELL HISTORY / CHECKLIST**

PERMIT and BOND RELEASE CHECKLIST

WELL NAME: **WBRRU #32-23**  
PERMIT NO: **1759**

LOCATION: **21N-3E-23 SWNE**  
API NO: **40 063 05037.01**

FORMS RECEIVED

- Application (Form 2)
- Permit Fee of \$100.00
- Oil & Gas Leasing Agreement
- Permission to Inspect Form
- P & P Bond
- Plat Map
- Organization Report (Form 1) if not on file
- Certificate of Negotiation (Form 9)
- Certification of Applicant
- Surface Restore Bond

NOTIFICATION OF PENDING APPLICATION:

*Re-Delay*  State Archaeologist  SD Dept of Game, Fish, Parks  Harding County Zoning Adm.  
Fax 605-375-3318

REVIEW OF PERMIT APPLICATION:

Surface casing program:  through Fox Hills  adequate as stated

Spacing requirements:  meets statewide spacing  exception granted (Case # )  
 conforms to *See Order # 4-97* Field spacing

*NA* REVIEW OF PIT LINER VARIANCE:

Plans and specifications sent to Staff Engineer  
 Approved  Disapproved  Variance granted  Variance denied

PERMIT APPROVED:

- Transmit check to Treasurer's Office with copy to our accounting personnel
  - Type Permit #, API # and date on Application for Permit, have supervisor sign two forms.
  - Prepare conditions to permit (O:\O&G\Reports\Apd\Conditions\ .doc)
  - Mail cover notice (O:\O&G\Reports\Misc Letters & Notices\OperPermitNote.doc), operator application, conditions, fee receipt, and pit liner application - if applicable
  - Mail application copies and fax to Harding Co. 605-375-3415
  - Add to New Permits List (O:\O&G\New Permits\NewPermit.doc)
  - Add to API and Permit No. Lists (O:\O&G\Permits\API & Permit No.s/)
  - Add to Bond Lists (O:\O&G\Reports\Bonds\Bondbalance.xls & BondList.doc)
  - Add to data base and Web
  - Prepare file folder following established labeling and order of material. File.
- Pits to be lined or required by Rule of Practice*

PLUGGING AND PERFORMANCE BOND RELEASE

- Well Logs
- Geologist's Report
- DST Chart and Reports
- Results of coring and core analyses
- Set of 10-foot sample cuttings-Vermillion
- Completion/Recompletion Report
- Plugging Report

SURFACE RESTORATION BOND RELEASE

- Approved Scout Report
- Approved letter from Surface Owner

BOND RELEASE NOTIFICATION

- Letter to bond carrier to release liability with copy to operator (O:\O&G\Reports\Bonds\BondRelease.doc)
- Enter information in Bond Lists (O:\O&G\Reports\Bonds\BondList.doc and Bondbalance.xls) and data base.

**PERMIT TO DRILL /  
INTENT TO DRILL**



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
Minerals & Mining Program - Oil & Gas Section  
2050 West Main, Suite #1, Rapid City, SD 57702-2493  
Telephone: 605-394-2229, FAX: 605-394-5317

FORM 2

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DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RCRO

## APPLICATION FOR PERMIT TO DRILL

Type of work:  
 Drill New Well  Reenter Well  Drill Directional Well  
 Other Horizontal Re-entry

Type of well:  
 Oil Well  Gas Well  Injection  
 Other \_\_\_\_\_

Name and Address of Operator:  
Continental Resources, Inc.  
P.O. Box 1032, Enid, OK 73702  
Name and Address of Surface Owner:  
Clarkson & Company  
P.O. Box 184, Buffalo, SD 57720  
Name and Address of Drilling Contractor and Rig Number:  
J & R Well Service  
791 Lane 9, Powell, WY 82435

Telephone  
580-233-8955

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available): 1980' FNL & 660' FWL (SW NE) Sec 23-21N-3E, Harding Co.

If Directional, top of pay and bottom hole location from nearest lines of section:

Top of Pay: 8484' BHL(1) 700' FNL & 300' FEL Sec 23-21N-3E  
BHL(2) 1700' FNL & 1000' FWL Sec 23-21N-3E

Acres in Spacing (Drilling) Unit  
4,580.93

Description of Spacing Unit  
Unitized - West Buffalo Red River  
Unit - Order #10-96

Well Name and Number		Elevation	Field and Pool, or Wildcat		Proposed Depth and Formation
WBRRU #32-23		3167' GL	Buffalo		Red River "B" 8484' TVD
Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (amount, type, additives)	Depth
1)	10 3/4"	32.7	700'		Surface
2)	5 1/2"	17#	4705'		
3)					
4)					

Describe Proposed Operations (Clearly State all Pertinent Details, and Give Pertinent Dates, Including Estimated Date of Starting any Proposed Work). Use additional page(s) if appropriate.

A window will be cut in the 5 1/2" csg for a KOP @ 8393'. A horizontal lateral will then be extended through the currently producing Red River "B" formation to BHL #1 above. After sidetracking the original curve, a second lateral will be extended to BHL #2 above. Pits will be lined with a 12-mil plastic liner.

I hereby certify that the foregoing as to any work or operation performed is a true and correct report of such work or operation.

Pam Combest  
Signature

Pam Combest,  
Name (Print)

SOUTH DAKOTA  
STATE GEOLOGICAL SURVEY  
WESTERN FIELD OFFICE  
Reg. Compliance Analyst 7/13/2005  
Title Date

### FOR OFFICE USE ONLY

Approved By: Fred O'Brien Title: Oil & Gas Supervisor  
Permit No. 1759 API No. 40 063 05037.01 Date Issued: 07/29/05  
Conditions, if any, on attached page.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

2050 West Main, Suite #1  
Rapid City, SD 57702  
Telephone 605-394-2229  
FAX Number 605-394-5317

**PERMIT CONDITIONS**

CRI WBRRU #32-23  
21N-3E-23 SWNE, Harding County

Permit #1759  
API: 40 063 05037.01

Approval has been granted to drill this location as detailed on the attached Application for Permit to Drill (Form #2) with the following additional provisions:

1. A 12-mil, woven, reinforced, high-density polyethylene liner will be used.
2. Surface runoff will be diverted around the drill site.
3. If horizontally drilled:
  - A. The coordinates of the production casing shoe and the well terminus will be filed with the department.
  - B. The azimuth of the horizontal segment of the well will be filed with the department along with the results of periodic down hole surveys.
4. If abandoned:
  - A. With long string, sufficient cement will be circulated to install:
    1. A 100-foot cement plug immediately above the KOP, if horizontally drilled.
    2. A 100-foot cement plug, half in and half out of the top of the casing stub after the retrievable part of the production casing has been removed.
    3. A 100-foot cement plug, half in and half out of the top of any fresh water aquifer between the top of the casing stub and the base of the surface casing.
    4. A 100-foot plug, half in and half out of the base of the surface casing.
    5. A 25-foot cement plug at the top of the surface casing.
  - B. Without long string, sufficient cement will be circulated to set:
    1. A 100-foot cement plug immediately above the KOP, if horizontally drilled.
    2. 100-foot cement plugs, half in and half out of the top of the following formations: Red River, Interlake, Madison, Mianelusa and Fall River.
    3. A 100-foot cement plug, half in and half out of the base of the surface casing.
    4. A 25-foot cement plug at the top of the surface casing.
  - C. Heavy, mud-laden fluid will be used between all plugs.
5. A washed set of sample cuttings (or cores, if cut) is to be shipped to the State free of charge.
6. Please notify this office prior to plugging so that a witness can be on location. After hours, call Fred V. Steeee at 605-343-8617 or Mack McGillivray at 605-341-0207.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

2050 West Main, Suite #1  
Rapid City, SD 57702  
Telephone 605-394-2229  
FAX Number 605-394-5317

**N O T I C E**

Please notify this office with the SPUD DATE of the well as soon as possible. We can be contacted during office hours at the above telephone number. After hour telephone numbers are:

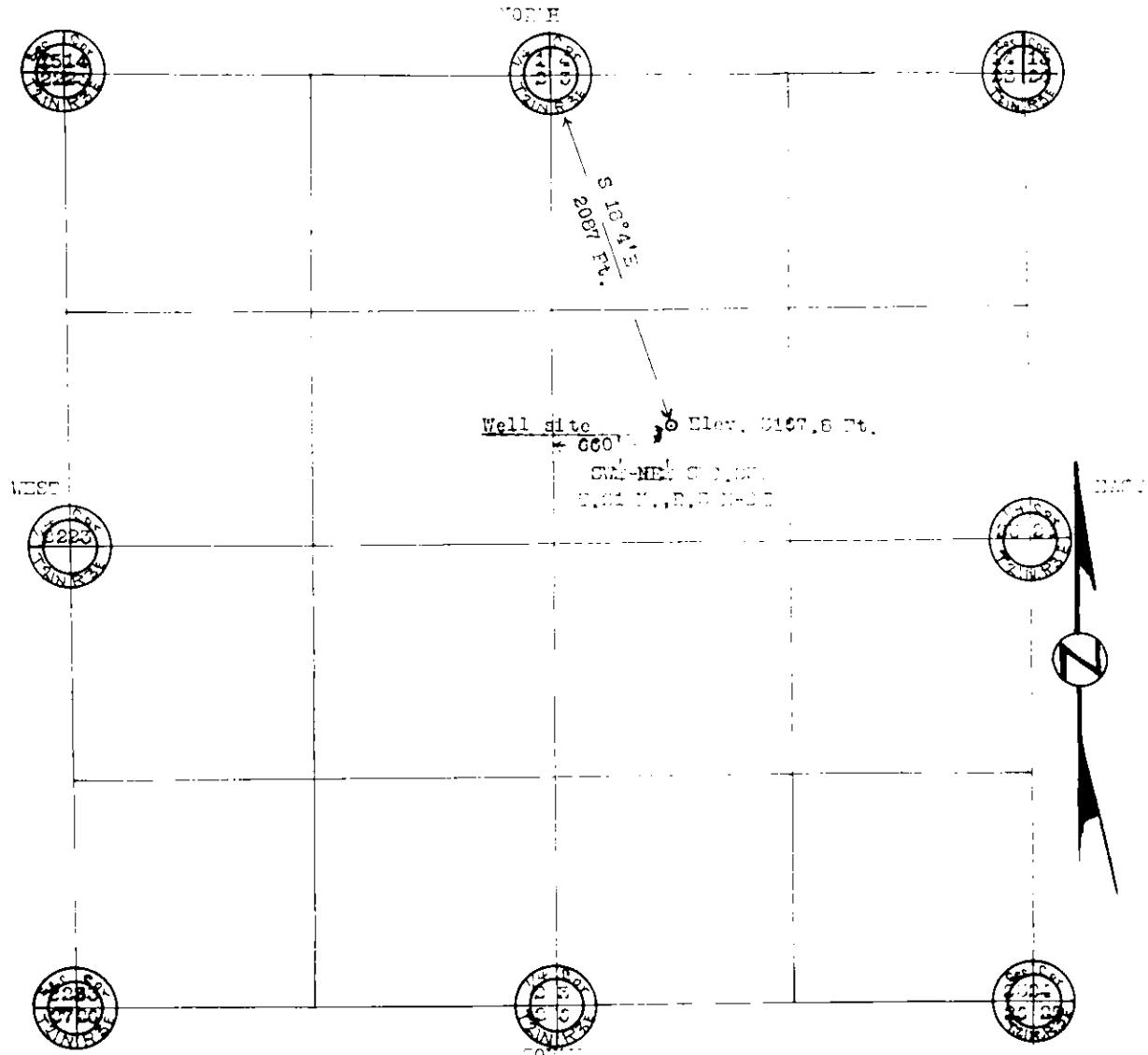
Fred V. Steece - 605-343-8617

Gerald (Mack) McGillivray - 605-341-0207

PLAT  
OF  
THE SCHLAIKER-CLARKSON-GRAVES WELL NO. 1,  
LOCATED IN THE SW.<sup>1</sup>-NE<sup>4</sup>, SEC. #3, T. 21 N., R. 3 E-DIS IN HARDING COUNTY, SOUTH DAKOTA.

PLAT DRAWN BY CARL M. CORNELL,  
LICENSED SURVEYOR #144,  
BUFFALO, SOUTH DAKOTA.

SCALE 1 INCH = 660 FEET.



I, CARL M. CORNELL, LICENSED SURVEYOR IN AND FOR THE STATE OF SOUTH DAKOTA, DO HEREBY CERTIFY THAT, AT THE REQUEST OF ARTHUR L. SCHLAIKER, OF NEWCASTLE, WYOMING, I HAVE MADE A SURVEY AND DRAWN THIS PLAT OF THE SW.<sup>1</sup>-NE<sup>4</sup> OF SEC. 23, T. 21 N., R. 3 E-DIS AND HAVE LOCATED THE WELL SITE IN THE CENTER OF THE SAID TRACT, AS SHOWN ON THIS PLAT.

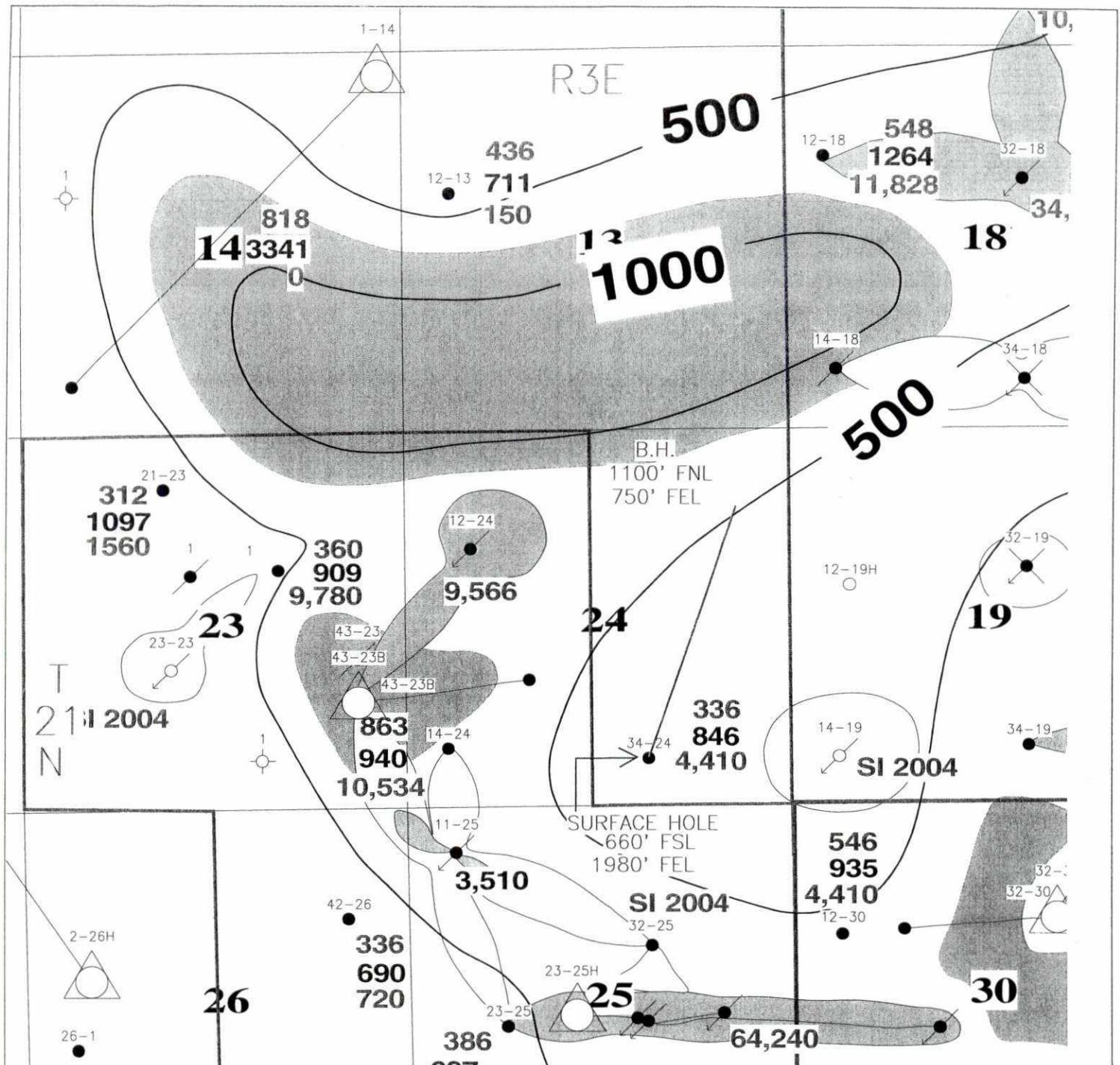
I FURTHER CERTIFY THAT THE LENGTHS AND BEARINGS OF ALL LINES SHOWN, AND THE LOCATION WITH REFERENCE TO THE GOVERNMENT LAND COUNTERS SHOWN, ARE CORRECT, AND IN THE OWNERSHIP OF THE OWNERS AND BILLET.

SUBSCRIBED AND SWEORN TO AT BUFFALO, SOUTH DAKOTA THIS 23<sup>rd</sup> DAY OF MARCH 1959.

SIGNED AND SWORN TO  
Carl M. Cornell, Licensed Surveyor  
No. 144 (SEAL)

Subscribed and sworn to before me at Buffalo, South Dakota this 23<sup>rd</sup> day of March 1959.

*M. H. Yank*  
Notary Public. (SEAL)



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CRI

WBRRU #32-23 SIDETRACK LATERALS  
PRODUCTION & INJECTION 9/04 (OR NEARBY)  
PROPOSED LATERALS SHOWN IN PURPLE

491 9/03 BOPM  
1192 9/03 BWPM  
9,600 9/03 MCFPM

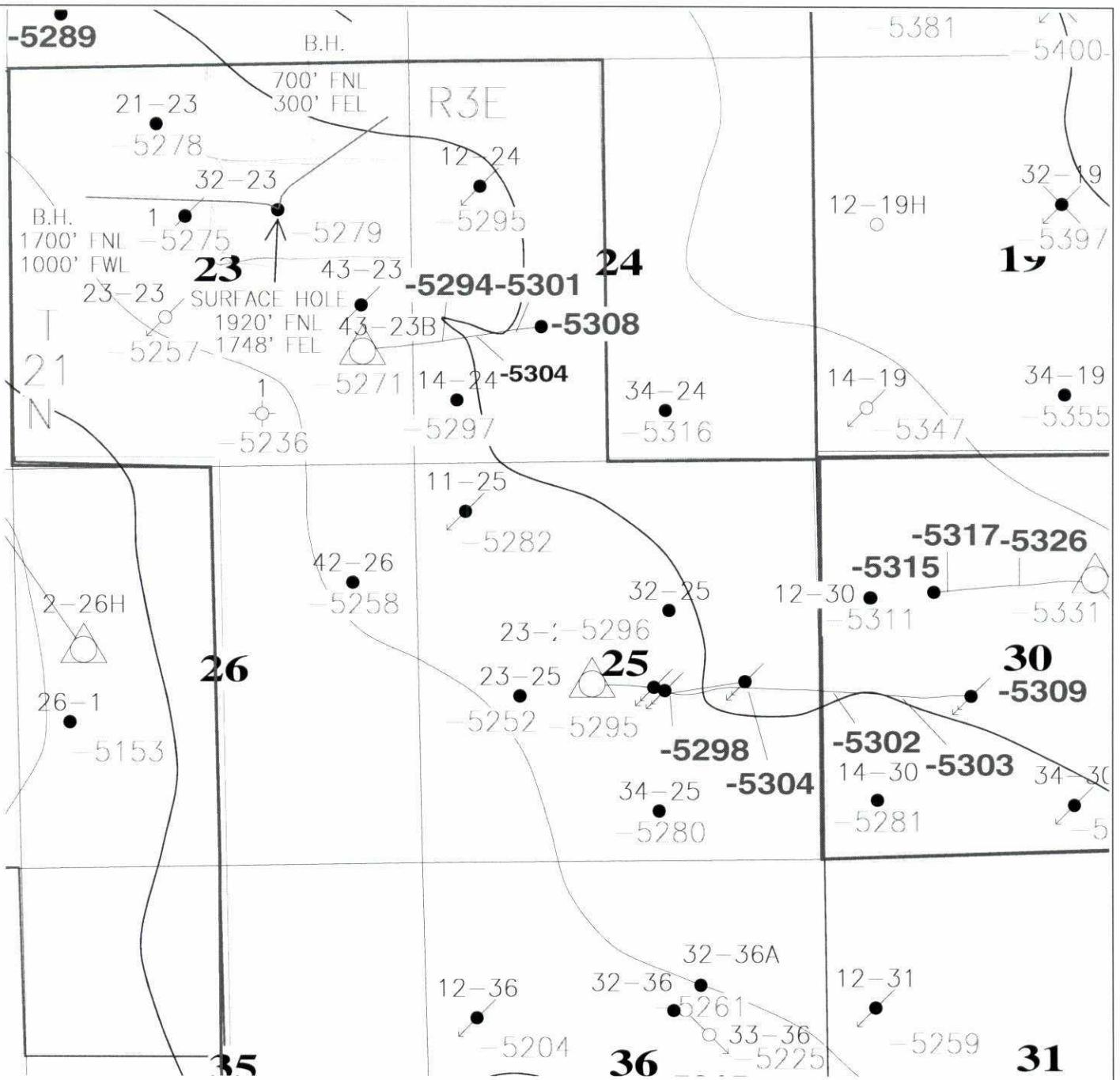
PROPOSED HORIZONTAL WELL LOCATIONS

PETE THIES

8/26/2005

WB3223A.GPF

SCALE: 1" = 2000'



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DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RCRO

— PROPOSED HORIZONTAL WELL LOCATION

CRI

WBRRU #32-23 SIDETRACK LATERALS  
RED RIVER STRUCTURE C.I. = 50'  
SEC. 23-T21N-R3E HARDING CO., S. DAKOTA

PETE THIES		7/14/2005
WB3223.GPF	SCALE: 1"= 2000'	



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
 Minerals & Mining Program - Oil & Gas Section  
 2050 West Main, Suite #1, Rapid City, SD 5770 -2493  
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FORM 1  
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## ORGANIZATION REPORT

### COMPANY

Name of company, organization or individual : Continental Resources, Inc.

Address : 302 N. Independence, P.O. Box 1032, Enid, OK 73702

Telephone number: (580) 233-8955 Fax Number: (580) 548-5293

### ORGANIZATION

If re-organization, list previous name: \_\_\_\_\_

Type of organization: Oil & Gas Expl. & Prod. State of incorporation: Oklahoma

Date of registration with Secretary of State to do business in South Dakota: 01/17/1995

Name/Address of Registered South Dakota Agent: CT Corporation System

### OFFICERS/PARTNERS/DIRECTORS (Use extra sheet if necessary)

Name	Title	Address
Harold G. Hamm	President	2519 W. Chestnut, Enid, OK 73703
Jeff B. Hume	Sr. V.P. - Resource Development	2701 Rolling Oaks Dr., Enid, OK 73703
Roger V. Clement	Chief Financial Officer	1709 Calico Ln., Enid, OK 73703

### SIGNATURE

Signature <u>Ponda Hermanski</u>	Title <u>Reg. Compliance</u>	Date <u>1/12/2004</u>
State of <u>Oklahoma</u>		
County of <u>Garfield</u>		
Subscribed and sworn to before me this <u>22</u> day of <u>January</u> , <u>2004</u>		
Notary Public <u>PAMELA R. COMBEST</u> , My Commission expires <u>3/8/2005</u>		



DO NOT WRITE BELOW THIS LINE			
Approved: <u>Fred Steele</u>	Signature	<u>Oil &amp; Gas Supervisor</u>	Title
		FEB 18 2004	
		Date	



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
Minerals & Mining Program - Oil & Gas Section  
12050 West Main, Suite #1, Rapid City, SD 57702-2493  
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FORM 9

## CERTIFICATE OF NEGOTIATION WITH SURFACE OWNER/LESSEE

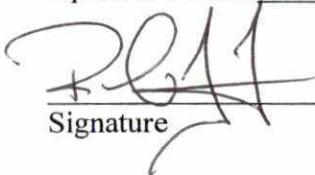
Surface owner/lessees Clarkson & Company

Well Name WBRRU #32-23

Township 21N Range 3E Section 23 County Harding

In accordance with SDCL 45-5A, I hereby certify that to the best of my knowledge and belief, an agreement regarding compensation for damages to livestock and surface land resulting from drilling operations on the described property has been or is being negotiated with the surface landowners or lessees, as listed above.

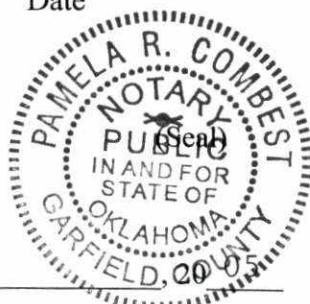
Operator Name: Continental Resources, Inc.

  
Signature \_\_\_\_\_ Title Drilling Engineer Date 7/14/2005

State of Oklahoma)

County of Garfield)

Subscribed and sworn to before me this 14 day of July



Notary Public Pamela R. Combest My Commission expires 3/8/2009  
Commission #: 01004021

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RESOURCES - RCRO



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
Minerals & Mining Program - Oil & Gas Section  
2050 West Main, Suite #1, Rapid City, SD 57702-2493  
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FORM 8

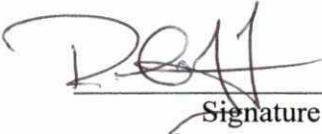
## PERMISSION TO INSPECT

Well Name WBRRU #32-23

Township 21N Range 3E Section 23 County Harding

In compliance with ARSD 74:10:11:05 and SDCL 45-9, I do hereby grant the Secretary of the Department of Environment and Natural Resources, or his designated agent, permission to inspect all facilities, upon notification, at any time during the life of the permit or project.

Operator Name: Continental Resources, Inc.

  
Signature

Rob J. Love  
Name (print)

Drilling Engineer 7/14/2005  
Title



State of Oklahoma)

County of Garfield)

Subscribed and sworn to before me this 14 day of July, 2005

Notary Public Pamela R. Combest My Commission expires 3/8/2009  
Commission #: 01004021

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JUL 19 2005

DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RCRO



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
Minerals & Mining Program - Oil & Gas Section  
2050 West Main, Suite #1, Rapid City, SD 57702-2493  
Telephone: 605-394-2229, FAX: 605-394-5317

FORM 13

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JUL 19 2005

DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RCRO

STATE OF SOUTH DAKOTA  
BEFORE THE SECRETARY OF  
THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF THE \_\_\_\_\_ )  
APPLICATION OF \_\_\_\_\_ )  
Continental Resources, Inc. \_\_\_\_\_ )

CERTIFICATION OF  
APPLICANT

STATE OF Oklahoma \_\_\_\_\_ )  
COUNTY OF Garfield \_\_\_\_\_ ) SS

I, Rob J. Love, the applicant in the above matter after being duly sworn upon oath hereby certify the following information in regard to this application:

South Dakota Codified Laws Section 1-40-27 provides:

*"The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:*

- (1) *The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner, or resident general manager of the facility for which application has been made:*
- (a) *Has intentionally misrepresented a material fact in applying for a permit;*
  - (b) *Has been convicted of a felony or other crime of moral turpitude;*
  - (c) *Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;*
  - (d) *Has had any permit revoked under the environmental laws of any state or the United States;*
  - (e) *Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or*

CERTIFICATE OF APPLICANT – FORM 13  
PAGE 2

(2) The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a *prima facie* showing of the suitability and qualification of the applicant. If at any point in the application review recommendation, or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification, consideration of the application may be suspended and the application may be rejected as provided for under this section.

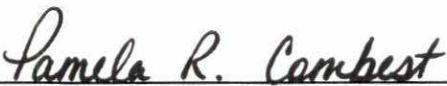
Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26."

Pursuant to SDCL 1-40-27, I certify that I have read the forgoing provision of state law, and that I am not disqualified by reason of that provision from obtaining the permit for which application has been made.

Dated this 14 day of July, 2005.

  
\_\_\_\_\_  
Applicant

Subscribed and sworn before me this 14 day of July, 2005.

  
\_\_\_\_\_  
Notary Public

My commission expires: 3/8/2009  
Commission # 01004021



**PLEASE ATTACH SHEET DISCLOSING ALL FACTS PERTAINING TO  
SDCL 1-40-27 (1)(a) THROUGH (e).**

**ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT  
AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION.**

# **WELL INSPECTION / SCOUT REPORTS**

### ***Oil & Gas Well Inspection Report***

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01**

Permit #: **1759**

Operator: **Continental Resources Inc.**

Inspection Date: **2-22-17**

Time In: **9:39 AM MT**

Time Out: **9:45 AM MT**

Accompanied by: **Lucy Dahl (DENR)**

Equipment on Site: **1 pumpjack, 1 tank, 1 treater, backhoe and Olson Construction company pickup**

Type of Inspection:

Routine Oil Well

Routine Gas Well

New Drill

Final

MIT

Other

#### Routine Inspection Items

Adequate Sign in Place?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Tanks Adequately Bermed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Spills?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Improper Waste Disposal?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Weed Problems at Site?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Erosion or Settling Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Other Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>

#### Reclamation

Area Adequately Reshaped & Sloped?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Top Soil Replaced?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Adequate Vegetation Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Protects Ground/Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

#### New Drill

Drill Pit Adequately Lined?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Blowout Preventer Used?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Terrain Suitable/Protects Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

#### Mechanical Integrity Test

Landuse:

Time (Minutes)	Pressure in Production Casing	Pressure in Tubing	Pressure in Surface Casing
0			
5			
10			
15			

Production Casing Maintains 90%  
of Initial Pressure after 15 minutes?

Pass  
MIT

Fail  
MIT

#### Comments

Pumpjack was pumping. No problems noted.

Inspector: Jeff Klenner

Signature:

Date: Feb 28, 2017

***Oil & Gas Well Inspection Report Photo—WBRRU 32-23H, Page 1 of 1***

Inspection Date: **2-22-17**

Well: **WBRRU 32-23H** Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01** Permit #: **1759** Operator: **Continental Resources Inc.**



Photo 1. WBRRU 32-23H well site.

**Oil & Gas Well Inspection Report**

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01**

Permit #: **1759**

Operator: **Continental Resources Inc.**

Inspection Date: **3-9-2016**

Time In: **2:02 PM MDT**

Time Out: **2:04 PM MDT**

Accompanied by:

Equipment on Site: **1 tank, 1 treater**

Type of Inspection:

Routine Oil Well

Routine Gas Well

New Drill

Final

MIT

Other

**Routine Inspection Items**

Adequate Sign in Place?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Tanks Adequately Bermed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Spills?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Improper Waste Disposal?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Weed Problems at Site?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Erosion or Settling Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Other Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>

**Reclamation**

Area Adequately Reshaped & Sloped?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Top Soil Replaced?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Adequate Vegetation Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Protects Ground/Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

**New Drill**

Drill Pit Adequately Lined?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Blowout Preventer Used?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Terrain Suitable/Protects Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

**Mechanical Integrity Test**

Time (Minutes)	Pressure in Production Casing	Pressure in Tubing	Pressure in Surface Casing
0			
5			
10			
15			

Production Casing Maintains 90%  
of Initial Pressure after 15 minutes?

Pass  
MIT

Fail  
MIT

**Comments**

Flowing well. No problems noted.

Inspector: Jeff Klenner

Signature:

Date: Mar 29, 2016

***Oil & Gas Well Inspection Report Photo—WBRRU 32-23H, Page 1 of 1***

Inspection Date: **3-9-2016**

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01**

Permit #: **1759**

Operator: **Continental Resources Inc.**



Photo 1. WBRRU 32-23H well site.

## ***Oil & Gas Well Inspection Report***

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01**

Permit #: **1759**

Operator: **Continental Resources Inc.**

Inspection Date: **6/11/2014**

Time In: **12:53 PM MDT**

Time Out: **12:55 PM MDT**

Accompanied by:

Equipment on Site: **1 tank, 1 treater**

Type of Inspection:

Routine Oil Well

Routine Gas Well

New Drill

Final

MIT

Other

### Routine Inspection Items

Adequate Sign in Place?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Tanks Adequately Bermed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Spills?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Improper Waste Disposal?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Weed Problems at Site?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Erosion or Settling Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Other Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>

### Reclamation Bond Release

Area Adequately Reshaped & Sloped?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Top Soil Replaced?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Adequate Vegetation Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Protects Ground/Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

### New Drill

Drill Pit Adequately Lined?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Blowout Preventer Used?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Terrain Suitable/Protects Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

### Mechanical Integrity Test

Landuse:

Time (Minutes)	Pressure in Production Casing	Pressure in Tubing	Pressure in Surface Casing
0			
5			
10			
15			

Production Casing Maintains 90% of Initial Pressure after 15 minutes?  Pass MIT  Fail MIT

### Comments

*Flowing well. No problems noted.*

Inspector: Jeff Klenner

Signature:

Date: Jun 16, 2014

***Oil & Gas Well Inspection Report Photo—WBRRU 32-23H, Page 1 of 1***

Inspection Date: **6/11/2014**

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01** Permit #: **1759** Operator: **Continental Resources Inc.**



Photo 1. WBRRU 32-23H well site.

## ***Oil & Gas Well Inspection Report***

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01**

Permit #: **1759**

Operator: **Continental Resources Inc.**

Inspection Date: **7/16/2013**

Time In: **1:42 PM MT**

Time Out: **1:47 PM MT**

Accompanied by: **Kelsey Newling, Georgina McKee, Kayla Fawcett**

Equipment on Site: **1 pumpjack, 1 tank, 1 treater**

Type of Inspection:

Routine Oil Well

Routine Gas Well

New Drill

Final

MIT

Other

### Routine Inspection Items

Adequate Sign in Place?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Tanks Adequately Bermed?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Spills?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Evidence of Improper Waste Disposal?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Weed Problems at Site?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Erosion or Settling Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Other Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>

### Reclamation Bond Release

Area Adequately Reshaped & Sloped?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Top Soil Replaced?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Adequate Vegetation Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Protects Ground/Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

### New Drill

Drill Pit Adequately Lined?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Blowout Preventer Used?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Terrain Suitable/Protects Surface Water?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

### Mechanical Integrity Test

Time (Minutes)	Pressure in Production Casing	Pressure in Tubing	Pressure in Surface Casing
0			
5			
10			
15			

Production Casing Maintains 90%  
of Initial Pressure after 15 minutes?

Pass  
MIT

Fail  
MIT

### Comments

There is no berm around the tank. An email was sent to Continental on 7/18/2013 with response it would be fixed within a week.

Inspector: Jeff Klenner

Signature:

Date: Jul 18, 2013

***Oil & Gas Well Inspection Report Photos—WBRRU 32-23H, Page 1 of 2***

Inspection Date: **7/16/2013**

Well: **WBRRU 32-23H**

Location: **SWNE 23-21N-3E, Harding County**

API #: **40 063 05037.01** Permit #: **1759** Operator: **Continental Resources Inc.**



Photo 1. WBRRU 32-23H tank, treater, and pumpjack.

*Oil & Gas Well Inspection Report Photos—WBRRU 32-23H, Page 2 of 2*



Photo 2. Area where berm needs to be built up around tank.

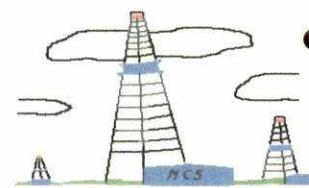
**OPERATOR'S  
TECHNICAL  
REPORTS / MAPS**

# CONTINENTAL RESOURCES, INC

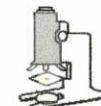
WBRRU #32-23

SECTION 23-T21N-R3E  
Harding County, SD

*YANCY SMITH*  
*Wellsite Geologist*



**NESET  
CONSULTING  
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6853 102 Ave NW  
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## WELL SUMMARY

**OPERATOR:** **CONTINENTAL RESOURCES, INC.**

**LEASE:** **WBRRU #32-23 – DUAL LATERAL**

**LOCATION:** **Field: Buffalo**  
**Footage:** Surface: 1920' FNL & 1748' FEL, Sec. 23-T21N-R3E  
Bottom Hole: 1700' FNL & 1000' FWL, Sec. 23-T21N-R3E  
Lateral #2: 700' FNL & 300' FEL, Sec. 23-T21N-R3E

**Legal:** Sec. 23-T21N-R3E  
**County:** Harding Co., South Dakota

**ELEVATION:** Kelly Bushing: 3167'      **Ground Level:** 3156'

**SPUD DATE:** August 24, 2005 at 11:15 AM CDT

**CEASE DRILLING:** September 6, 2005 2:15 PM CDT

**TOTAL DEPTH:** Lateral 1 (W): 10,961' MD  
Lateral 2: (NE): 10,348' MD

**CONTRACTOR:** Rig: J & R Drilling #8  
Toolpusher: Toby Hurley, Lynden Eide  
Drillers: Doyle Kruger, John Eide, Mike Dailey, Derrick Dehann

**CASING RECORD:** Surface: 5 ½" casing

**MUD RECORD:** Mud type: Freshwater

**DIRECTIONAL DRILLING PROGRAM:** Directional company: Multishot  
Directional drillers: Steve Harper, Tracy Lewis, Clint Shirley  
Gyro company: Multishot  
Gyro supervisors: Alan Pederson

**MUDLOGGING PROGRAM:** Mudlogging company: Neson Consulting Services  
Mudloggers: Yancy Smith, LeMan Hoffmann  
Services: Pason Total Gas

**SAMPLE PROGRAM:** Caught: 10', 30', 50'  
Examined: All  
Saved: All  
Quality: Very good to fair

**WELL STATUS:** Awaiting Completion

**COMPANY ENGINEER:** Rob Love

**WELLSITE SUPERVISOR:** Sonny Honrud, Al Hartse

**COMPANY GEOLOGIST:** Barry Peter Thies

**WELLSITE GEOLOGIST:** Yancy Smith

## Geologic Summary

Continental Resources, Inc.; WBRRU #32-23 well is a dual lateral that will be drilled out of existing 5 1/2" casing by cutting a northwest facing window at least 10' below the Gunton porosity located at 8342'-8360', landing in the Red River "B" porosity at 8480'-8497'. Out of this window one lateral will turn to the northeast and one to the west to described bottom hole locations. The plan for this well is to build both curves first before drilling out the laterals. The well is located in Sec. 23-T21N-R3E of Harding County, near Buffalo, South Dakota.

This well spudded on August 24, 2005. Wellsite geological services were begun from tie in survey at 8,330 feet measured depth on August 24, 2005 at 11:15 AM CDT. Ten, thirty and fifty foot lagged samples were caught and saved for archive by Continental Resources, Inc.; Pason Total Gas Detection equipment was used for monitoring gas.

### **WBRRU #32-23 RR"B" Lateral - (West )**

#### *Curve*

Began re-entry of the WBRRU #32-23, on August 24, 2005 at 11:15 AM CDT. Curve began from the tie in survey at 8,330.0' measured depth; 1.29° inclination; 261.92° azimuth; 8,329.5' true vertical depth; 22.4 feet of vertical section. Kick-off point was 8,388' MD, 4.4° INC, 309.4° AZ, 8,387' TVD at 24.91 feet of vertical section. Time drilling began from 8388'-8401' measured depth. Weight on bit commenced at 8,401'measured depth. Lithology from initial samples was limestone, medium to light gray to off white, light brown, brown, micro to very fine crystalline, soft to firm, slightly marly, slightly argillaceous, brittle in part, pyritic, moderately dolomitic, residual oil, pipe dope, mill cuttings, scattered dull yellow fluorescence, weak cloudy cut. Possum belly was opened to dump mill cuttings. No gas or trip gas was recorded with initial samples. Drilled gyro section to 8,433 feet measured depth and pulled back to drill gyro section of northeast lateral.

We encountered problems as we went in with lateral assembly. The BHA could not be made to turn downward upon landing with 1.5° motor. Continued efforts at a 180° tool-face proved fruitless. It was determined that perhaps a mud motor failure or steering tool malfunction had occurred. A trip out of the hole was initiated to investigate why BHA wasn't responding to slides. The mud motor had twisted off and fishing tools were called out. Fish was left in the hole and sidetrack #1 was issued. The WBRRU #32-23, West Lateral, ST# 1 curve would be rebuilt from initial kick off point.

#### **W. Lateral, ST#1**

Began sidetrack #1 of the WBRRU #32-23, west lateral, from a tie in survey at 8330' MD; 1.29° INC; 261.9° AZ; 8,561' TVD; 1,987.7' feet of vertical section. Kick-off point was 8,388' MD; 1.6° INC, 339.9° AZ, 8,387' TVD at 24.4 feet of vertical section. Time drilling began from 8,388-8403' measured depth. Weight on bit commenced at 8403' measured depth. Lithology from initial sample consisted of creamy light to

medium gray limestone, light brown, brown, micro to very fine crystalline, soft to firm, marly, brittle in part, slightly argillaceous, pyritic, scattered dull yellow fluorescence, no cut. Gas values ranged between 29-50 units with 54 peak units. Hourly fluid loss was 0-3 barrels.

#### **Red River "B": 8,493' MD; 8,478 TVD; -5,311' SS**

The Red River "B" porosity zone was encountered at 8,493' MD, 8,478' TVD, and 67.16 feet of vertical section. Lithology of the "B" zone consisted brown dolomite, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut. It should be noted here that no anhydrite signature was recorded nor did anhydrite appear in samples.

An increase in gas was noted upon entry into the Red River "B". Gas values increased to 90-433 units, over a background of 26-38 units. 644 units of trip gas were recorded.

The "B" zone was depicted at a change in rate of penetration from 1.8 minutes per foot to 1.03 minutes per foot. After samples were lagged up, there was a distinct change in lithology from a limestone to a dolomite. A thin oil break out was noted at possum belly and wash water. Hourly fluid losses were at 0-3 barrels.

Due to initial kick off of this lateral, we would drill approximately 17 feet below the top of the Red River "B" zone, leaving a "P" trap at the beginning of this lateral.

The Red River "B" porosity was again achieved at approximately 8736' MD; 8482' TVD; 305.6' VS at -5315 sub-sea depth. Lithology at re-entry into the "B" consisted of gray brown, brown, dark brown dolomite, light creamy brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm, fair intercrystalline porosity, strong oil odor, fair layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut. Dolomite from the lower "B" would exhibit fair to moderate calcite fill. Gas from this area was recorded at 798 units. Hourly fluid losses were between 9-11 bbl.

Drilling of the west lateral, sidetrack #1 continued at 90.32 degrees until 9774 feet of measured depth. A top strike was encountered at 9,774' MD; 8,471' TVD; and 1,339.5 feet of vertical section, at -5304' sub-sea depth. Overall lithology would consist of dolomite, dark brown, gray brown, brown, creamy gray brown, argillaceous/dirty, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, good intercrystalline porosity, oil veining, strong oil odor, moderate layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse fair to moderate streaming milky yellow cut. Gamma from the immediate top of the "B" would register between 21-28.6 API units. Samples would also be more gray to light gray, with tighter porosity. Gas would register between 184-722 units. Hourly fluid losses through this section of the lateral ranged between 13-35 barrels.

The remainder of the WBRRU #32-23, west lateral sidetrack #1 was drilled out to prognosis depth. We would get approximately 9 feet low to the top immediately following the top strike at 9,774 feet measured depth. We were able to level out and finish this lateral in zone. Company personnel issued a top strike at end of this lateral for

reference purposes. Lithology through the latter section of this lateral consisted of brown, light brown, gray brown dolomite, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, brown oil in pores, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut. Samples would exhibit lighter color through this section due to the use of citrasol to remove sweep material. Gas registered between 604-2044 units. Hourly fluid losses ranged between 15-24 bbl.

TD of the WBRRU #32-23, west lateral sidetrack #1 occurred at measured depth of 10,961 feet on September 1, 2005 at 6:30 AM CDT.

#### **WBRRU #32-23 RR"B" Lateral - (Northeast)**

##### *Curve*

Began re-entry of the WBRRU #32-23, on August 24, 2005 at 11:15 AM CDT. Curve began from the tie in survey at 8,330.0' measured depth; 1.29° inclination; 261.92° azimuth; 8,329.5' true vertical depth; -27.12 feet of vertical section. Kick-off point was 8,388' MD, 3.7° INC, 285.6° AZ, 8,463.4' TVD at 16.9 feet of vertical section. Time drilling began from 8388'-8468' measured depth. Weight on bit commenced at 8,414' measured depth. Lithology from initial sample was limestone, medium to light gray, light brown, off white, white, micro to very fine crystalline, soft to firm, brittle in part, pyritic, dolomite, gray brown, fine to intergranular, sucrosic to tight sucrosic, scattered dull yellow fluorescence, weak cloudy cut. Pulled gyro at 8,506' measured depth and ran in hole with magnetic steering assembly. Finished drilling curve of northeast lateral at 8,524' measured depth. Pulled back to drill out remainder of the southwest lateral curve.

#### **Red River "B": 8,632' MD; 8,482 TVD; -5,315' SS**

The Red River "B" porosity was encountered at 8,632' MD; 8,482' TVD; 168.95' of vertical section. Sample lithology at entry consisted of gray brown, brown dolomite, fine to very fine crystalline, firm to friable, brittle in part, argillaceous, fair to good intercrystalline porosity, moderately limy, faint oil odor, scattered dull yellow to yellow fluorescence, slow streaming cloudy cut. Gas from entry into the "B" registered 525-1721 units. Hourly fluid losses ranged between 0-5 bbl.

We began taking air/gas kicks at 9694' measured depth. The gas buster was put online at this time. The first two kicks were circulated out. Consecutive gas kicks were drilled through maintaining 300 pounds of backside pressure. Lithology throughout the drilling of the northeast lateral consisted of brown, dark brown, gray brown dolomite, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, brown oil in pores, strong oil odor, evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut. Gas values ranged between 495-2654 units. Hourly fluid losses throughout the drilling of this lateral ranged between 5-17 bbl. It should be noted that sample and gas measurements were skewed somewhat after we began utilizing the gas buster.

The remainder of this well was drilled to prognosis depth at approximately 89.07 degree dip.

TD of the WBRRU #32-23, northeast lateral, occurred at measured depth of 10,348 feet on September 6, 2005 at 2:15 PM CDT.

### ***Conclusion***

Some difficulties did arise while drilling out this well. We could not get oriented into the northeast lateral curve with 1.5° lateral mud motor. A trip out of the hole was initialized to see if we could get in with a 2.5° build assembly. The higher degree mud motor could be oriented into this curve. At this point a decision was made to trip the build assembly out and turn the motor down to 1.8 degrees. We then ran in the hole with this assembly and could not get oriented. Sand was pumped down hole to give us some support from which to orient BHA. The sand pill did work and we were able to get into the northeast lateral curve and commence drilling out the lateral.

Directional personnel deduced that the hole immediately around kickoff point had been washed out enough that we could not reach across the well bore with the smaller motor. The sand pill enabled us to get the support we needed.

This well is currently awaiting completion.

**Yancy Smith**  
*Wellsite Geologist*

## DAILY LOG OF OPERATIONS

6:00 AM DEPTH

DATE	DEPTH	FOOTAGE	DAY	FORMATION	OPERATIONS
24-Aug-2005	8388	0	1	Gunton	TOH to change BHA; change BHA; TIH with stiff assembly; swivel up; worked on window & rat hole ( iron on bottom, just spinning); swivel down; TOH to change BHA; waited on fishing tools; pick up basket; TIH with basket; fished with basket; TOH; changed out BHA ( had a little iron and cement in basket); TIH with 2.5* motor and 4.5 inch bit.
25-Aug-2005	8418	74	2	Gunton	TIH with 2.5* motor and 4.5 in bit; wireline - orient tool face; time drilling NW curve from 8,395' to 8,432'; pulled back to KOP - 8,388'; time drilling from 8,839' to 8,418'.
26-Aug-2005	8497	169	3	Red River	Slide drilling NE curve-8418'; pull gyro tool; pull 6 jts out of hole and put rocket in tubing; run steering tool and hang off @ rocket; swivel up and orient into NE curve-8428'; slide drill NE curve 8429-8522 (EOC); TOH to KOP and orient into W curve-8432'; slide drill NW curve 8447-8497.
27-Aug-2005	8685	188	4	Red River	Slide drilling NW curve - 8,523'; circulated hole; swivel down and TOH to rocket; wireline; TOH to change BHA; change BHA - layed down 2.5* motor - picked up 1.5* motor; slip drilling line; TIH to rocket; wireline; oriented into W curve; TIH to 8,523'; slide and rotating drilling from 8,575' - 8,685'; fluid loss = 4 - 10 bbl.
28-Aug-2005	8773	88	5	Red River	Slide and rotate drilling from 8,733' - 8,773'; fluid loss = 10 bbl; swivel down; TOH to rocket; wireline - steering tool; TOH - no rotor - bent housing - bearing pack - bit box - bit; waiting on fishing tools; made up fishing tool - overshot - bent sub - orient sub - 14 jts - bumper sub; TIH; worked fishing tool in curve but couldn't get passed 8,462'; wireline - orient fishing tool in NW curve - ok; wireline - pulled tools; TOH with fishing tools.
29-Aug-2005	8,396	8	6	Gunton	TOH with fishing tools; layed down fishing tool and picked up 2.5* motor and 4-1/2in bit; TIH; swivel up; wireline - gyro tool; orient into hole - 8,388'; time drilling 5 min/in; time drilling 8,396'; TBG pressure up and pop popoff; swivel down - something in TBG motor plugging up; wireline - gyro tool; TOH change out motor assembly (bad); TIH.
30-Aug-2005	8,554	158	7	Red River "B"	Swivel up and run Gyro tool from 8,396'; time drilling 2.5min/ft - 8,399'; slide drilling from 8,414' - 8,431'; wireline pulled gyro tool; wireline run steering tool and oriented into NW lateral; slide drilling from 8,452' - 8,554'; swivel down and TOH to rocket; wireline - pulled steering tool; TOH to change BHA.

31-Aug-2005	9,660	1106	8	Red River "B"	TOH to change BHA; change BHA (layed down 2.5* motor & picked up 1.5* motor); slip and cut drill line; TIH - 1.5* motor - 4 1/2 in bit; wireline; swivel up & orient into NW curve; slide & rotating 8,554' - 8,620'; fluid loss = 15 bbl; slide & rotating 8,620' - 8760'; fluid loss -25 bbls; slide & rotating from 8760' - 9001'; fluid loss - 52 bbls; slide & rotating from 9001' - 9276'; fluid loss 68 bbls; slide & rotating from 9276' - 9520'; fluid loss 97 bbls; slide & rotating from 9520' - 9660'; fluid loss 78 bbls
1-Sep-2005	10,961	1301	9	Red River"B"	Slide & rotating from 9660' - 9790'; fluid loss 86 bbls; slide & rotating from 9790' - 9897'; fluid loss 72 bbls; slide & rotating 9897' - 10061'; fluid loss 48 bbls; slide & rotating 10061' - 10231'; fluid loss 45 bbls; slide & rotating from 10231' - 10386'; fluid loss 58 bbls; slide & rotating 10386' - 10595'; fluid loss 56 bbls; slide & rotating 10595' - 10806'; fluid loss 63 bbls; slide & rotating 10806' - 10961; fluid loss 64 bbls; TD
2-Sep-2005	10,961	1301	10	Red River "B"	Circulate hole; swivel down; TOH to KOP; swivel up; oriented into NE lateral; swivel down; TOH to rocket; wireline; TOH to change BHA- layed down 1.5* & pickup 2.5* motor; TIH to rocket; wireline; swivel up; oriented into NE lateral; washed to bottom - 8522'; circulated hole; swivel out 4 jts; swivel down; wireline; TOH to change BHA - layed down 2.5* & pickup 1.5* motor
3-Sep-2005	10,961	0	11	Red River"B"	TOH to change BHA - lay down 2.5* & pick up 1.5* motor; change out BHA; slip and cut drilling line; TIH to rocket; wireline; TIH to KOP; swivel up and try to get into NE lateral; swivel down; TOH to change BHA - lay down 2.5* motor & pick up 1.5* motor; change motor degree; TIH; wireline; try to orient into NE lateral.
4-Sep-2005	10,961	0	12	Red River"B"	Try orienting into NE lateral; swivel down - wireline - pull steering tool; TOH; lay down BHA; TIH; wait on sand; spot 20 sacks sand; TIH to tag sand, no tag; spot 10 sacks sand; let sand fall; TIH to tag sand, no tag; TIH to tag sand, no tag, TIH to tag sand, no tag, TIH to tag sand, no tag; spot 20 sacks sand; TIH to tag sand, no tag; spot 20 sacks sand.
5-Sep-2005	8,600	78	13	Red River"B"	Spotted 20 sacks sand; displace tubing 42 bbls; shut tubing in and presure up annular and stage sand up to 500#; TIH and tag sand @ 8363 ft - top of window is 8376 ft - 70 sacks sand total; TOH; pick up - 2 NMDC - MSS - 1.83* motor and 4 1/2 inch bit; TIH; swivel up; wireline - run gyro tool; oriented into NE lateral; circulated sand out of hole; wireline - pull gyro tool and run steering tool; wash out curve to 8522 ft; slide drilling - 8538 ft; rotate and slide drilling 8600 ft - water loss - 12 bbls.
6-Sep-2005	9,938	1338	14	Red River"B"	Rotate and slide drilling 8711-9938 - circulate gas kick out - water loss - 5-42 bbl.

## BIT RECORD

<u>BIT</u>	<u>BIT</u>	<u>BIT</u>	<u>BIT</u>	<u>SERIAL</u>	<u>JET</u>	<u>DEPTH</u>		<u>HRS</u>	<u>ACC</u>		<u>FT/HR</u>	<u>WOB</u>	<u>RPM</u>	<u>SPM</u>	<u>PP</u>	<u>MUD</u>	<u>DULL</u>
<u>NO.</u>	<u>SIZE</u>	<u>MFGR</u>	<u>TYPE</u>	<u>NO.</u>	<u>SIZE</u>	<u>OUT</u>	<u>FTGE</u>	<u>RUN</u>	<u>HRS</u>						<u>WT/VIS</u>	<u>CODE</u>	
1	4 1/2	Hughes	STX-30	5061997	3-20	8773	519	55.5	55.5	9.35	10	229 mm	80	1230	8.5/29	NA	
2	4 1/2	Smith	XR30PS	PB9798	3-20	10,961	2407	65.25	120.75	36.9	10	229mm	90	1900	8.5/29	NA	
2RR	4 1/2	Smith	XR30PS	PB9798	3-20	10,348	2016	37.75	157.78	51.03	8.6	229.5mm	90	1860	8.5/29	NA	

## MUD RECORD

DATE	DEPTH	WT	VIS	WATER LOSS	PV	YP	GELS	Ph	CHLOR	CAKE	SOLIDS	TRACER	CUMM COST
24-Aug-2005	0	8.4	29		SW			7					
25-Aug-2005	8,418	8.5	28		SW			7					
26-Aug-2005	8,497	8.5	28		SW			7					
27-Aug-2005	8,685	8.5	29		SW			7					
28-Aug-2005	8,773	8.5	29		SW			7					
29-Aug-2005	8,396	8.5	29		SW			7					
30-Aug-2005	8,554	8.5	29		SW			7					
31-Aug-2005	9,660	8.5	29		SW			7					
1-Sep-2005	10,961	8.5	29		SW			7					
2-Sep-2005	10,961	8.5	29		SW			7					
3-Sep-2005	10,961	8.5	29		SW			7					
4-Sep-2005	10,961	8.5	29		SW			7					
5-Sep-2005	8,600	8.5	29		SW			7					
6-Sep-2005	9,938	8.5	29		SW			7					

FORMATION TOPS		CONTINENTAL RESOURCES, INC.			
WBRRU # 32-23		SECTION 23-T21N-R3E Harding County, South Dakota			
FORMATION	Low(-)/High	Sample Tops		Prognosis	
		KB 3167		KB 3167	
		To Prog	Sample Tops	TVD Depth	
<b>NE Lateral</b>					
Gunton		****	****	8342	-5175
Red River	1' high	8445	-5278	8446	-5279
RR "A"		****	****	****	****
RR "B"	2' low	8482	-5315	8480	-5313
Total depth	10,348				
<b>W Lateral</b>					
Gunton		****	****	8342	-5175
Red River	2' high	8444	-5277	8446	-5279
RR "A"		****	****	****	****
RR "B"	2' high	8478	-5311	8480	-5313
Total depth	10,961				
** Not mudlogged.					
**** No top picked					
NP Not Present					

**CONTINENTAL RESOURCES, INC.**  
**WBRRU # 32-23**  
**Sec.23-T21N-R3E**  
**DUAL LATERAL**

**SAMPLE DESCRIPTIONS**  
*Curve and Lateral*

***CURVE –WEST LATERAL***

***GUNTON***

***HOURLY SAMPLES***

- 8388 – 8389      LIMESTONE: Medium to light gray to off white, light brown, brown, micro to very fine crystalline, soft to firm, slightly marly, slightly argillaceous, brittle in part, pyritic, moderately dolomitic, residual oil, pipe dope, mill cuttings, scattered dull yellow fluorescence, weak cloudy cut.
- 8389 – 8391      LIMESTONE: Medium to light gray to off white, light brown, brown, micro to very fine crystalline, soft to firm, slightly marly, slightly argillaceous, brittle in part, pyritic, moderately dolomitic, residual oil, pipe dope, mill cuttings, scattered dull yellow fluorescence, weak cloudy cut.

***10' SAMPLES***

- 8398 – 8410      LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, brittle in part, slightly argillaceous, dolomitic, pyritic, metal shavings, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8410 – 8420      LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, brittle in part, moderately argillaceous, dolomitic, pyritic, metal shavings, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8420 – 8430      LIMESTONE: Creamy light to medium gray, medium gray brown, light brown, brown, micro to very fine crystalline, soft to firm, very marly, pasty, brittle in part, moderately argillaceous, dolomitic, pyritic, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8430 – 8440      LIMESTONE: Light creamy gray to gray, light brown, brown, gray brown micro to very fine crystalline, soft to firm, slightly marly, brittle in part, moderately argillaceous, dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8440 – 8450      LIMESTONE: Light creamy tan to brown, light to medium gray, brown, micro to very fine crystalline, soft to firm, slightly marly, pasty, brittle in part, moderately argillaceous to shaley, dolomitic, pyritic, scattered dull yellow fluorescence, no cut.

- 8450 – 8460 LIMESTONE: Light creamy tan to brown, light to medium gray, brown, micro to very fine crystalline, soft to firm, slightly marly, pasty, brittle in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8460 – 8470 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8470 – 8480 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8480 – 8490 LIMESTONE: Gray brown, brown, light gray, micro to very fine crystalline, firm to brittle, soft in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8490 – 8500 LIMESTONE: Dark gray brown, brown, light to medium gray, micro to very fine crystalline, firm to brittle, soft in part, argillaceous to shaley, pyritic, scattered dull yellow fluorescence, no cut.
- 8500 – 8510 LIMESTONE: Dark gray brown, brown, light to medium gray, micro to very fine crystalline, firm to brittle, soft in part, argillaceous to shaley, pyritic, scattered dull yellow fluorescence, no cut.
- 8510 – 8520 LIMESTONE: Dark brown, gray brown, light to medium gray, micro to very fine crystalline, firm to brittle, soft in part, argillaceous to shaley, pyritic, scattered dull yellow fluorescence, no cut.

#### END OF CURVE

- 8520 – 8530 LIMESTONE: Dark brown, gray brown, light to medium gray, micro to very fine crystalline, firm to brittle, soft in part, argillaceous to shaley, pyritic, scattered dull yellow fluorescence, no cut. Mixed sample from trip.
- 8530 – 8540 LIMESTONE: Brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8540 – 8550 LIMESTONE: Brown, dark gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8550 – 8560 LIMESTONE: Brown, dark gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8560 – 8570 LIMESTONE: Brown, dark brown, gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8570 – 8580 LIMESTONE: Brown, dark brown, gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.

- 8580 – 8590 LIMESTONE: Brown, gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8590 – 8600 LIMESTONE: Brown, gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8600 – 8610 LIMESTONE: Brown, gray brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8610 – 8620 LIMESTONE: Brown, light brown, edges frosty, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8620 – 8630 LIMESTONE: Dark brown, brown, light brown, edges frosty, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8630 – 8640 LIMESTONE: Dark brown, brown, light brown, edges frosty, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.

#### **20' SAMPLES**

- 8640 – 8660 LIMESTONE: Brown, dark brown, light brown, edges frosty, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8660 – 8680 LIMESTONE: Brown, dark brown, edges frosty, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8680 – 8700 LIMESTONE: Brown, dark brown, edges frosty, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8700 – 8720 LIMESTONE: Brown, edges frosty, light gray, dark brown, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.
- 8720 – 8740 LIMESTONE: Brown, edges frosty, dark brown, light gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, scattered dull yellow fluorescence, no cut.

#### **WBRRU #32-23 - West Lateral, ST #1**

##### **HOURLY SAMPLES**

- 8388 – 8389 LIMESTONE: Brown, light brown, edges frosty, light to medium gray, micro to very fine crystalline, brittle, firm in part, slightly argillaceous, pyritic veining, residual oil, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.

- 8389 – 8391 LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, brittle in part, slightly argillaceous, pyritic, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8391 – 8393 LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, brittle in part, slightly argillaceous, pyritic, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8393 – 8395 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, white, off white, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, very dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8395 – 8398 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, white, off white, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, very dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8398 – 8400 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, white, off white, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, very dolomitic, pyritic, scattered dull yellow fluorescence, no cut.

#### 10' SAMPLES

- 8400 – 8410 LIMESTONE: Light gray, light creamy gray-tan, medium gray brown, brown, white, off white, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, very dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8410 – 8420 LIMESTONE: Light gray, light creamy gray-tan, medium gray brown, brown, white, off white, micro to very fine crystalline, soft to firm, marly, pasty, moderately argillaceous, pyritic, scattered dull yellow fluorescence, no cut.
- 8420 – 8430 LIMESTONE: Light gray, light creamy gray-tan, medium gray brown, brown, white, off white, micro to very fine crystalline, soft to firm, marly, pasty, moderately argillaceous, pyritic, scattered dull yellow fluorescence, no cut.
- 8430 – 8440 LIMESTONE: Creamy light to medium gray, medium gray brown, light brown, brown, micro to very fine crystalline, soft to firm, very marly, pasty, brittle in part, moderately argillaceous, dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8440 – 8450 LIMESTONE: Light creamy tan to brown, light to medium gray, brown, micro to very fine crystalline, soft to firm, slightly marly, pasty, brittle in part, moderately argillaceous to shaley, dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8450 – 8460 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8460 – 8470 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.
- 8470 – 8480 LIMESTONE: Light creamy gray-tan, light to medium gray, brown, micro to very fine crystalline, soft to firm, brittle in part, moderately argillaceous to shaley, lightly dolomitic, pyritic, scattered dull yellow fluorescence, no cut.

8480 – 8490 LIMESTONE: 80% Light creamy gray-tan, light to medium gray, brown, micro to very fine crystalline, soft to firm, brittle in part, pyritic, dolomite, brown, off white, fine to very fine crystalline, sucrosic, tight in part, good intercrystalline porosity, even oil staining, mild oil odor, thin layer oil on possum belly, spotty dull yellow fluorescence, instant diffuse, slow to moderate streaming weak milky yellow cut.

#### Red River “B”

Samples exhibit intercrystalline calcite fill throughout Red River “B”

8490 – 8500 DOLOMITE: Brown, light brown, trace off white, fine to very fine crystalline, sucrosic, tight in part, good intercrystalline porosity, even oil staining, trace limestone, light creamy gray-tan, light to medium gray, brown micro to very fine crystalline, mild oil odor, thin layer oil on possum belly, spotty dull yellow fluorescence, instant diffuse, slow to moderate streaming weak milky yellow cut.

#### 30' SAMPLES

8500 – 8530 DOLOMITE: Brown, light brown, creamy brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm to friable, good intercrystalline porosity, trace chert, white to off white, conchoidal fracture, strong oil odor, thin layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.

8530 – 8560 DOLOMITE: Brown, dark gray brown, gray brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm to friable, good to fair intercrystalline porosity, chert, creamy tan, hard, strong oil odor, thin layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.

8560 – 8590 DOLOMITE: Gray brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm to friable, fair to good intercrystalline porosity, strong oil odor, thin layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.

8590 – 8620 DOLOMITE: Gray brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm to friable, fair to good intercrystalline porosity, strong oil odor, fair layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.

8620 – 8650 DOLOMITE: Gray brown, brown, light creamy brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm to friable, fair intercrystalline porosity, strong oil odor, fair layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.

#### 50' SAMPLES

8650 – 8700 DOLOMITE: Gray brown, brown, light creamy brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm to friable, fair intercrystalline porosity, strong oil odor, fair layer oil on possum belly, spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.

8700 – 8750	DOLOMITE: Gray brown, brown, dark brown, light creamy brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm, fair intercrystalline porosity, strong oil odor, fair layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.</b></u>
8750 – 8800	DOLOMITE: Gray brown, brown, light creamy brown, fine to very fine crystalline, tight sucrosic to sucrosic, firm, friable, fair intercrystalline porosity, strong oil odor, good layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse moderate to fast streaming milky yellow cut.</b></u>
8800 – 8850	DOLOMITE: Brown, gray brown, light creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
8850 – 8900	DOLOMITE: Brown, gray brown, light creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
8900 - 8950	DOLOMITE: Gray brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, thick layer oil on possum belly, strong oil odor, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
8950 – 9000	DOLOMITE: Gray brown, brown, trace creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
9000 – 9050	DOLOMITE: Gray brown, brown, creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
9050 – 9100	DOLOMITE: Gray brown, brown, creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
9100 – 9150	DOLOMITE: Gray brown, brown, trace creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
9150 – 9200	DOLOMITE: Gray brown, brown, trace creamy brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>
9200 – 9250	DOLOMITE: Gray brown, brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, thick layer oil on possum belly, strong oil odor, <u><b>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</b></u>

9250 – 9300	DOLOMITE: Brown, gray brown, fine to very fine crystalline, sucrosic, firm to friable, intercrystalline calcite fill, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</u></b>
9300 – 9350	DOLOMITE: Brown, gray brown, fine to very fine crystalline, sucrosic, firm to friable, intercrystalline calcite fill, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</u></b>
9350 – 9400	DOLOMITE: Light brown, gray brown, fine to very fine crystalline, sucrosic, firm to friable, intercrystalline calcite fill, good intercrystalline porosity, strong oil odor, thick layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse broad streaming milky yellow cut.</u></b>
9400 – 9450	DOLOMITE: Light brown, gray brown, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, good intercrystalline porosity, oil veining, strong oil odor, moderate layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse moderate to broad streaming milky yellow cut.</u></b>
9450 – 9500	DOLOMITE: Dark brown, gray brown, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, good intercrystalline porosity, oil veining, strong oil odor, moderate layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse moderate to broad streaming milky yellow cut.</u></b>
9500 – 9550	DOLOMITE: Dark brown, gray brown, trace creamy brown, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, good intercrystalline porosity, oil veining, strong oil odor, moderate layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</u></b>
9550 – 9600	DOLOMITE: Dark brown, gray brown, trace gray, dirty, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, good intercrystalline porosity, oil veining, strong oil odor, moderate layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse, fair to moderate streaming milky yellow cut.</u></b>
9600 – 9650	DOLOMITE: Gray brown, trace gray, dirty, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, good intercrystalline porosity, oil veining, strong oil odor, moderate layer oil on possum belly, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse, fair to moderate streaming milky yellow cut.</u></b>
9650 – 9700	DOLOMITE: Dark brown, creamy gray, dirty, creamy brown, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, fair to good intercrystalline porosity, oil veining, light layer oil on possum belly, strong oil odor, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.</u></b>
9700 – 9750	DOLOMITE: Light gray, dark brown, dirty, creamy brown, very fine to fine crystalline, tight sucrosic to sucrosic, brittle to firm, fair to good intercrystalline porosity, oil veining, light layer oil on possum belly, strong oil odor, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.</u></b>
9750 – 9800	DOLOMITE: Light to medium gray, dark brown, creamy brown, very fine to fine crystalline, tight sucrosic to sucrosic, dirty, brittle to firm, fair to good intercrystalline porosity, oil veining, light layer oil on possum belly, strong oil odor, <b><u>spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.</u></b>

- 9800 – 9850 DOLOMITE: Dark brown, brown, fine to very fine crystalline, tight sucrosic to sucrosic, intergranular in part, trace vuggy, brittle to firm, fair to good intercrystalline porosity, oil veining, light layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.**
- 9850 – 9900 DOLOMITE: Brown, dark brown, fine to very fine crystalline, tight sucrosic to sucrosic, intergranular in part, trace vuggy, brittle to firm, fair to good intercrystalline porosity, oil veining, light to fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.**
- 9900 – 9950 DOLOMITE: Dark brown, brown, moderately gray, fine to very fine crystalline, tight sucrosic to sucrosic, intergranular in part, trace vuggy, brittle to firm, fair to good intercrystalline porosity, oil veining, chert, light to fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.**
- 9950- 10000 DOLOMITE: Dark brown, brown, moderately gray, fine to very fine crystalline, tight sucrosic to sucrosic, intergranular in part, trace vuggy, brittle to firm, fair to good intercrystalline porosity, oil veining, chert, light to fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, fair streaming milky yellow cut.**
- 10000 – 10050 DOLOMITE: Dark brown, brown, moderately gray, fine to very fine crystalline, tight sucrosic to sucrosic, intergranular in part, brittle to firm, fair to good intercrystalline porosity, oil veining, chert, light to fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.**
- 10050 – 10100 DOLOMITE: Dark brown, brown, gray brown, fine to very fine crystalline, sucrosic, brittle to firm, good intercrystalline porosity, oil veining, chert, fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, broad streaming milky yellow cut.**
- 10100 – 10150 DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, oil veining, fair to good layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, broad streaming milky yellow cut.**
- 10150 – 10200 DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, oil veining, fair to good layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, broad streaming milky yellow cut.**
- 10200 – 10250 DOLOMITE: Light brown, brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, broad streaming milky yellow cut.**
- 10250 – 10300 DOLOMITE: Dark brown, brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, fair layer oil on possum belly, strong oil odor, **spotty dull yellow to yellow fluorescence, instant diffuse, broad streaming milky yellow cut.**

- 10300 – 10350 DOLOMITE: Brown, light brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10350 – 10400 DOLOMITE: Brown, light brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10400 – 10450 DOLOMITE: Brown, light brown, gray brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10450 – 10500 DOLOMITE: Light brown, gray brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10500 – 10550 DOLOMITE: Dark brown, gray brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10550 – 10600 DOLOMITE: Brown, gray brown, light brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, fair to good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10600 – 10650 DOLOMITE: Brown, gray brown, light brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, fair to good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10650 – 10700 DOLOMITE: Brown, gray brown, light brown, fine to very fine crystalline, sucrosic, tight in part, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10700 – 10750 DOLOMITE: Brown, light brown, gray brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.
- 10750 – 10778 DOLOMITE: Brown, light brown, gray brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, good layer oil on possum belly, strong oil odor, spotty dull yellow to yellow fluorescence, instant diffuse, moderate streaming milky yellow cut.

The W lateral, ST #1 achieved TD status of 10,961' MD at 6:30 AM CDT on September 1, 2005.

**CURVE – NE LATERAL**

**GUNTON**

**HOURLY SAMPLES**

- 8390      LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, pasty, brittle in part, moderately argillaceous, dolomitic, pyritic, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8390 – 8391      LIMESTONE: Medium to light gray to off white, light brown, brown, micro to very fine crystalline, soft to firm, slightly marly, slightly argillaceous, brittle in part, pyritic, moderately dolomitic, scattered dull yellow fluorescence, no cut.

**10' SAMPLES**

- 8398 – 8410      LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, brittle in part, slightly argillaceous, dolomitic, pyritic, metal shavings, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8410 – 8420      LIMESTONE: Creamy light to medium gray, light brown, brown, micro to very fine crystalline, soft to firm, very marly, brittle in part, moderately argillaceous, dolomitic, pyritic, metal shavings, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8420 – 8430      LIMESTONE: Creamy light to medium gray, medium gray brown, light brown, brown, micro to very fine crystalline, soft to firm, very marly, pasty, brittle in part, moderately argillaceous, dolomitic, pyritic, trace cement, pipe dope, pipe scale, scattered dull yellow fluorescence, no cut.
- 8430 – 8440      LIMESTONE: Light to medium gray, dark gray, medium gray brown, micro to very fine crystalline, soft, firm in part, marly, pasty, brittle in part, moderately argillaceous, pyritic, pipe scale, even dull yellow fluorescence, no cut.
- 8440 – 8450      LIMESTONE: Light to medium gray, dark gray, medium gray brown, light brown, micro to very fine crystalline, soft, firm in part, marly, pasty, brittle in part, moderately argillaceous, pyritic, pipe scale, even dull yellow fluorescence, no cut.

**Red River**

- 8450 – 8460      LIMESTONE: Medium gray brown, brown, creamy light brown, light brown, off white, micro to very fine crystalline, soft to firm, slightly frosted edges, marly, pasty in part, brittle in part, moderately argillaceous, pyritic, pipe scale, metal shavings, even dull yellow fluorescence, no cut.
- 8460 – 8470      LIMESTONE: Medium gray brown, brown, creamy light brown off white, micro to very fine crystalline, soft to firm, marly, pasty in part, brittle in part, moderately argillaceous, pyritic, pipe scale, metal shavings, even dull yellow to scattered yellow fluorescence, no cut.

8470 – 8480 LIMESTONE: Medium gray brown, dark gray brown, brown, very fine to micro crystalline, soft to firm, brittle, slightly marly, moderately argillaceous, pyritic, pipe scale, even scattered dull yellow to yellow fluorescence, no cut.

#### 20' SAMPLES

8480 – 8500 LIMESTONE: Medium gray brown, dark gray brown, brown, very fine to micro crystalline, soft to firm, brittle, slightly marly, moderately argillaceous, pyritic, pipe scale, even scattered dull yellow to yellow fluorescence, no cut.

8500 – 8520 LIMESTONE: Medium gray brown, dark gray brown, brown, very fine to micro crystalline, soft to firm, brittle, slightly marly, moderately argillaceous, pyritic, pipe scale, even scattered dull yellow to yellow fluorescence, no cut.

#### END OF CURVE

**Encountered difficulties orienting into NE lateral following TD of West lateral.**

#### 10' SAMPLES

8520 – 8530 LIMESTONE: Medium gray brown, dark gray brown, brown, very fine to micro crystalline, brittle, moderately argillaceous, pyritic, sand from additive, trace dull yellow fluorescence, no cut.

8530 – 8540 LIMESTONE: Medium to dark gray brown, brown, light brown, micro to very fine crystalline, brittle, moderately argillaceous, pyritic, sand from hole additive, trace dull yellow fluorescence, no cut.

8540 – 8550 LIMESTONE: Light creamy brown, light creamy gray, trace white, microcrystalline, brittle, firm in part, pyritic veining, trace dull yellow fluorescence, no cut.

8550 – 8560 LIMESTONE: Light brown, light creamy gray, trace white, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, trace dull yellow fluorescence, no cut.

8560 – 8570 LIMESTONE: Light brown, light creamy gray, trace white, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, trace dull yellow fluorescence, no cut.

8570 – 8580 LIMESTONE: Light brown, light creamy gray, trace white, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, trace dull yellow fluorescence, no cut.

8580 – 8590 LIMESTONE: Light brown, light creamy gray, brown, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, trace shale, gray, fissile, moderately well indurated, trace dull yellow fluorescence, no cut.

8590 – 8600 LIMESTONE: Light brown, light creamy gray, brown, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, trace shale, gray, fissile, moderately well indurated, trace dull yellow fluorescence, no cut.

8600 – 8610 LIMESTONE: Brown, light brown, light gray, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, trace dull yellow fluorescence, no cut.

8610 – 8620 LIMESTONE: Brown, light brown, light gray, off white, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, anhydrite, white, microcrystalline, dense, opaque, trace dull yellow fluorescence, no cut.

8620 – 8630 LIMESTONE: Brown, light brown, light gray, off white, microcrystalline, brittle, soft to firm, edges frosted, pyritic veining, anhydrite, white, microcrystalline, dense, opaque, trace dull yellow fluorescence, no cut.

#### RED RIVER "B"

##### 50' SAMPLES

8630 – 8650 DOLOMITE: Gray brown, brown, fine to very fine crystalline, firm to friable, brittle in part, argillaceous, fair to good intercrystalline porosity, moderately limy, faint oil odor, scattered dull yellow to yellow fluorescence, slow streaming cloudy cut.

8650 – 8700 DOLOMITE: Brown, creamy brown, fine to very fine crystalline, intergranular in part, firm to friable, brittle in part, good intercrystalline porosity, thin oil veining, brown oil in pores, faint oil odor, evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.

8700 – 8750 DOLOMITE: Brown, light brown, light creamy brown, fine to very fine crystalline, firm to friable, good intercrystalline porosity, thin oil veining, trace shale, fissile, poorly indurated, brown oil in pores, moderate oil odor, evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.

8750 – 8800 DOLOMITE: Brown, light brown, light creamy brown, fine to very fine crystalline, firm to friable, good intercrystalline porosity, thin oil veining, trace limestone, fissile, poorly indurated, brown oil in pores, moderate oil odor, evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.

8800 – 8850 DOLOMITE: Light brown, light creamy brown, cream, off white, fine to very fine crystalline, firm to friable, good intercrystalline porosity, thin oil veining, fissile, poorly indurated, brown oil in pores, moderate oil odor, evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.

8850 – 8900 DOLOMITE: Gray brown, brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, argillaceous, fair to good intercrystalline porosity, trace limy, thin oil veining, brown oil in pores, faint oil odor, scattered dull yellow to yellow fluorescence, slow streaming milky cut.

8900 – 8950 DOLOMITE: Gray brown, brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, faint oil odor, scattered dull yellow to yellow fluorescence, fair streaming milky yellow cut.

8950 – 9000 DOLOMITE: Gray brown, brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, faint oil odor, scattered dull yellow to yellow fluorescence, fair streaming milky yellow cut.

9000 – 9050 DOLOMITE: Gray brown, brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, faint oil odor, scattered dull yellow to yellow fluorescence, fair streaming milky yellow cut.

9050 – 9100 DOLOMITE: Gray brown, brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, faint oil odor, scattered dull yellow to yellow fluorescence, fair streaming milky yellow cut.

9100 – 9150	DOLOMITE: Brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, moderate oil odor, <u><b>evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.</b></u>
9150 – 9200	DOLOMITE: Brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, moderate oil odor, <u><b>evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.</b></u>
9200 – 9250	DOLOMITE: Brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, moderate oil odor, <u><b>evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.</b></u>
9250 – 9300	DOLOMITE: Brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, moderate oil odor, <u><b>evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.</b></u>
9300 – 9350	DOLOMITE: Brown, light brown, cream, off white, fine to very fine crystalline, firm to friable, brittle in part, sucrosic, good to excellent intercrystalline porosity, dark brown oil in pores, moderate oil odor, <u><b>evenly scattered dull yellow to yellow fluorescence, broad streaming milky yellow cut.</b></u>
9350 – 9400	DOLOMITE: Creamy brown, brown, trace gray brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, brittle in part, fair to good intercrystalline porosity, dark brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, slow to moderate streaming milky yellow cut.</b></u>
9400 – 9450	DOLOMITE: Brown, creamy brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, brittle in part, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, slow to moderate streaming milky yellow cut.</b></u>
9450 – 9500	DOLOMITE: Brown, creamy brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, brittle in part, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, slow to moderate streaming milky yellow cut.</b></u>
9500 – 9550	DOLOMITE: Creamy brown, brown, trace gray brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, brittle in part, fair to good intercrystalline porosity, dark brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, slow to moderate streaming milky yellow cut.</b></u>
9550 – 9600	DOLOMITE: Brown, creamy brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, brittle in part, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, fair to moderate streaming milky yellow cut.</b></u>

#### Gas kicks – samples skewed

9600 – 9650	DOLOMITE: Brown, creamy brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, brittle in part, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, fair to moderate streaming milky yellow cut.</b></u>
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9650 – 9700	DOLOMITE: Brown, fine to very fine crystalline, sucrosic to tight sucrosic, firm to friable, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, moderate to broad streaming milky yellow cut.</b></u>
9700 – 9750	DOLOMITE: Brown, light brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, moderate to broad streaming milky yellow cut.</b></u>
9750 – 9800	DOLOMITE: Brown, light brown, fine to very fine crystalline, sucrosic, firm to friable, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, moderate to broad streaming milky yellow cut.</b></u>
9800 – 9850	DOLOMITE: Brown, dark brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
9850 – 9900	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
9900 – 9950	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
9950 – 10000	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
10000 – 10050	NO RETURNS FROM GAS BUSTER
10050 – 10100	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
10100 – 10150	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
10150 – 10200	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>
10200 – 10250	DOLOMITE: Brown, fine to very fine crystalline, sucrosic, firm to friable, brittle in part, good intercrystalline porosity, trace shale, blocky to fissile, poorly indurated, brown oil in pores, strong oil odor, <u><b>evenly scattered yellow fluorescence, instant diffuse, moderate to broad streaming milky yellow cut.</b></u>

The NE lateral, achieved TD status of 10,348' MD at 2:15 PM CDT on September 6, 2005.

# MULTI-SHOT

## HORIZONTAL SURVEY PROGRAM MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL LOCATION: Harding Co.SD JOB NO: 520420175						START: 8-21-2005 FINISH: INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: T. Lewis, C. Shirley	FILE: Sidetrack #00						
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,479 VS1 = 22 ft						DATE: 8/26/2005 TIME: 4:04 AM	MAG DECLINATION 9.51 EAST(M-T) Assumed to true north						
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft						DIRECTION: 275.16							
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	TRUE CENTER LINE	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	QUAD FORMAT
TIE	8330.00	1.29	261.92	8329.5	22.44				149.63	-15.93	-13.85	-23.78	S 21.6 W
KOP	8388	4.4	309.4	8387.4	24.9	6.30	5.4		91.6	-14.8	-12.5	-12.5	N 50.6 W
2	8393	6.7	293.2	8392.4	25.3	55.22	46.0		86.6	-14.6	-12.3	-26.6	N 66.8 W
3	8398	9.6	285.5	8397.3	26.0	61.85	58.0		81.7	-14.5	-12.1	-27.2	N 74.5 W
4	8403	12.8	280.7	8402.2	27.0	66.61	64.0		76.7	-14.3	-11.9	-28.2	N 79.3 W
5	8408	15.9	281.2	8407.1	28.2	62.05	62.0		71.9	-14.2	-11.6	-29.4	N 78.8 W
6	8413	18.8	281.5	8411.8	29.7	58.03	58.0		67.1	-14.1	-11.3	-30.9	N 78.5 W
7	8418	21.6	282.4	8416.5	31.4	56.34	56.0		62.4	-13.8	-11.0	-32.5	N 77.6 W
8	8423	24.6	283.0	8421.1	33.4	60.18	60.0		57.8	-13.6	-10.5	-34.5	N 77.0 W
9	8428	27.6	283.5	8425.6	35.5	60.16	60.0		53.3	-13.3	-10.0	-36.6	N 76.5 W
10	8433	30.7	284.1	8430.0	38.0	62.27	62.0		48.9	-12.9	-9.4	-39.0	N 75.9 W
11	8438	33.8	284.7	8434.2	40.6	62.33	62.0		44.6	-12.5	-8.8	-41.5	N 75.3 W
12	8443	36.9	285.0	8438.3	43.4	62.10	62.0		40.5	-12.0	-8.0	-44.3	N 75.0 W
13	8448	39.9	285.3	8442.2	46.5	60.12	60.0		36.6	-11.5	-7.2	-47.3	N 74.7 W
RR	8453	43.0	285.6	8445.9	49.8	62.13	62.0		32.8	-10.9	-6.3	-50.5	N 74.4 W
15	8458	46.1	285.9	8449.5	53.2	62.14	62.0		29.2	-10.2	-5.4	-53.9	N 74.1 W
16	8463	49.1	285.9	8452.9	56.8	60.00	60.0		25.8	-9.5	-4.4	-57.5	N 74.1 W
17	8468	52.1	285.8	8456.0	60.6	60.02	60.0		22.6	-8.8	-3.3	-61.2	N 74.2 W
18	8473	55.3	285.9	8459.0	64.6	64.02	64.0		19.6	-8.1	-2.2	-65.0	N 74.1 W
19	8478	58.1	285.6	8461.8	68.7	56.22	56.0		16.8	-7.3	-1.1	-69.1	N 74.4 W
20	8483	61.3	285.5	8464.3	72.9	64.02	64.0		14.3	-6.5	0.1	-73.2	N 74.5 W
21	8488	64.4	285.2	8466.6	77.3	62.23	62.0		12.0	-5.7	1.2	-77.5	N 74.8 W
22	8493	67.6	285.1	8468.6	81.8	64.03	64.0		9.9	-4.9	2.4	-81.9	N 74.9 W
23	8498	71.0	284.5	8470.4	86.4	68.92	68.0		8.1	-4.2	3.6	-86.4	N 75.5 W
24	8503	74.0	283.7	8471.9	91.1	61.91	60.0		6.5	-3.4	4.8	-91.1	N 76.3 W

# MULTI-SHOT

## HORIZONTAL SURVEY PROGRAM MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL LOCATION: Harding Co. SD JOB NO: 520420175						START: 8-21-2005 FINISH: INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: T. Lewis, C. Shirley	FILE: Sidetrack #00					
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,479 VS1 = 22 ft						DATE: 8/26/2005 TIME: 4:04 AM	MAG DECLINATION 9.51 EAST(M-T) Assumed to true north					
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft						DIRECTION: 275.16						
TRUE												
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	QUAD FORMAT
25	8508	77.1	282.6	8473.1	95.9	65.56	62.0	5.2	-2.7	5.9	-95.8	N 77.4 W
26	8513	79.7	280.3	8474.1	100.8	68.80	52.0	4.2	-2.2	6.9	-100.6	N 79.7 W
27	8518	82.3	280.3	8474.9	105.7	52.00	52.0	3.4	-1.8	7.7	-105.4	N 79.7 W
28	8523	84.5	280.4	8475.5	110.7	44.04	44.0	2.8	-1.3	8.6	-110.3	N 79.6 W
29	8533	87.9	280.4	8476.1	120.6	34.00	34.0	2.0	-0.4	10.4	-120.1	N 79.6 W
30	8543	90.3	280.7	8476.3	130.6	24.19	24.0	1.8	0.5	12.3	-130.0	N 79.3 W
31	8554	91.2	280.6	8476.1	141.5	8.23	8.2	1.8	1.6	14.3	-140.8	N 79.4 W
32	8583	91.2	279.6	8475.5	170.4	3.45	0.0	2.2	4.1	19.4	-169.3	N 80.4 W
33	8613	88.8	275.0	8475.5	200.4	17.29	-8.0	1.9	5.2	23.2	-199.1	N 85.0 W
34	8644	89.5	271.9	8476.0	231.3	10.25	2.3	1.2	4.3	25.1	-230.0	N 88.1 W
35	8675	91.0	270.0	8475.9	262.2	7.81	4.8	1.0	2.0	25.6	-261.0	S 90.0 W
36	8703	92.3	267.2	8475.1	290.0	11.02	4.6	1.6	-1.2	24.9	-289.0	S 87.2 W
37	8734	94.3	264.2	8473.3	320.6	11.62	6.5	3.1	-6.3	22.6	-319.8	S 84.2 W

## MULTI-SHOT

HORIZONTAL SURVEY PROGRAM  
MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL, ST#1 LOCATION: Harding Co.SD JOB NO: 520420175						START: 8-24-2005 FINISH: 9-1-2005 INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: S. Harper, T. Lewis	FILE: Sidetrack #01		
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,478 VS1 = 67 ft				DATE: 8/30/2005 MAG DECLINATION 9.51 EAST(M-T) TIME: Assumed to true north					
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft				DIRECTION: 275.16					
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	CENTER LINE	QUAD FORMAT
TIE	8330.00	1.29	261.92	8329.5	22.40			148.47 -15.93 -13.85 -23.78	S 21.6 W
KOP	8388	1.6	339.9	8387.4	24.4	3.16	0.5	90.5 -15.4 -13.1 -24.8	N 20.1 W
2	8393	1.5	281.8	8392.4	23.5	30.15	-2.0	86.9 -15.3 -13.1 -24.8	N 78.2 W
3	8398	3.1	246.7	8397.4	23.7	41.23	32.0	80.9 -15.3 -13.1 -25.0	S 66.7 W
4	8403	5.4	244.8	8402.4	24.0	46.08	46.0	76.0 -15.5 -13.3 -25.3	S 64.8 W
5	8408	8.3	257.8	8407.4	24.6	65.41	58.0	70.9 -15.7 -13.5 -25.9	S 77.8 W
6	8413	11.1	245.6	8412.4	25.3	69.18	56.0	66.0 -16.1 -13.7 -26.7	S 65.6 W
7	8418	13.7	255.8	8417.2	26.3	67.80	52.0	61.1 -16.5 -14.1 -27.7	S 75.8 W
8	8423	16.3	259.5	8422.1	27.5	55.39	52.0	56.3 -16.9 -14.4 -29.0	S 79.5 W
9	8428	19.2	262.5	8426.8	29.0	60.80	58.0	51.5 -17.3 -14.6 -30.5	S 82.5 W
10	8433	22.0	264.3	8431.5	30.7	57.41	56.0	46.8 -17.6 -14.8 -32.2	S 84.3 W
11	8438	24.7	264.1	8436.1	32.7	54.02	54.0	42.2 -18.0 -15.0 -34.2	S 84.1 W
12	8443	27.4	263.2	8440.6	34.8	54.57	54.0	37.7 -18.5 -15.2 -36.4	S 83.2 W
RR	8447	29.7	262.8	8444.1	36.7	57.70	57.5	34.2 -18.9 -15.5 -38.3	S 82.8 W
13	8448	30.3	262.6	8445.0	37.2	60.83	60.0	33.3 -19.0 -15.5 -38.8	S 82.6 W
14	8453	33.1	262.8	8449.2	39.8	56.04	56.0	29.0 -19.5 -15.9 -41.4	S 82.8 W
15	8458	36.1	263.0	8453.3	42.5	60.04	60.0	24.9 -20.1 -16.2 -44.2	S 83.0 W
16	8463	38.9	263.9	8457.3	45.5	57.06	56.0	20.9 -20.8 -16.6 -47.2	S 83.9 W
17	8468	41.7	264.2	8461.1	48.7	56.13	56.0	17.0 -21.4 -16.9 -50.4	S 84.2 W
18	8473	44.5	264.6	8464.8	52.0	56.27	56.0	13.4 -22.0 -17.2 -53.8	S 84.6 W
19	8478	47.4	265.0	8468.2	55.6	58.28	58.0	9.9 -22.7 -17.6 -57.4	S 85.0 W
20	8483	50.2	265.4	8471.5	59.3	56.32	56.0	6.5 -23.3 -17.9 -61.1	S 85.4 W
21	8488	52.8	266.2	8474.7	63.1	53.49	52.0	3.4 -23.9 -18.2 -65.0	S 86.2 W
B	8493	55.7	266.8	8477.6	67.2	58.81	58.0	0.4 -24.6 -18.4 -69.1	S 86.8 W

## MULTI-SHO

HORIZONTAL SURVEY PROGRAM  
MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL, ST#1 LOCATION: Harding Co.SD JOB NO: 520420175							START: 8-24-2005		FILE: Sidetrack #01				
							FINISH: 9-1-2005						
							INFORMATION PROVIDED BY: Multishot						
							HORIZONTAL COORDINATOR: S. Harper, T. Lewis						
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,478 VS1 = 67 ft							DATE: 8/30/2005		MAG DECLINATION				
							9.51		EAST(M-T)				
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft							TIME:		Assumed to true north				
							DIRECTION: 275.16						
TRUE													
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	ABOVE(+) BELOW(-)	CENTER LINE	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	QUAD FORMAT
23	8498	58.7	267.5	8480.3	71.3	61.14	60.0	-2.3	-25.1	-18.6	-73.3	S 87.5 W	
24	8503	61.3	267.6	8482.8	75.6	52.03	52.0	-4.9	-25.7	-18.8	-77.6	S 87.6 W	
25	8508	64.2	268.0	8485.1	80.0	58.43	58.0	-7.2	-26.3	-19.0	-82.1	S 88.0 W	
26	8513	67.4	268.3	8487.1	84.5	64.23	64.0	-9.3	-26.8	-19.1	-86.6	S 88.3 W	
27	8518	70.5	268.5	8488.9	89.2	62.11	62.0	-11.1	-27.4	-19.3	-91.3	S 88.5 W	
28	8523	73.6	268.4	8490.5	93.9	62.03	62.0	-12.7	-27.9	-19.4	-96.0	S 88.4 W	
29	8528	76.5	268.4	8491.7	98.7	58.00	58.0	-14.0	-28.5	-19.5	-100.9	S 88.4 W	
30	8533	79.5	268.3	8492.8	103.6	60.03	60.0	-15.1	-29.1	-19.7	-105.7	S 88.3 W	
31	8538	82.5	268.4	8493.6	108.5	60.03	60.0	-15.9	-29.7	-19.8	-110.7	S 88.4 W	
32	8543	85.4	268.0	8494.1	113.4	58.54	58.0	-16.5	-30.3	-20.0	-115.7	S 88.0 W	
33	8548	87.7	268.9	8494.4	118.3	49.38	46.0	-16.8	-30.9	-20.1	-120.6	S 88.9 W	
34	8553	89.5	269.5	8494.5	123.3	37.95	36.0	-17.0	-31.4	-20.2	-125.6	S 89.5 W	
35	8563	91.9	270.8	8494.4	133.3	27.29	24.0	-17.0	-32.3	-20.1	-135.6	N 89.2 W	
36	8573	92.8	271.4	8494.0	143.2	10.81	9.0	-16.7	-33.0	-19.9	-145.6	N 88.6 W	
37	8585	93.1	271.6	8493.4	155.2	3.00	2.5	-16.1	-33.7	-19.6	-157.6	N 88.4 W	
38	8616	93.2	271.8	8491.7	186.1	0.72	0.3	-14.7	-35.6	-18.7	-188.5	N 88.2 W	
39	8646	93.3	271.7	8490.0	216.0	0.47	0.3	-13.3	-37.4	-17.8	-218.5	N 88.3 W	
40	8677	94.0	271.9	8488.0	246.9	2.35	2.3	-11.6	-39.2	-16.8	-249.4	N 88.1 W	
41	8706	96.2	274.3	8485.4	275.7	11.20	7.6	-9.2	-40.2	-15.3	-278.2	N 85.7 W	
42	8736	95.9	272.9	8482.3	305.6	4.75	-1.0	-6.3	-41.0	-13.4	-308.0	N 87.1 W	
43	8766	92.5	274.2	8480.1	335.5	12.13	-11.3	-4.4	-41.9	-11.5	-337.9	N 85.8 W	
44	8798	92.4	273.7	8478.7	367.4	1.59	-0.3	-3.3	-42.6	-9.3	-369.8	N 86.3 W	
45	8829	91.7	274.7	8477.6	398.4	3.94	-2.3	-2.5	-43.1	-7.1	-400.7	N 85.3 W	
46	8860	90.2	273.3	8477.1	429.4	6.62	-4.8	-2.2	-43.7	-4.9	-431.6	N 86.7 W	
47	8890	89.8	272.2	8477.1	459.4	3.90	-1.3	-2.5	-45.0	-3.5	-461.6	N 87.8 W	

## MULTI-SHOI

HORIZONTAL SURVEY PROGRAM  
MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL, ST#1 LOCATION: Harding Co.SD JOB NO: 520420175				START: 8-24-2005 FINISH: 9-1-2005 INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: S. Harper, T. Lewis	FILE: Sidetrack #01
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,478 VS1 = 67 ft				DATE: 8/30/2005 TIME:	MAG DECLINATION 9.51 EAST(M-T) Assumed to true north
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft				DIRECTION: 275.16	

SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	TRUE VERTICAL		DLS/ 100.00	ACTUAL BUR	CENTER LINE				QUAD FORMAT
				DEPTH	SECTION			ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	
48	8919	90.7	272.2	8476.9	488.3	3.10	3.1	-2.6	-46.5	-2.4	-490.5	N 87.8 W
49	8947	89.6	276.0	8476.9	516.3	14.13	-3.9	-2.8	-47.0	-0.4	-518.5	N 84.0 W
50	8978	90.7	279.0	8476.8	547.3	10.31	3.5	-3.0	-45.7	3.7	-549.2	N 81.0 W
51	9009	89.9	279.2	8476.6	578.2	2.66	-2.6	-3.1	-43.6	8.6	-579.8	N 80.8 W
52	9040	90.4	279.6	8476.5	609.1	2.07	1.6	-3.3	-41.3	13.7	-610.4	N 80.4 W
53	9070	90.0	280.6	8476.4	639.0	3.59	-1.3	-3.4	-38.7	18.9	-639.9	N 79.4 W
54	9099	90.8	280.9	8476.2	667.9	2.95	2.8	-3.5	-35.9	24.3	-668.4	N 79.1 W
55	9130	90.9	281.9	8475.8	698.7	3.24	0.3	-3.3	-32.5	30.5	-698.8	N 78.1 W
56	9160	90.0	281.4	8475.5	728.5	3.43	-3.0	-3.3	-29.1	36.5	-728.2	N 78.6 W
57	9191	90.8	280.8	8475.3	759.3	3.23	2.6	-3.4	-25.9	42.5	-758.6	N 79.2 W
58	9222	90.0	278.2	8475.1	790.2	8.77	-2.6	-3.4	-23.6	47.6	-789.2	N 81.8 W
59	9253	90.7	278.3	8474.9	821.2	2.28	2.3	-3.5	-21.9	52.0	-819.8	N 81.7 W
60	9281	90.0	278.3	8474.7	849.2	2.50	-2.5	-3.6	-20.4	56.1	-847.5	N 81.7 W
61	9312	90.0	277.8	8474.7	880.1	1.61	0.0	-3.8	-18.8	60.4	-878.2	N 82.2 W
62	9343	90.6	277.8	8474.6	911.1	1.94	1.9	-3.9	-17.4	64.6	-908.9	N 82.2 W
63	9371	89.9	277.4	8474.5	939.1	2.88	-2.5	-4.1	-16.2	68.3	-936.7	N 82.6 W
64	9402	90.5	278.5	8474.4	970.0	4.04	1.9	-4.2	-14.7	72.6	-967.4	N 81.5 W
65	9433	90.6	278.3	8474.1	1001.0	0.72	0.3	-4.2	-12.9	77.2	-998.1	N 81.7 W
66	9464	90.1	279.6	8473.9	1031.9	4.49	-1.6	-4.3	-10.9	82.0	-1028.7	N 80.4 W
67	9494	89.6	281.8	8473.9	1061.8	7.52	-1.7	-4.6	-8.0	87.5	-1058.2	N 78.2 W
68	9525	90.1	284.0	8474.0	1092.5	7.28	1.6	-5.0	-3.8	94.5	-1088.4	N 76.0 W
69	9556	89.8	285.1	8474.1	1123.1	3.68	-1.0	-5.3	1.3	102.3	-1118.4	N 74.9 W
70	9584	89.0	284.8	8474.3	1150.6	3.05	-2.9	-5.8	6.0	109.5	-1145.4	N 75.2 W
71	9615	90.0	281.5	8474.6	1181.3	11.12	3.2	-6.3	10.3	116.5	-1175.6	N 78.5 W
72	9646	89.9	279.3	8474.6	1212.2	7.10	-0.3	-6.6	13.2	122.1	-1206.1	N 80.7 W

# MULTI-SHOT

## HORIZONTAL SURVEY PROGRAM MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL, ST#1 LOCATION: Harding Co.SD JOB NO: 520420175	START: 8-24-2005 FINISH: 9-1-2005 INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: S. Harper, T. Lewis	FILE: Sidetrack #01
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,478 VS1 = 67 ft	DATE: 8/30/2005 TIME:	MAG DECLINATION 9.51 EAST(M-T) Assumed to true north
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft		DIRECTION: 275.16

SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	CENTER LINE					QUAD FORMAT
								ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)		
73	9676	90.8	280.3	8474.5	1242.1	4.48	3.0	-6.7	15.6	127.2	-1235.7	N 79.7 W	
74	9707	91.8	280.5	8473.8	1273.0	3.29	3.2	-6.3	18.4	132.8	-1266.2	N 79.5 W	
75	9738	92.8	279.4	8472.5	1303.8	4.79	3.2	-5.3	21.0	138.2	-1296.7	N 80.6 W	
76	9769	92.3	281.4	8471.1	1334.7	6.64	-1.6	-4.2	23.8	143.8	-1327.1	N 78.6 W	
77	9799	89.2	276.8	8470.7	1364.6	18.49	-10.3	-4.1	25.9	148.5	-1356.7	N 83.2 W	
78	9830	87.7	273.2	8471.6	1395.6	12.58	-4.8	-5.2	25.8	151.2	-1387.6	N 86.8 W	
79	9861	88.0	274.3	8472.7	1426.5	3.68	1.0	-6.6	25.0	153.2	-1418.5	N 85.7 W	
80	9892	90.4	275.8	8473.2	1457.5	9.13	7.7	-7.3	25.0	156.0	-1449.4	N 84.2 W	
81	9922	88.8	275.7	8473.4	1487.5	5.34	-5.3	-7.8	25.3	159.0	-1479.2	N 84.3 W	
82	9953	88.6	271.6	8474.1	1518.5	13.24	-0.6	-8.8	24.5	160.9	-1510.1	N 88.4 W	
83	9984	88.3	272.4	8474.9	1549.4	2.76	-1.0	-9.9	22.8	162.0	-1541.1	N 87.6 W	
84	10015	88.6	272.5	8475.8	1580.4	1.02	1.0	-11.0	21.3	163.3	-1572.1	N 87.5 W	
85	10045	86.2	274.3	8477.1	1610.3	10.00	-8.0	-12.6	20.4	165.1	-1602.0	N 85.7 W	
86	10076	85.7	274.2	8479.3	1641.3	1.64	-1.6	-15.1	19.9	167.4	-1632.8	N 85.8 W	
87	10105	89.5	273.3	8480.5	1670.2	13.47	13.1	-16.5	19.2	169.3	-1661.7	N 86.7 W	
88	10135	90.8	272.9	8480.4	1700.2	4.53	4.3	-16.7	18.1	170.9	-1691.7	N 87.1 W	
89	10166	92.2	272.2	8479.6	1731.2	5.05	4.5	-16.2	16.7	172.3	-1722.6	N 87.8 W	
90	10197	92.0	271.4	8478.5	1762.1	2.66	-0.6	-15.3	14.9	173.3	-1753.6	N 88.6 W	
91	10227	92.9	271.9	8477.2	1792.0	3.43	3.0	-14.3	13.0	174.1	-1783.6	N 88.1 W	
92	10256	93.7	271.9	8475.6	1820.9	2.76	2.8	-12.9	11.4	175.1	-1812.5	N 88.1 W	
93	10287	91.3	272.6	8474.2	1851.8	8.06	-7.7	-11.8	9.8	176.3	-1843.4	N 87.4 W	
94	10318	88.6	273.9	8474.2	1882.8	9.67	-8.7	-12.1	8.8	178.1	-1874.4	N 86.1 W	
95	10348	88.6	274.5	8475.0	1912.8	2.00	0.0	-13.1	8.3	180.3	-1904.3	N 85.5 W	
96	10379	91.6	274.3	8474.9	1943.8	9.70	9.7	-13.3	7.9	182.7	-1935.2	N 85.7 W	
97	10410	91.9	273.9	8474.0	1974.8	1.61	1.0	-12.6	7.3	184.9	-1966.1	N 86.1 W	

## MULTI-SHOT

HORIZONTAL SURVEY PROGRAM  
MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - WEST LATERAL, ST#1 LOCATION: Harding Co.SD JOB NO: 520420175						START: 8-24-2005		FILE: Sidetrack #01			
						FINISH: 9-1-2005					
						INFORMATION PROVIDED BY: Multishot					
						HORIZONTAL COORDINATOR: S. Harper, T. Lewis					
DIP1 = 0.50 deg = 90.50 deg TARGET1 = 8,478 VS1 = 67 ft						DATE: 8/30/2005	MAG DECLINATION				
							9.51	EAST(M-T)			
DIP2 = 0.50 deg = 90.50 deg TARGET2 = 8,479 ft TVD VS2 = 2,600 ft						TIME:	Assumed to true north				
						DIRECTION:	275.16				
TRUE											
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	ABOVE(+) BELOW(-)	CENTER LINE		
98	10440	90.8	273.5	8473.3	2004.8	3.90	-3.7	-12.2	6.5 186.8 -1996.0 N 86.5 W		
99	10469	89.8	274.0	8473.1	2033.7	3.86	-3.4	-12.3	5.8 188.7 -2025.0 N 86.0 W		
100	10500	90.5	274.4	8473.0	2064.7	2.60	2.3	-12.5	5.3 191.0 -2055.9 N 85.6 W		
101	10530	91.0	273.6	8472.6	2094.7	3.14	1.7	-12.3	4.7 193.1 -2085.8 N 86.4 W		
102	10559	91.0	272.8	8472.1	2123.7	2.76	0.0	-12.1	3.7 194.7 -2114.8 N 87.2 W		
103	10590	90.8	272.2	8471.6	2154.7	2.04	-0.6	-11.9	2.3 196.0 -2145.7 N 87.8 W		
104	10621	90.7	272.3	8471.2	2185.6	0.46	-0.3	-11.7	0.7 197.3 -2176.7 N 87.7 W		
105	10651	90.5	272.0	8470.9	2215.6	1.20	-0.7	-11.7	-0.9 198.4 -2206.7 N 88.0 W		
106	10682	90.7	274.5	8470.6	2246.6	8.09	0.6	-11.6	-1.9 200.1 -2237.6 N 85.5 W		
107	10712	90.2	275.0	8470.4	2276.6	2.36	-1.7	-11.6	-2.1 202.6 -2267.5 N 85.0 W		
108	10741	88.7	275.0	8470.6	2305.6	5.17	-5.2	-12.2	-2.2 205.1 -2296.4 N 85.0 W		
109	10772	89.1	275.3	8471.2	2336.6	1.61	1.3	-13.0	-2.2 207.9 -2327.3 N 84.7 W		
110	10803	88.6	275.5	8471.8	2367.6	1.74	-1.6	-13.9	-2.1 210.8 -2358.1 N 84.5 W		
111	10834	89.2	275.3	8472.4	2398.5	2.04	1.9	-14.8	-2.0 213.8 -2389.0 N 84.7 W		
112	10864	88.7	274.8	8473.0	2428.5	2.36	-1.7	-15.6	-2.0 216.4 -2418.9 N 85.2 W		
113	10895	89.8	275.2	8473.4	2459.5	3.78	3.5	-16.3	-2.1 219.1 -2449.8 N 84.8 W		
114	10926	93.8	276.9	8472.4	2490.5	14.02	12.9	-15.6	-1.6 222.4 -2480.6 N 83.1 W		
Proj	10961	93.8	276.9	8470.1	2525.4	0.00	0.0	-13.6	-0.6 226.6 -2515.2 N 83.1 W		

# MULTI-SHOT

## HORIZONTAL SURVEY PROGRAM MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: <b>CONTINENTAL RESOURCES, INC.</b> WELL: <b>WBRRU # 32-23 - NE LATERAL</b> LOCATION: Harding Co. SD JOB NO: <b>520420175</b>						START: 8-24-2005 FINISH: 9-6-2005 INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: T. Lewis, C. Shirley	FILE: Sidetrack #00
DIP1 = -1.45 deg = 88.50 deg TARGET1 = 8,482 VS1 = 169 ft						DATE: 8/24/2005 TIME: Assumed to True North	MAG DECLINATION 9.51 EAST(M-T)
DIP2 = -0.70 deg = 89.30 deg TARGET2 = 8,493 ft TVD VS2 = 607 ft						DIRECTION: 49.98	

SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	TRUE					QUAD FORMAT
								ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)		
TIE	8330.00	1.29	261.92	8329.5	-27.12			149.38	-4.69	-13.85	-23.78	S 21.6 W	
KOP	8388	3.7	4.6	8387.4	-26.4	7.20	4.2	91.4	-6.4	-12.1	-24.3	N 4.6 E	
2	8393	6.3	32.0	8392.4	-26.0	69.22	52.0	86.5	-6.6	-11.7	-24.1	N 32.0 E	
3	8398	9.4	41.3	8397.3	-25.3	66.81	62.0	81.5	-6.7	-11.1	-23.7	N 41.3 E	
4	8403	12.6	46.9	8402.3	-24.4	67.40	64.0	76.6	-6.8	-10.5	-23.0	N 46.9 E	
5	8408	15.5	49.8	8407.1	-23.2	59.67	58.0	70.0	-6.8	-9.7	-22.1	N 49.8 E	
6	8413	18.7	51.2	8411.9	-21.7	64.52	64.0	67.0	-6.8	-8.7	-21.0	N 51.2 E	
7	8418	21.6	52.3	8416.6	-20.0	58.49	58.0	62.3	-6.8	-7.7	-19.6	N 52.3 E	
8	8423	24.5	51.9	8421.2	-18.0	58.08	58.0	56.1	-6.7	-6.5	-18.1	N 51.9 E	
9	8428	27.6	51.1	8425.7	-15.8	62.40	62.0	53.3	-6.6	-5.1	-16.4	N 51.1 E	
10	8433	30.8	50.3	8430.0	-13.4	64.47	64.0	48.9	-6.6	-3.5	-14.5	N 50.3 E	
11	8438	33.8	50.3	8434.3	-10.7	60.00	60.0	44.7	-6.6	-1.8	-12.4	N 50.3 E	
12	8443	36.9	50.5	8438.3	-7.8	62.10	62.0	40.7	-6.5	2.0	-10.2	N 50.5 E	
13	8448	40.0	50.9	8442.3	-4.7	62.20	62.0	36.8	-6.4	16.9	10.2	N 50.9 E	
RR	8452	42.5	48.1	8445.3	-2.1	77.68	62.5	32.4	-6.6	3.7	-5.8	N 48.1 E	
15	8458	46.2	49.3	8449.5	2.1	63.23	61.7	28.2	-6.6	6.5	-2.6	N 49.3 E	
16	8463	49.2	49.9	8452.9	5.8	60.65	60.0	25.0	-6.7	8.9	0.2	N 49.9 E	
17	8468	52.4	50.0	8456.1	9.7	64.02	64.0	21.9	-6.7	11.3	3.1	N 50.0 E	
18	8473	55.4	49.6	8459.0	13.7	60.35	60.0	19.1	-6.7	14.0	6.2	N 49.6 E	
19	8478	58.5	49.3	8461.7	17.9	62.20	62.0	16.4	-6.7	16.7	9.4	N 49.3 E	
20	8483	61.5	49.0	8464.2	22.3	60.22	60.0	14.0	-6.8	19.5	12.7	N 49.0 E	
21	8488	64.5	48.9	8466.5	26.7	60.03	60.0	11.9	-6.9	22.4	16.0	N 48.9 E	
22	8493	67.9	48.9	8468.5	31.3	68.00	68.0	10.0	-7.0	25.4	19.5	N 48.9 E	
23	8498	71.0	48.7	8470.3	36.0	62.11	62.0	8.4	-7.0	28.5	23.0	N 48.7 E	
24	8503	74.1	49.1	8471.8	40.7	62.47	62.0	7.0	-7.1	31.7	26.6	N 49.1 E	

## MULTI-SHOT

HORIZONTAL SURVEY PROGRAM  
MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - NE LATERAL LOCATION: Harding Co. SD JOB NO: 520420175						START: 8-24-2005 FINISH: 9-6-2005 INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: T. Lewis, C. Shirley	FILE: Sidetrack #00						
DIP1 = -1.45 deg = 88.50 deg TARGET1 = 8,482 VS1 = 169 ft				DATE: 8/24/2005 MAG DECLINATION 9.51 EAST(M-T) TIME: Assumed to True North									
DIP2 = -0.70 deg = 89.30 deg TARGET2 = 8,493 ft TVD VS2 = 607 ft				DIRECTION: 49.98									
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	TRUE CENTER LINE	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	QUAD FORMAT
25	8508	76.6	48.3	8473.0	45.6	52.34	50.0	5.8	-7.2	34.9	30.2	N 48.3 E	
26	8513	79.7	48.2	8474.1	50.5	62.03	62.0	4.9	-7.4	38.1	33.9	N 48.2 E	
27	8518	82.2	48.3	8474.9	55.4	50.04	50.0	4.3	-7.5	41.4	37.6	N 48.3 E	
28	8523	84.1	48.6	8475.5	60.4	38.46	38.0	3.8	-7.7	44.7	41.3	N 48.6 E	
29	8533	86.2	51.2	8476.3	70.3	33.35	21.0	3.2	-7.7	51.1	48.9	N 51.2 E	
30	8543	87.1	52.2	8476.9	80.3	13.44	9.0	2.9	-7.4	57.3	56.7	N 52.2 E	
31	8558	86.9	53.2	8477.7	95.3	6.79	-1.3	2.5	-6.7	66.4	68.7	N 53.2 E	
32	8587	87.0	53.7	8479.2	124.2	1.76	0.3	1.7	-4.9	83.6	91.9	N 53.7 E	
33	8617	86.7	53.0	8480.9	154.1	2.54	-1.0	0.8	-3.2	101.5	116.0	N 53.0 E	
B	8632	86.6	52.1	8481.7	169.0	6.03	-0.7	0.3	-2.5	110.6	127.8	N 52.1 E	
35	8648	87.1	50.8	8482.6	185.0	8.69	3.1	-0.2	-2.1	120.6	140.3	N 50.8 E	
36	8679	88.9	47.3	8483.7	216.0	12.69	5.8	-0.5	-2.6	140.9	163.7	N 47.3 E	
37	8707	89.9	46.0	8484.0	243.9	5.86	3.6	-0.1	-4.2	160.1	184.1	N 46.0 E	
38	8738	88.8	44.3	8484.3	274.8	6.53	-3.5	0.3	-6.8	181.9	206.1	N 44.3 E	
39	8769	89.0	46.0	8484.9	305.7	5.52	0.6	0.5	-9.4	203.8	228.0	N 46.0 E	
40	8800	88.5	47.1	8485.6	336.6	3.90	-1.6	0.6	-11.3	225.1	250.5	N 47.1 E	
41	8830	89.0	47.3	8486.3	366.6	1.79	1.7	0.7	-12.7	245.5	272.5	N 47.3 E	
42	8861	89.4	47.2	8486.7	397.5	1.33	1.3	1.1	-14.2	266.5	295.3	N 47.2 E	
43	8892	87.0	49.5	8487.7	428.5	10.72	-7.7	0.9	-15.1	287.1	318.5	N 49.5 E	
44	8921	87.0	48.9	8489.2	457.5	2.07	0.0	0.1	-15.5	306.0	340.4	N 48.9 E	
45	8949	86.0	48.6	8490.9	485.4	3.73	-3.6	-0.9	-16.1	324.5	361.4	N 48.6 E	
46	8980	85.6	52.1	8493.2	516.3	11.33	-1.3	-2.4	-15.9	344.2	385.2	N 52.1 E	
47	9011	86.6	52.6	8495.3	547.2	3.60	3.2	-3.7	-14.6	363.1	409.7	N 52.6 E	
48	9041	87.1	52.6	8496.9	577.1	1.67	1.7	-4.6	-13.2	381.3	433.5	N 52.6 E	
49	9072	91.3	55.5	8497.4	608.1	16.46	13.5	-4.4	-11.0	399.5	458.6	N 55.5 E	

# MULTI-SHOT

## HORIZONTAL SURVEY PROGRAM MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC.	START: 8-24-2005	FILE: Sidetrack #00
WELL: WBRRU # 32-23 - NE LATERAL	FINISH: 9-6-2005	
LOCATION: Harding Co.SD	INFORMATION PROVIDED BY: Multishot	
JOB NO: 520420175	HORIZONTAL COORDINATOR: T. Lewis, C. Shirley	
DIP1 = -1.45 deg = 88.50 deg	DATE: 8/24/2005	MAG DECLINATION
TARGET1 = 8,482		9.51 EAST(M-T)
VS1 = 169 ft	TIME:	Assumed to True North
DIP2 = -0.70 deg = 89.30 deg		
TARGET2 = 8,493 ft TVD	DIRECTION: 49.98	
VS2 = 607 ft		

SVY #	MEASURED DEPTH	TRUE			CENTER LINE						QUAD FORMAT	
		INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	
50	9101	91.7	54.7	8496.6	636.9	3.08	1.4	-3.2	-8.5	416.1	482.3	N 54.7 E
51	9131	91.1	54.3	8495.9	666.8	2.40	-2.0	-2.1	-6.1	433.5	506.7	N 54.3 E
52	9162	88.9	53.2	8495.9	697.8	7.93	-7.1	-1.8	-4.1	451.8	531.7	N 53.2 E
53	9193	89.4	52.3	8496.3	728.7	3.32	1.6	-1.8	-2.6	470.6	556.4	N 52.3 E
54	9224	88.9	51.2	8496.8	759.7	3.90	-1.6	-1.9	-1.6	489.8	580.8	N 51.2 E
55	9254	88.3	51.1	8497.5	789.7	2.03	-2.0	-2.3	-1.0	508.6	604.1	N 51.1 E
56	9283	88.6	50.4	8498.3	818.7	2.63	1.0	-2.7	-0.6	526.9	626.6	N 50.4 E
57	9314	89.4	50.7	8498.9	849.7	2.76	2.6	-2.9	-0.3	546.6	650.5	N 50.7 E
58	9344	89.9	51.6	8499.0	879.7	3.43	1.7	-2.7	0.3	565.4	673.9	N 51.6 E
59	9373	89.9	51.6	8499.1	908.6	0.00	0.0	-2.4	1.1	583.4	696.6	N 51.6 E
60	9404	90.0	50.1	8499.1	939.6	4.85	0.3	-2.0	1.6	603.0	720.6	N 50.1 E
61	9434	87.8	51.6	8499.7	969.6	8.87	-7.3	-2.3	2.1	621.9	743.9	N 51.6 E
62	9465	89.5	52.5	8500.4	1000.6	6.20	5.5	-2.6	3.2	641.0	768.3	N 52.5 E
63	9496	89.4	51.0	8500.7	1031.6	4.85	-0.3	-2.5	4.1	660.2	792.7	N 51.0 E
64	9527	88.3	50.6	8501.3	1062.6	3.78	-3.5	-2.8	4.6	679.8	816.7	N 50.6 E
65	9557	89.0	51.3	8502.0	1092.6	3.30	2.3	-3.1	5.1	698.7	840.0	N 51.3 E
66	9586	90.2	52.5	8502.2	1121.5	5.85	4.1	-3.0	6.1	716.6	862.8	N 52.5 E
67	9617	88.8	51.6	8502.5	1152.5	5.37	-4.5	-2.9	7.2	735.6	887.2	N 51.6 E
68	9648	89.2	51.9	8503.1	1183.5	1.61	1.3	-3.0	8.1	754.8	911.6	N 51.9 E
69	9678	89.4	51.2	8503.4	1213.5	2.43	0.7	-3.0	9.0	773.5	935.1	N 51.2 E
70	9709	89.8	50.9	8503.6	1244.5	1.61	1.3	-2.9	9.5	793.0	959.2	N 50.9 E
71	9740	89.9	50.4	8503.7	1275.5	1.64	0.3	-2.6	9.9	812.6	983.2	N 50.4 E
72	9770	89.9	48.5	8503.8	1305.5	6.33	0.0	-2.2	9.6	832.1	1005.9	N 48.5 E
73	9801	88.1	48.2	8504.3	1336.5	5.89	-5.8	-2.4	8.7	852.7	1029.1	N 48.2 E
74	9832	88.5	47.9	8505.2	1367.4	1.61	1.3	-2.9	7.7	873.4	1052.2	N 47.9 E

# MULTI-SHOT

## HORIZONTAL SURVEY PROGRAM MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: CONTINENTAL RESOURCES, INC. WELL: WBRRU # 32-23 - NE LATERAL LOCATION: Harding Co. SD JOB NO: 520420175						START: 8-24-2005 FINISH: 9-6-2005 INFORMATION PROVIDED BY: Multishot HORIZONTAL COORDINATOR: T. Lewis, C. Shirley	FILE: Sidetrack #00					
DIP1 = -1.45 deg = 88.50 deg TARGET1 = 8,482 VS1 = 169 ft						DATE: 8/24/2005 TIME: Assumed to True North	MAG DECLINATION 9.51 EAST(M-T)					
DIP2 = -0.70 deg = 89.30 deg TARGET2 = 8,493 ft TVD VS2 = 607 ft						DIRECTION: 49.98						
TRUE												
SVY #	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100.00	ACTUAL BUR	CENTER LINE ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)	QUAD FORMAT
75	9863	90.2	49.0	8505.6	1398.4	6.53	5.5	-2.9	6.9	894.0	1075.4	N 49.0 E
76	9893	88.9	47.2	8505.8	1428.4	7.40	-4.3	-2.8	5.9	914.0	1097.7	N 47.2 E
77	9924	88.9	47.2	8506.4	1459.3	0.00	0.0	-3.0	4.4	935.1	1120.4	N 47.2 E
78	9955	89.7	47.6	8506.8	1490.3	2.89	2.6	-3.0	3.0	956.1	1143.2	N 47.6 E
79	9985	88.4	51.3	8507.3	1520.3	13.07	-4.3	-3.1	2.7	975.6	1166.0	N 51.3 E
80	10016	90.1	53.4	8507.7	1551.3	8.72	5.5	-3.2	4.0	994.5	1190.6	N 53.4 E
81	10047	88.5	54.1	8508.1	1582.2	5.63	-5.2	-3.2	6.0	1012.8	1215.6	N 54.1 E
82	10078	89.1	57.2	8508.7	1613.0	10.18	1.9	-3.4	9.1	1030.3	1241.1	N 57.2 E
83	10106	89.0	57.5	8509.2	1640.8	1.13	-0.4	-3.6	12.7	1045.4	1264.7	N 57.5 E
84	10137	89.5	53.7	8509.6	1671.6	12.36	1.6	-3.6	15.7	1062.9	1290.3	N 53.7 E
85	10168	88.8	52.0	8510.1	1702.6	5.93	-2.3	-3.7	17.3	1081.6	1315.0	N 52.0 E
86	10198	88.0	50.9	8510.9	1732.6	4.53	-2.7	-4.1	18.0	1100.3	1338.4	N 50.9 E
87	10229	89.0	49.2	8511.7	1763.6	6.36	3.2	-4.6	18.1	1120.2	1362.2	N 49.2 E
88	10258	88.6	47.7	8512.3	1792.5	5.35	-1.4	-4.8	17.3	1139.5	1383.9	N 47.7 E
89	10289	89.5	46.6	8512.8	1823.5	4.58	2.9	-5.0	15.8	1160.5	1406.6	N 46.6 E
90	10313	92.6	46.5	8512.4	1847.5	12.92	12.9	-4.2	14.3	1177.0	1424.0	N 46.5 E
Proj	10348	92.6	46.5	8510.8	1882.3	0.00	0.0	1.9	9.5	1203.2	1447.6	N 46.5 E

## Distribution List

Below is the distribution list for the *Continental Resources, WBRRU # 32-23 in Harding County, South Dakota.*

<u>NAME</u>	<u>Open &amp; cased hole logs</u> <u>DST and core analysis</u>
Continental Resources, Inc. Attn: David McMahan Exploration Department-10 <sup>th</sup> Floor 302 N. Independence P.O. Box 1032 Enid, OK 73701	Standard Information (1 copy of mud logs)
Continental Resources, Inc. Attn: Pam Combest-12 <sup>th</sup> Floor 302 N. Independence Enid, OK 73701	Standard Information ( 7 copies of mud logs)
Lamamco Drilling Co. Attn: Stan Miller II P. O. Box 550 Skiatook, OK 74070	Standard Information
Robert G. Fowler P. O. Box 917 Casper, WY 82602	Standard Information
Michael & Patricia Porter 48 Walnut Ave. Millburn, NJ 07041	Standard Information



*End of Well Report*

**Continental Resources, Inc**  
**MS #0520-420-175**

**WBRRU 32-23**  
**Harding County, South Dakota**

**Prepared By:**  
**Leanne Butler**

**October 21, 2005**

2511 North Frazier • Conroe, Texas 77304  
P.O. Box 3047 • Conroe, Texas 77305-3047  
Office: (936) 441-6630 • Watts: (800) 769-5988 • Fax: (936) 539-1075  
[www.multi-shotllc.com](http://www.multi-shotllc.com)

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RESOURCES - RCRO

*Actual Well & Surveys* 1

*Daily Reports* 2

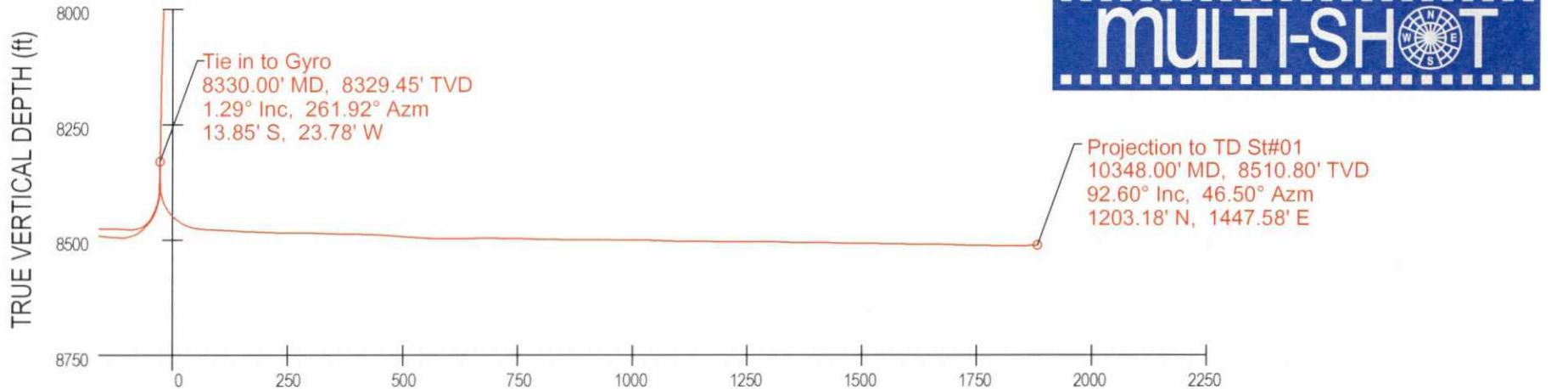
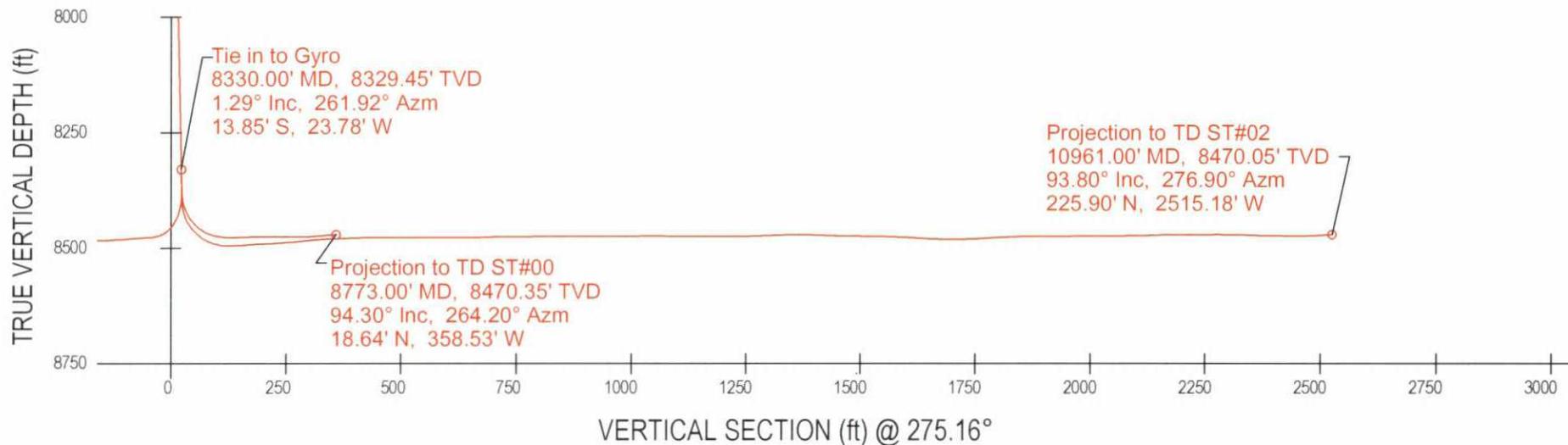
*BHA's* 3

*Support Staff* 4

Company: Continental Resources  
Lease/Well: WBRRU 32-23  
Location: Harding County  
Rig Name: J&R #8



State/Country: South Dakota  
Declination: 9.51° E (M-T)  
Grid: Referenced to True North  
Date/Time: 10/21/2005



Drawn By: CAC

Actual Surveys

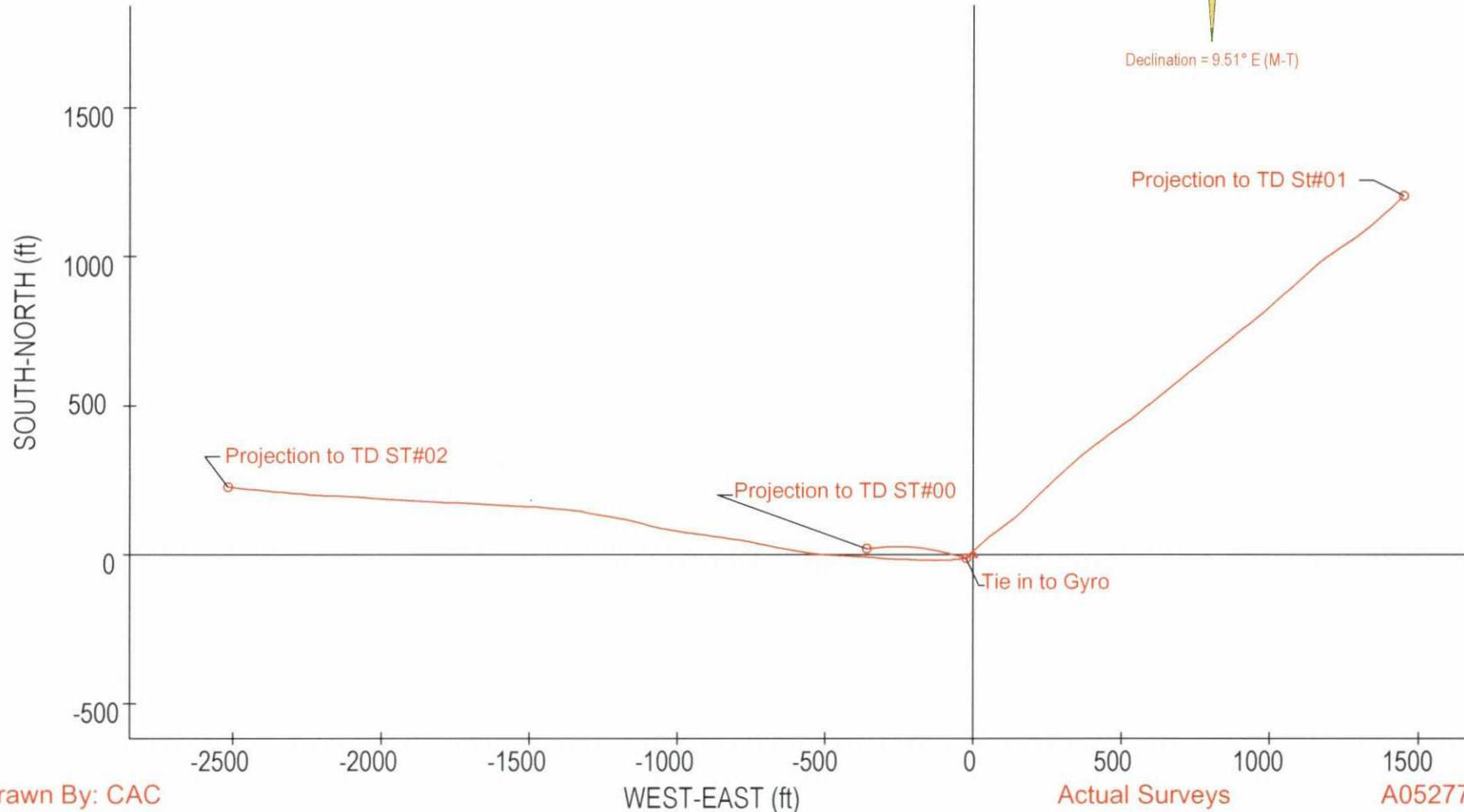
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Company: Continental Resources  
Lease/Well: WBRRU 32-23  
Location: Harding County  
Rig Name: J&R #8



State/Country: South Dakota  
Declination: 9.51° E (M-T)  
Grid: Referenced to True North  
Date/Time: 10/21/2005

**MULTI-SHOT**



	Job Number: P05-277	State/Country: South Dakota
	Company: Continental Resources	Declination: 9.51° E (M-T)
	Lease/Well: WBRRU 32-23	Grid: Referenced to True North
	Location: Harding County	File name: F:\WELLPL~1\2005\P05270'S\P05277\05277.SVY
	Rig Name: J&R #8	Date/Time: 21-Oct-05 / 09:28
	RKB: 11'	Curve Name: Gyro
	G.L. or M.S.L.: 3156'	

**WINSERVE SURVEY CALCULATIONS**  
*Minimum Curvature Method*  
*Vertical Section Plane 275.16*  
*Vertical Section Referenced to Wellhead*  
*Rectangular Coordinates Referenced to Wellhead*

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.73	164.67	100.00	-.61	.17	-.22	.64	164.67	.73
200.00	.79	160.03	199.99	-1.88	.57	-.74	1.96	163.04	.09
300.00	.64	162.17	299.98	-3.06	.98	-1.25	3.21	162.24	.15
400.00	.48	157.49	399.98	-3.97	1.31	-1.66	4.19	161.76	.17
500.00	.46	150.12	499.97	-4.71	1.67	-2.09	5.00	160.47	.06
600.00	.37	147.93	599.97	-5.33	2.04	-2.51	5.71	159.04	.09
700.00	.40	134.98	699.97	-5.85	2.46	-2.98	6.35	157.20	.09
800.00	.34	133.97	799.97	-6.30	2.92	-3.48	6.95	155.14	.06
900.00	.47	140.51	899.96	-6.83	3.40	-4.00	7.62	153.56	.14
1000.00	.46	138.97	999.96	-7.45	3.92	-4.57	8.42	152.24	.02
1100.00	.58	149.01	1099.96	-8.18	4.44	-5.16	9.31	151.50	.15
1200.00	.67	146.71	1199.95	-9.11	5.03	-5.82	10.40	151.11	.09
1300.00	.71	150.14	1299.94	-10.13	5.65	-6.54	11.60	150.84	.06
1400.00	.59	126.41	1399.94	-10.97	6.38	-7.34	12.69	149.84	.29
1500.00	.47	137.51	1499.93	-11.58	7.07	-8.08	13.57	148.61	.16
1600.00	.47	112.73	1599.93	-12.04	7.72	-8.78	14.31	147.33	.20
1700.00	.30	85.31	1699.93	-12.18	8.36	-9.42	14.78	145.53	.25
1800.00	.33	88.31	1799.92	-12.15	8.91	-9.97	15.07	143.74	.03
1900.00	.26	52.53	1899.92	-12.00	9.38	-10.42	15.23	142.00	.19
2000.00	.35	59.49	1999.92	-11.71	9.82	-10.84	15.29	140.01	.10
2100.00	.29	54.24	2099.92	-11.41	10.29	-11.28	15.36	137.95	.07
2200.00	.28	48.72	2199.92	-11.10	10.68	-11.64	15.40	136.10	.03
2300.00	.36	69.26	2299.92	-10.83	11.16	-12.09	15.55	134.14	.14

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100
2400.00	.34	43.60	2399.92	-10.50	11.66	-12.55	15.69	132.01	.16
2500.00	.42	88.96	2499.91	-10.28	12.23	-13.10	15.97	130.05	.30
2600.00	.52	172.47	2599.91	-10.72	12.65	-13.57	16.59	130.28	.63
2700.00	.44	263.20	2699.91	-11.22	12.33	-13.29	16.67	132.29	.69
2800.00	.36	35.82	2799.91	-11.01	12.13	-13.08	16.38	132.22	.73
2900.00	.35	14.50	2899.91	-10.46	12.39	-13.28	16.22	130.16	.13
3000.00	.37	27.63	2999.90	-9.88	12.62	-13.46	16.03	128.04	.08
3100.00	.41	32.95	3099.90	-9.29	12.97	-13.75	15.95	125.62	.05
3200.00	.44	33.90	3199.90	-8.67	13.37	-14.10	15.94	122.96	.03
3300.00	.32	23.86	3299.90	-8.10	13.70	-14.37	15.91	120.58	.14
3400.00	.29	19.80	3399.90	-7.60	13.90	-14.53	15.84	118.68	.04
3500.00	.37	10.05	3499.89	-7.05	14.04	-14.62	15.71	116.65	.10
3600.00	.33	347.80	3599.89	-6.45	14.04	-14.56	15.45	114.67	.14
3700.00	.12	347.24	3699.89	-6.06	13.95	-14.44	15.21	113.49	.21
3800.00	.29	328.30	3799.89	-5.75	13.80	-14.26	14.95	112.61	.18
3900.00	.29	329.41	3899.89	-5.31	13.54	-13.96	14.54	111.43	.01
4000.00	.32	328.00	3999.89	-4.86	13.26	-13.64	14.12	110.13	.03
4100.00	.30	328.84	4099.89	-4.40	12.98	-13.32	13.70	108.73	.02
4200.00	.24	277.94	4199.89	-4.15	12.63	-12.95	13.30	108.17	.24
4300.00	.20	276.76	4299.88	-4.10	12.25	-12.57	12.92	108.49	.04
4400.00	.14	290.09	4399.88	-4.03	11.96	-12.28	12.63	108.63	.07
4500.00	.14	315.83	4499.88	-3.90	11.76	-12.07	12.39	108.36	.06
4600.00	.40	308.12	4599.88	-3.60	11.40	-11.68	11.96	107.52	.26
4700.00	.40	298.87	4699.88	-3.22	10.82	-11.07	11.29	106.55	.06
4800.00	.42	304.69	4799.88	-2.84	10.22	-10.43	10.60	105.53	.05
4900.00	.33	299.38	4899.88	-2.49	9.66	-9.85	9.98	104.45	.10
5000.00	.48	313.89	4999.87	-2.06	9.11	-9.26	9.34	102.73	.18
5100.00	.57	324.75	5099.87	-1.36	8.52	-8.61	8.63	99.08	.13
5200.00	.52	325.24	5199.86	-.58	7.98	-8.00	8.00	94.18	.05
5300.00	.57	332.45	5299.86	.23	7.49	-7.44	7.49	88.23	.08
5400.00	.62	332.45	5399.85	1.15	7.01	-6.88	7.10	80.66	.05
5500.00	.69	327.15	5499.85	2.14	6.43	-6.21	6.78	71.61	.09
5600.00	.71	331.01	5599.84	3.19	5.80	-5.49	6.62	61.24	.05
5700.00	.70	328.16	5699.83	4.25	5.18	-4.78	6.70	50.66	.04
5800.00	.69	330.43	5799.83	5.29	4.56	-4.07	6.98	40.78	.03
5900.00	.60	323.77	5899.82	6.24	3.96	-3.38	7.38	32.39	.12
6000.00	.47	288.92	5999.82	6.79	3.26	-2.63	7.53	25.63	.34
6100.00	.51	294.24	6099.81	7.11	2.46	-1.81	7.52	19.12	.06
6200.00	.52	274.82	6199.81	7.33	1.61	-.94	7.50	12.36	.17
6300.00	.38	247.20	6299.80	7.24	.85	-.19	7.29	6.68	.25
6400.00	.29	230.30	6399.80	6.95	.35	.28	6.96	2.87	.13
6500.00	.44	227.07	6499.80	6.52	-.13	.71	6.52	358.87	.15

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100
6600.00	.33	226.60	6599.80	6.06	-.62	1.16	6.10	354.18	.11
6700.00	.43	227.23	6699.80	5.61	-1.10	1.60	5.72	348.88	.10
6800.00	.36	221.38	6799.79	5.12	-1.59	2.04	5.36	342.79	.08
6900.00	.59	205.40	6899.79	4.42	-2.01	2.40	4.86	335.49	.26
7000.00	.67	211.46	6999.78	3.46	-2.54	2.84	4.29	323.68	.10
7100.00	.69	203.38	7099.78	2.40	-3.08	3.29	3.91	307.94	.10
7200.00	.81	211.52	7199.77	1.25	-3.69	3.79	3.90	288.69	.16
7300.00	.82	223.17	7299.76	.12	-4.55	4.55	4.55	271.57	.17
7400.00	.81	225.54	7399.75	-.89	-5.55	5.44	5.62	260.86	.04
7500.00	1.12	224.52	7499.73	-2.08	-6.74	6.52	7.05	252.81	.31
7600.00	1.30	222.25	7599.71	-3.62	-8.18	7.83	8.95	246.14	.19
7700.00	1.50	218.34	7699.68	-5.49	-9.76	9.23	11.20	240.65	.22
7800.00	1.74	223.52	7799.64	-7.61	-11.62	10.88	13.89	236.76	.28
7900.00	1.77	231.61	7899.60	-9.67	-13.87	12.95	16.91	235.11	.25
8000.00	1.59	238.03	7999.55	-11.37	-16.26	15.17	19.84	235.04	.26
8100.00	1.46	248.23	8099.52	-12.57	-18.62	17.41	22.47	235.97	.30
8200.00	1.30	260.23	8199.49	-13.24	-20.92	19.65	24.76	237.67	.33
8300.00	1.28	255.32	8299.46	-13.72	-23.12	21.79	26.88	239.32	.11
<b>Final Survey</b>									
8330.00	1.29	261.92	8329.46	-13.85	-23.78	22.44	27.52	239.78	.49

<b>MULTI-SHOT</b>	Job Number: P05-277	State/Country: South Dakota
	Company: Continental Resources	Declination: 9.51° E (M-T)
	Lease/Well: WBRRU 32-23	Grid: Referenced to True North
	Location: Harding County	File name: F:\WELLPL~1\2005\P05270'S\P05277\05277.SVY
	Rig Name: J&R #8	Date/Time: 21-Oct-05 / 09:28
	RKB: 11'	Curve Name: SDTRK #00
	G.L. or M.S.L.: 3156'	

**WINSERVE SURVEY CALCULATIONS**  
*Minimum Curvature Method*  
*Vertical Section Plane 275.16*  
*Vertical Section Referenced to Wellhead*  
*Rectangular Coordinates Referenced to Wellhead*

<b>Measured Depth FT</b>	<b>Incl Angle Deg</b>	<b>Drift Direction Deg</b>	<b>True Vertical Depth</b>	<b>N-S FT</b>	<b>E-W FT</b>	<b>Vertical Section FT</b>	<b>C L O S U R E Distance FT</b>	<b>Direction Deg</b>	<b>Dogleg Severity Deg/100</b>
<b>Tie in to Gyro</b>									
8330.00	1.29	261.92	8329.45	-13.85	-23.78	22.44	27.52	239.78	00
8388.00	4.40	309.40	8387.38	-12.53	-26.15	24.91	28.99	244.40	6.30
8393.00	6.70	293.20	8392.35	-12.29	-26.56	25.35	29.27	245.17	55.22
8398.00	9.60	285.50	8397.30	-12.07	-27.23	26.04	29.79	246.10	61.85
8403.00	12.80	280.70	8402.21	-11.85	-28.18	27.00	30.57	247.19	66.61
8408.00	15.90	281.20	8407.05	-11.62	-29.40	28.23	31.61	248.44	62.05
8413.00	18.80	281.50	8411.82	-11.32	-30.86	29.71	32.87	249.85	58.03
8418.00	21.60	282.40	8416.51	-10.96	-32.55	31.43	34.34	251.38	56.34
8423.00	24.60	283.00	8421.11	-10.53	-34.46	33.37	36.03	253.00	60.18
8428.00	27.60	283.50	8425.60	-10.03	-36.60	35.55	37.95	254.68	60.16
8433.00	30.70	284.10	8429.97	-9.45	-38.96	37.96	40.09	256.37	62.27
8438.00	33.80	284.70	8434.20	-8.78	-41.55	40.59	42.47	258.07	62.33
8443.00	36.90	285.00	8438.27	-8.04	-44.34	43.44	45.07	259.72	62.10
8448.00	39.90	285.30	8442.19	-7.23	-47.34	46.50	47.89	261.32	60.12
8453.00	43.00	285.60	8445.94	-6.35	-50.53	49.76	50.93	262.84	62.13
8458.00	46.10	285.90	8449.50	-5.39	-53.91	53.20	54.18	264.29	62.14
8463.00	49.10	285.90	8452.87	-4.38	-57.46	56.83	57.62	265.64	60.00
8468.00	52.10	285.80	8456.05	-3.33	-61.17	60.63	61.26	266.89	60.02
8473.00	55.30	285.90	8459.01	-2.23	-65.05	64.59	65.09	268.04	64.02
8478.00	58.10	285.60	8461.75	-1.09	-69.07	68.69	69.08	269.09	56.22
8483.00	61.30	285.50	8464.27	.06	-73.23	72.94	73.23	270.05	64.02

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100
8488.00	64.40	285.20	8466.55	1.24	-77.52	77.32	77.53	270.92	62.23
8493.00	67.60	285.10	8468.59	2.43	-81.93	81.82	81.96	271.70	64.03
8498.00	71.00	284.50	8470.36	3.63	-86.45	86.43	86.53	272.40	68.92
8503.00	74.00	283.70	8471.86	4.79	-91.07	91.14	91.20	273.01	61.91
8508.00	77.10	282.60	8473.11	5.89	-95.79	95.93	95.97	273.52	65.56
8513.00	79.70	280.30	8474.11	6.86	-100.59	100.80	100.82	273.90	68.80
8518.00	82.30	280.30	8474.89	7.75	-105.45	105.72	105.73	274.20	52.00
8523.00	84.50	280.40	8475.47	8.64	-110.33	110.66	110.67	274.48	44.04
8533.00	87.90	280.40	8476.13	10.44	-120.14	120.60	120.60	274.97	34.00
8543.00	90.30	280.70	8476.29	12.27	-129.97	130.55	130.55	275.39	24.19
8554.00	91.20	280.60	8476.14	14.30	-140.78	141.50	141.51	275.80	8.23
8583.00	91.20	279.60	8475.54	19.39	-169.33	170.38	170.43	276.53	3.45
8613.00	88.80	275.00	8475.54	23.20	-199.07	200.35	200.42	276.65	17.29
8644.00	89.50	271.90	8476.00	25.06	-230.01	231.33	231.37	276.22	10.25
8675.00	91.00	270.00	8475.86	25.58	-261.00	262.25	262.25	275.60	7.81
8703.00	92.30	267.20	8475.06	24.89	-288.98	290.05	290.05	274.92	11.02
8734.00	94.30	264.20	8473.27	22.57	-319.84	320.57	320.63	274.04	11.62
<b>Projection to TD-ST#00</b>									
8773.00	94.30	264.20	8470.35	18.64	-358.53	358.75	359.01	272.98	.00

	Job Number: P05-277	State/Country: South Dakota
Company: Continental Resources	Declination: 9.51° E (M-T)	
Lease/Well: WBRRU 32-23	Grid: Referenced to True North	
Location: Harding County	File name: F:\WELLPL~1\2005\P05270'S\P05277\05277.SVY	
Rig Name: J&R #8	Date/Time: 21-Oct-05 / 09:28	
RKB: 11'	Curve Name: SDTRK#01	
G.L. or M.S.L.: 3156'		

**WINSERVE PROPOSAL REPORT**  
*Minimum Curvature Method*  
*Vertical Section Plane 49.98*  
*Vertical Section Referenced to Wellhead*  
*Rectangular Coordinates Referenced to Wellhead*

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
<b>Tie in to Gyro</b>									
8330.00	1.29	261.92	8329.45	-13.85	-23.78	-27.12	27.52	239.78	.00
8388.00	3.70	4.60	8387.41	-12.08	-24.28	-26.36	27.11	243.55	7.20
8393.00	6.30	32.00	8392.39	-11.68	-24.12	-25.98	26.80	244.16	69.22
8398.00	9.40	41.30	8397.34	-11.14	-23.70	-25.32	26.19	244.82	66.81
8403.00	12.60	41.90	8402.25	-10.43	-23.07	-24.37	25.32	245.67	64.04
8408.00	15.50	42.50	8407.10	-9.53	-22.25	-23.17	24.21	246.82	58.07
8413.00	18.70	43.10	8411.88	-8.45	-21.25	-21.71	22.87	248.31	64.10
8418.00	21.60	43.70	8416.57	-7.20	-20.07	-20.00	21.32	250.26	58.15
8423.00	24.50	44.40	8421.17	-5.80	-18.71	-18.05	19.59	252.79	58.26
8428.00	27.60	45.00	8425.66	-4.24	-17.16	-15.87	17.68	256.14	62.22
8433.00	30.80	45.60	8430.03	-2.52	-15.43	-13.44	15.63	260.72	64.27
8438.00	33.80	46.20	8434.25	-.66	-13.51	-10.77	13.53	267.20	60.34
8443.00	36.90	46.80	8438.33	1.33	-11.41	-7.89	11.49	276.64	62.39
8448.00	40.00	47.50	8442.25	3.44	-9.13	-4.78	9.76	290.65	62.61
8453.00	43.20	48.70	8445.98	5.66	-6.66	-1.46	8.74	310.34	65.95
8458.00	46.20	49.30	8449.54	7.97	-4.01	2.05	8.92	333.29	60.59
8463.00	49.20	49.90	8452.90	10.36	-1.19	5.75	10.43	353.44	60.65
8468.00	52.40	50.00	8456.06	12.85	1.77	9.62	12.98	7.86	64.02
8473.00	55.40	49.60	8459.01	15.46	4.86	13.66	16.21	17.45	60.35
8478.00	58.50	49.30	8461.73	18.19	8.04	17.85	19.89	23.86	62.20
8483.00	61.50	49.00	8464.23	21.02	11.32	22.18	23.87	28.30	60.22

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
8488.00	64.50	48.90	8466.50	23.94	14.68	26.64	28.08	31.51	60.03
8493.00	67.90	48.90	8468.52	26.95	18.12	31.21	32.48	33.92	68.00
8498.00	71.00	48.70	8470.28	30.03	21.65	35.89	37.02	35.78	62.11
8503.00	74.10	49.10	8471.78	33.17	25.24	40.66	41.68	37.27	62.47
8508.00	76.60	48.30	8473.04	36.36	28.87	45.50	46.43	38.45	52.34
8513.00	79.70	48.20	8474.07	39.62	32.52	50.39	51.26	39.38	62.03
8518.00	82.20	48.30	8474.85	42.91	36.21	55.32	56.14	40.16	50.04
8523.00	84.10	48.60	8475.45	46.20	39.92	60.28	61.06	40.83	38.46
8533.00	86.20	51.20	8476.29	52.62	47.54	70.25	70.92	42.10	33.35
8543.00	87.10	52.20	8476.88	58.80	55.38	80.22	80.78	43.28	13.44
8558.00	86.90	53.20	8477.66	67.88	67.29	95.19	95.58	44.75	6.79
8587.00	87.00	53.70	8479.21	85.13	90.56	124.09	124.29	46.77	1.76
8617.00	86.70	53.00	8480.86	103.01	114.59	153.99	154.08	48.05	2.54
8632.00	86.60	52.10	8481.73	112.11	126.48	168.95	169.01	48.45	6.03
8648.00	87.10	50.80	8482.61	122.07	138.97	184.92	184.97	48.70	8.69
8679.00	88.90	47.30	8483.69	142.37	162.37	215.90	215.94	48.75	12.69
8707.00	89.90	46.00	8483.99	161.59	182.73	243.85	243.93	48.51	5.86
8738.00	88.80	44.30	8484.34	183.45	204.70	274.73	274.87	48.13	6.53
8769.00	89.00	46.00	8484.93	205.31	226.67	305.61	305.83	47.83	5.52
8800.00	88.50	47.10	8485.61	226.62	249.17	336.55	336.81	47.71	3.90
8830.00	89.00	47.30	8486.26	247.00	271.18	366.51	366.81	47.67	1.79
8861.00	89.40	47.20	8486.70	268.04	293.94	397.47	397.80	47.64	1.33
8892.00	87.00	49.50	8487.67	288.63	317.09	428.44	428.78	47.69	10.72
8921.00	87.00	48.90	8489.19	307.55	339.01	457.40	457.73	47.79	2.07
8949.00	86.00	48.60	8490.90	325.98	360.02	485.34	485.67	47.84	3.73
8980.00	85.60	52.10	8493.17	345.70	383.82	516.25	516.56	47.99	11.33
9011.00	86.60	52.60	8495.28	364.60	408.31	547.15	547.40	48.24	3.60
9041.00	87.10	52.60	8496.93	382.79	432.11	577.07	577.27	48.46	1.67
9072.00	91.30	55.50	8497.36	400.98	457.19	607.98	608.12	48.75	16.46
9101.00	91.70	54.70	8496.60	417.57	480.97	636.85	636.94	49.04	3.08
9131.00	91.10	54.30	8495.87	434.98	505.39	666.75	666.80	49.28	2.40
9162.00	88.90	53.20	8495.87	453.31	530.38	697.68	697.71	49.48	7.93
9193.00	89.40	52.30	8496.33	472.07	555.06	728.64	728.66	49.62	3.32
9224.00	88.90	51.20	8496.79	491.26	579.40	759.62	759.63	49.71	3.90
9254.00	88.30	51.10	8497.52	510.08	602.75	789.61	789.61	49.76	2.03
9283.00	88.60	50.40	8498.30	528.42	625.20	818.60	818.60	49.80	2.63
9314.00	89.40	50.70	8498.85	548.11	649.14	849.59	849.59	49.82	2.76
9344.00	89.90	51.60	8499.03	566.93	672.50	879.58	879.58	49.87	3.43
9373.00	89.90	50.50	8499.08	585.16	695.05	908.58	908.58	49.91	3.79
9404.00	90.00	50.10	8499.11	604.96	718.90	939.58	939.58	49.92	1.33
9434.00	87.80	51.60	8499.68	623.90	742.16	969.56	969.56	49.95	8.87
9465.00	89.50	52.50	8500.41	642.96	766.60	1000.53	1000.53	50.01	6.20

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	Direction Deg	Dogleg Severity Deg/100
9496.00	89.40	51.00	8500.71	662.15	790.94	1031.52	1031.52	50.07	4.85
9527.00	88.30	50.60	8501.33	681.74	814.96	1062.51	1062.51	50.09	3.78
9557.00	89.00	51.30	8502.04	700.63	838.25	1092.49	1092.50	50.11	3.30
9586.00	90.20	52.20	8502.24	718.58	861.03	1121.48	1121.48	50.15	5.17
9617.00	88.80	51.60	8502.51	737.71	885.42	1152.46	1152.47	50.20	4.91
9648.00	89.20	51.90	8503.05	756.90	909.76	1183.44	1183.45	50.24	1.61
9678.00	89.40	51.20	8503.42	775.55	933.25	1213.43	1213.44	50.27	2.43
9709.00	89.80	50.90	8503.64	795.04	957.36	1244.42	1244.44	50.29	1.61
9740.00	89.90	50.40	8503.72	814.69	981.33	1275.42	1275.44	50.30	1.64
9770.00	89.90	48.50	8503.77	834.20	1004.13	1305.41	1305.43	50.28	6.33
9801.00	88.10	48.20	8504.31	854.79	1027.29	1336.40	1336.41	50.24	5.89
9832.00	88.50	47.90	8505.23	875.51	1050.33	1367.36	1367.37	50.19	1.61
9863.00	90.20	49.00	8505.58	896.07	1073.53	1398.35	1398.36	50.15	6.53
9893.00	88.90	47.20	8505.82	916.10	1095.85	1428.33	1428.33	50.11	7.40
9924.00	88.90	47.20	8506.41	937.16	1118.60	1459.29	1459.29	50.04	00
9955.00	89.70	47.60	8506.79	958.14	1141.41	1490.25	1490.25	49.99	2.89
9985.00	88.40	51.30	8507.29	977.64	1164.20	1520.24	1520.24	49.98	13.07
10016.00	90.10	53.40	8507.69	996.57	1188.74	1551.21	1551.21	50.03	8.72
10047.00	88.50	54.10	8508.07	1014.90	1213.74	1582.14	1582.14	50.10	5.63
10078.00	89.10	57.20	8508.72	1032.38	1239.32	1612.98	1612.99	50.20	10.18
10106.00	89.00	57.50	8509.19	1047.49	1262.90	1640.74	1640.77	50.33	1.13
10137.00	89.50	53.70	8509.59	1065.00	1288.47	1671.59	1671.64	50.42	12.36
10168.00	88.80	52.00	8510.05	1083.72	1313.17	1702.54	1702.60	50.47	5.93
10198.00	88.00	50.90	8510.89	1102.40	1336.62	1732.52	1732.59	50.49	4.53
10229.00	89.00	49.20	8511.70	1122.30	1360.38	1763.51	1763.57	50.48	6.36
10258.00	88.60	47.70	8512.31	1141.53	1382.08	1792.49	1792.55	50.44	5.35
10289.00	89.50	46.60	8512.82	1162.61	1404.80	1823.45	1823.49	50.39	4.58
10313.00	92.60	46.50	8512.38	1179.11	1422.22	1847.40	1847.43	50.34	12.92
<b>Projection to TD-ST#01</b>									
10348.00	92.60	46.50	8510.80	1203.18	1447.58	1882.30	1882.32	50.27	00

	Job Number: P05-277	State/Country: South Dakota
	Company: Continental Resources	Declination: 9.51° E (M-T)
	Lease/Well: WBRRU 32-23	Grid: Referenced to True North
	Location: Harding County	File name: F:\WELLPL~1\2005\P05270'S\P05277\05277.SVY
	Rig Name: J&R #8	Date/Time: 21-Oct-05 / 09:28
	RKB: 11'	Curve Name: SDTRK#02
	G.L. or M.S.L.: 3156'	

**WINSERVE SURVEY CALCULATIONS**  
*Minimum Curvature Method*  
*Vertical Section Plane 275.16*  
*Vertical Section Referenced to Wellhead*  
*Rectangular Coordinates Referenced to Wellhead*

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
<b>Tie in to Gyro</b>									
8330.00	1.29	261.92	8329.45	-13.85	-23.78	22.44	27.52	239.78	.00
8388.00	1.60	339.90	8387.44	-13.18	-24.70	23.42	28.00	241.92	3.16
8393.00	1.50	281.80	8392.43	-13.10	-24.79	23.51	28.04	242.14	30.15
8398.00	3.10	246.70	8397.43	-13.14	-24.98	23.70	28.23	242.25	41.23
8403.00	5.40	244.80	8402.42	-13.30	-25.32	24.02	28.60	242.29	46.08
8408.00	8.30	245.00	8407.38	-13.55	-25.86	24.53	29.19	242.35	58.00
8413.00	11.10	245.60	8412.31	-13.90	-26.62	25.27	30.03	242.43	56.04
8418.00	13.70	255.80	8417.19	-14.24	-27.64	26.24	31.09	242.73	67.80
8423.00	16.30	259.50	8422.02	-14.52	-28.90	27.48	32.34	243.33	55.39
8428.00	19.20	261.00	8426.78	-14.77	-30.40	28.95	33.80	244.08	58.71
8433.00	22.00	262.30	8431.46	-15.03	-32.14	30.66	35.48	244.94	56.74
8438.00	24.70	262.40	8436.05	-15.29	-34.11	32.59	37.38	245.85	54.01
8443.00	27.40	262.50	8440.54	-15.58	-36.28	34.74	39.49	246.76	54.01
8448.00	30.30	262.60	8444.92	-15.89	-38.68	37.09	41.81	247.66	58.01
8453.00	33.10	262.80	8449.18	-16.23	-41.28	39.65	44.36	248.54	56.04
8458.00	36.10	263.00	8453.29	-16.58	-44.10	42.43	47.11	249.40	60.04
8463.00	38.90	263.90	8457.26	-16.92	-47.12	45.41	50.07	250.24	57.06
8468.00	41.70	264.20	8461.07	-17.26	-50.34	48.58	53.22	251.08	56.13
8473.00	44.50	264.60	8464.72	-17.59	-53.74	51.94	56.54	251.87	56.27
8478.00	47.40	265.00	8468.20	-17.92	-57.32	55.47	60.05	252.64	58.28
8483.00	50.20	265.40	8471.49	-18.23	-61.07	59.18	63.73	253.38	56.32

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E			Dogleg Severity Deg/100
							Distance FT	Direction Deg		
8488.00	52.80	266.20	8474.60	-18.52	-64.97	63.04	67.56	254.09	53.49	
8493.00	55.70	266.80	8477.52	-18.77	-69.02	67.05	71.52	254.79	58.81	
8498.00	58.70	267.50	8480.23	-18.97	-73.21	71.21	75.63	255.47	61.14	
8503.00	61.30	267.60	8482.73	-19.16	-77.54	75.50	79.87	256.12	52.03	
8508.00	64.20	268.00	8485.02	-19.33	-81.98	79.91	84.23	256.73	58.43	
8513.00	67.40	268.30	8487.07	-19.48	-86.54	84.44	88.70	257.32	64.23	
8518.00	70.50	268.50	8488.87	-19.61	-91.20	89.07	93.29	257.87	62.11	
8523.00	73.60	268.40	8490.41	-19.73	-95.96	93.79	97.97	258.38	62.03	
8528.00	76.50	268.40	8491.70	-19.87	-100.79	98.59	102.73	258.85	58.00	
8533.00	79.50	268.30	8492.74	-20.01	-105.67	103.45	107.55	259.28	60.03	
8538.00	82.50	268.40	8493.52	-20.15	-110.61	108.35	112.43	259.67	60.03	
8543.00	85.40	268.00	8494.05	-20.31	-115.58	113.28	117.35	260.03	58.54	
8548.00	87.70	268.90	8494.35	-20.44	-120.57	118.24	122.29	260.38	49.38	
8553.00	89.50	269.50	8494.47	-20.51	-125.57	123.21	127.23	260.72	37.95	
8563.00	91.90	270.80	8494.35	-20.49	-135.56	133.17	137.10	261.41	27.29	
8573.00	92.80	271.40	8493.94	-20.30	-145.55	143.14	146.96	262.06	10.81	
8585.00	93.10	271.60	8493.32	-19.98	-157.53	155.10	158.80	262.77	3.00	
8616.00	93.20	271.80	8491.62	-19.06	-188.47	185.99	189.43	264.22	.72	
8646.00	93.30	271.70	8489.91	-18.15	-218.41	215.89	219.16	265.25	.47	
8677.00	94.00	271.90	8487.94	-17.18	-249.33	246.78	249.92	266.06	2.35	
8706.00	96.20	274.30	8485.36	-15.62	-278.17	275.64	278.61	266.79	11.20	
8736.00	95.90	272.90	8482.20	-13.74	-307.94	305.46	308.25	267.44	4.75	
8766.00	92.50	274.20	8480.00	-11.89	-337.80	335.36	338.01	267.98	12.13	
8798.00	92.40	273.70	8478.64	-9.69	-369.70	367.33	369.82	268.50	1.59	
8829.00	91.70	274.70	8477.53	-7.42	-400.59	398.30	400.66	268.94	3.94	
8860.00	90.20	273.30	8477.01	-5.26	-431.51	429.29	431.54	269.30	6.62	
8890.00	89.80	272.20	8477.01	-3.82	-461.48	459.26	461.49	269.53	3.90	
8919.00	90.70	272.20	8476.89	-2.70	-490.45	488.22	490.46	269.68	3.10	
8947.00	89.60	276.00	8476.81	-.70	-518.38	516.21	518.38	269.92	14.13	
8978.00	90.70	279.00	8476.73	3.34	-549.11	547.18	549.12	270.35	10.31	
9009.00	89.90	279.20	8476.57	8.25	-579.72	578.11	579.78	270.81	2.66	
9040.00	90.40	279.60	8476.49	13.31	-610.30	609.02	610.45	271.25	2.07	
9070.00	90.00	280.60	8476.38	18.57	-639.83	638.91	640.10	271.66	3.59	
9099.00	90.80	280.90	8476.18	23.98	-668.32	667.77	668.75	272.05	2.95	
9130.00	90.90	281.90	8475.72	30.10	-698.71	698.59	699.36	272.47	3.24	
9160.00	90.00	281.40	8475.49	36.16	-728.09	728.39	728.99	272.84	3.43	
9191.00	90.80	280.80	8475.27	42.13	-758.51	759.22	759.68	273.18	3.23	
9222.00	90.00	278.20	8475.05	47.25	-789.08	790.13	790.49	273.43	8.77	
9253.00	90.70	278.30	8474.86	51.69	-819.76	821.09	821.39	273.61	2.28	
9281.00	90.00	278.30	8474.69	55.74	-847.46	849.04	849.30	273.76	2.50	
9312.00	90.00	277.80	8474.69	60.08	-878.16	880.00	880.21	273.91	1.61	
9343.00	90.60	277.80	8474.53	64.28	-908.87	910.97	911.14	274.05	1.94	

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100
9371.00	89.90	277.40	8474.41	67.99	-936.63	938.94	939.09	274.15	2.88
9402.00	90.50	278.50	8474.30	72.28	-967.33	969.91	970.02	274.27	4.04
9433.00	90.60	278.30	8474.00	76.80	-997.99	1000.86	1000.94	274.40	.72
9464.00	90.10	279.60	8473.81	81.63	-1028.61	1031.79	1031.85	274.54	4.49
9494.00	89.60	281.80	8473.89	87.20	-1058.09	1061.64	1061.68	274.71	7.52
9525.00	90.10	284.00	8473.97	94.12	-1088.31	1092.36	1092.37	274.94	7.28
9556.00	89.80	285.10	8474.00	101.90	-1118.31	1122.94	1122.94	275.21	3.68
9584.00	89.00	284.80	8474.29	109.13	-1145.36	1150.53	1150.55	275.44	3.05
9615.00	90.00	281.50	8474.56	116.18	-1175.54	1181.23	1181.27	275.64	11.12
9646.00	89.90	279.30	8474.59	121.77	-1206.03	1212.10	1212.16	275.77	7.10
9676.00	90.80	280.30	8474.41	126.88	-1235.59	1242.00	1242.09	275.86	4.48
9707.00	91.80	280.50	8473.70	132.47	-1266.08	1272.86	1272.99	275.97	3.29
9738.00	92.80	279.40	8472.46	137.83	-1296.58	1303.72	1303.89	276.07	4.79
9769.00	92.30	281.40	8471.08	143.42	-1327.04	1334.56	1334.77	276.17	6.64
9799.00	89.20	276.80	8470.69	148.16	-1356.65	1364.48	1364.72	276.23	18.49
9830.00	87.70	273.20	8471.53	150.86	-1387.52	1395.46	1395.69	276.21	12.58
9861.00	88.00	274.30	8472.69	152.89	-1418.43	1426.43	1426.64	276.15	3.68
9892.00	90.40	275.80	8473.12	155.61	-1449.30	1457.42	1457.63	276.13	9.13
9922.00	88.80	275.70	8473.33	158.62	-1479.15	1487.42	1487.63	276.12	5.34
9953.00	88.60	271.60	8474.04	160.59	-1510.07	1518.39	1518.59	276.07	13.24
9984.00	88.30	272.40	8474.87	161.67	-1541.04	1549.34	1549.50	275.99	2.76
10015.00	88.60	272.50	8475.71	163.00	-1572.00	1580.29	1580.43	275.92	1.02
10045.00	86.20	274.30	8477.07	164.77	-1601.91	1610.24	1610.37	275.87	10.00
10076.00	85.70	274.20	8479.26	167.07	-1632.75	1641.16	1641.28	275.84	1.64
10105.00	89.50	273.30	8480.48	168.96	-1661.66	1670.12	1670.23	275.81	13.47
10135.00	90.80	272.90	8480.40	170.58	-1691.61	1700.10	1700.19	275.76	4.53
10166.00	92.20	272.20	8479.59	171.96	-1722.57	1731.06	1731.13	275.70	5.05
10197.00	92.00	271.40	8478.45	172.93	-1753.53	1761.98	1762.04	275.63	2.66
10227.00	92.90	271.90	8477.17	173.80	-1783.49	1791.90	1791.94	275.57	3.43
10256.00	93.70	271.90	8475.50	174.76	-1812.43	1820.80	1820.84	275.51	2.76
10287.00	91.30	272.60	8474.15	175.97	-1843.37	1851.73	1851.75	275.45	8.06
10318.00	88.60	273.90	8474.17	177.73	-1874.32	1882.71	1882.73	275.42	9.67
10348.00	88.60	273.90	8474.91	179.77	-1904.24	1912.69	1912.71	275.39	.00
10379.00	91.60	274.30	8474.85	181.99	-1935.16	1943.68	1943.70	275.37	9.76
10410.00	91.90	273.90	8473.91	184.20	-1966.07	1974.66	1974.68	275.35	1.61
10440.00	90.80	273.50	8473.20	186.14	-1995.99	2004.65	2004.65	275.33	3.90
10469.00	89.80	274.00	8473.05	188.03	-2024.93	2033.64	2033.64	275.31	3.86
10500.00	90.50	274.40	8472.97	190.30	-2055.85	2064.63	2064.64	275.29	2.60
10530.00	91.00	273.60	8472.57	192.40	-2085.77	2094.62	2094.63	275.27	3.14
10559.00	91.00	272.80	8472.07	194.02	-2114.72	2123.60	2123.60	275.24	2.76
10590.00	90.80	272.20	8471.58	195.37	-2145.69	2154.56	2154.56	275.20	2.04
10621.00	90.70	272.30	8471.18	196.58	-2176.66	2185.52	2185.52	275.16	.46

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	Direction Deg	Dogleg Severity Deg/100
10651.00	90.50	272.00	8470.86	197.71	-2206.64	2215.48	2215.48	275.12	1.20
10682.00	90.70	274.50	8470.54	199.47	-2237.58	2246.46	2246.46	275.09	8.09
10712.00	90.20	275.00	8470.30	201.95	-2267.48	2276.45	2276.46	275.09	2.36
10741.00	88.70	275.00	8470.58	204.48	-2296.37	2305.45	2305.45	275.09	5.17
10772.00	89.10	275.30	8471.17	207.26	-2327.24	2336.45	2336.45	275.09	1.61
10803.00	88.60	275.50	8471.80	210.18	-2358.09	2367.44	2367.44	275.09	1.74
10834.00	89.20	275.30	8472.39	213.09	-2388.95	2398.43	2398.43	275.10	2.04
10864.00	88.70	274.80	8472.94	215.74	-2418.83	2428.43	2428.43	275.10	2.36
10895.00	89.80	275.20	8473.35	218.44	-2449.71	2459.42	2459.43	275.10	3.78
10926.00	93.80	276.90	8472.37	221.70	-2480.51	2490.40	2490.40	275.11	14.02

**Projection to TD-ST#02**

10961.00	93.80	276.90	8470.05	225.90	-2515.18	2525.31	2525.31	275.13	.00
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**Daily Drilling Report**
**Multi-Shot Directional**

Report No:

1

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

<b>Daily Totals</b>		<b>BHA No:</b>	<b>TOTALS</b>	<b>Today</b>	<b>Previous</b>	<b>Total</b>	<b>%</b>
Start Depth:	Ft	<b>Sliding ROP</b>	Motor S/N:				
End Depth:	Ft		Slide Footage:	0		0	
Daily Footage:	0 Ft	<b>Rotating ROP</b>	Slide Hours:	0.00		0.00	
Vertical Section:	Ft		Rotate Footage:	0		0	
Slide Footage:	0 Ft	<b>Overall</b>	Rotate Hours:	0.00		0.00	
Slide Hours:	0.00 Hrs		Circ. & Ream Hrs:	0.00		0.00	Footage
Slide ROP:	FPH		Cum. Motor Hrs:	0.00	0.00	0.00	0
<b>Drilling Parameters</b>							
Rotate Footage:	0 Ft	Mud Type:	Water	WOB:	K-LBS	R/T WT	
Rotate Hours:	0.00 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	RPM	----	
Rotate ROP:	FPH	Viscosity:	"/Qt	Motor:	RPM	P/U WT	
Reaming Hours	0.00 Hrs	Waterloss:	CC's	Torque:	FT/#		
Circulate Hours	0.00 Hrs	Pump Stks:	SPM	SPP Off:	PSI	S/O WT	
Daily Motor Hours:	0.00 Hrs	Volume Mud:	GPM	SPP On:	PSI		
<b>Gas</b>	<b>Units</b>	<b>BIT No:</b>			<b>Target Information</b>		
Trip Gas:		Manufacturer/Type:			TVD		
Connection Gas:		Serial Number:			VS		
Background Gas:		Depth In:			ANGLE		
<b>Time</b>	<b>Hours</b>	<b>Ftg.</b>	<b>Activity Code</b>	<b>Drilling Depths</b>	<b>Operation Description</b>		
	47:45	0		From                  To			
0:00							
14:00	14:00		Miscellaneous		Prep well		
14:30	0:30		Whipstock		P/U Whipstock		
23:45	9:15		Trip In		Pick up pipe		
0:00	0:00		Wireline Operations		Pick up / Run in hole with Gyro		

**Comments:**

MultiShot Daily Costs:\$13,750 \$3,750 Orientation \$10,000 Mob/Demob Drillers:Lewis, Shirley  
 Steering:Hirchert, Butschek

**Billing Costs and Times**

Costs reflect field estimates

Daily Costs: \$13,750.00

Cummulative Costs: \$13,750.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert, Butschek

# Daily Drilling Report

Date: 22-Aug-05

# Multi-Shot Directional

Report No:

2

Job Number:	520420175	State:	South Dakota			
Operator:	Continental Resources, Inc	County:	Harding			
Well:	WBRRU 32-23	Rig:	J&R #8			
Daily Totals	BHA No:	TOTALS	Today	Previous	Total	%
Start Depth:	8387 Ft	Motor S/N:	37D111			
End Depth:	Ft	Sliding ROP	Slide Footage:	0	0	0
Daily Footage:	-8387 Ft	Rotating ROP	Slide Hours:	0.00	0	0.00
Vertical Section:	Ft	Overall	Rotate Footage:	0	0	0
Slide Footage:	0 Ft		Rotate Hours:	0.00	0	0.00
Slide Hours:	0.00 Hrs		Circ. & Ream Hrs:	1.50	0	1.50
Slide ROP:	FPH		Cum. Motor Hrs:	1.50	0.00	1.50
Rotate Footage:	0 Ft	<b>Drilling Parameters</b>				
Rotate Hours:	0.00 Hrs	Mud Type:	Water	WOB:	K-LBS	R/T WT
Rotate ROP:	FPH	Mud Weight:	#/Gal	Rotary:	RPM	
Reaming Hours	0.00 Hrs	Viscosity:	"/Qt	Motor:	RPM	P/U WT
Circulate Hours	1.50 Hrs	Waterloss:	CC's	Torque:	FT/#	
Daily Motor Hours:	1.50 Hrs	Pump Stks:	SPM	SPP Off:	PSI	S/O WT
		Volume Mud:	GPM	SPP On:	PSI	
Gas	Units	BIT No:	1	Target Information		
Trip Gas:		Manufacturer/Type:	HUGHES	STX30	TVD	
Connection Gas:		Serial Number:	5061997		VS	
Background Gas:		Depth In:	8387		ANGLE	
Time	Hours	Ftg.	Activity Code	Drilling Depths	Operation Description	
				From	To	
0:00						
1:15	1:15		Wireline Operations			Run in hole with Gyro
1:30	0:15		Miscellaneous			Set whipstock @ 341.6°
2:30	1:00		Wireline Operations			Pull Gyro
5:30	3:00		Milling			Mill window
8:00	2:30		Trip Out			Trip out with starter mill
9:00	1:00		BHA Operations			Change out mills
12:00	3:00		Trip In			Trip in hole with window mill
18:30	6:30		Milling			Mill window
20:00	1:30		Circulate			Circulate
22:30	2:30		Trip Out			TOH
23:00	0:30		Miscellaneous			Lay down mills
23:30	0:30		Miscellaneous			Break swivel subs
0:00	0:00		BHA Operations			P/U, & Test MMTR & Monels
<b>Comments:</b>						
MultiShot Daily Costs:\$7,500 Drillers:Lewis,Shirley Steering:Hirchert,Butschek						
<b>Billing Costs and Times</b>						
Costs reflect field estimates				Daily Costs:	\$7,500.00	
				Cummulative Costs:	\$21,250.00	

Drillers: Harper,Lewis,Shirley  
Guidance Co.: MultiShot Steering Tool

Customer Representative:  
Guidance Supervisor:

Sonny Honrud  
Hirchert,Butschek

# Daily Drilling Report

Date: 23-Aug-05

# Multi-Shot Directional

Report No:

3

Job Number: 520420175  
 Operator: Continental Resources, Inc.  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	1	TOTALS	Today	Previous	Total	%			
Start Depth:	8387 Ft	Sliding ROP		Motor S/N:	37D111						
End Depth:	8387 Ft	Rotating ROP		Slide Footage:	0	0	0				
Daily Footage:	0 Ft	Overall		Slide Hours:	0.00	0	0.00				
Vertical Section:	Ft			Rotate Footage:	0	0	0				
Slide Footage:	0 Ft			Rotate Hours:	0.00	0	0.00				
Slide Hours:	0.00 Hrs			Circ. & Ream Hrs:	0.00	0	0.00	Footage			
Slide ROP:	FPH			Cum. Motor Hrs:	0.00	0.00	0.00	0			
Rotate Footage:	0 Ft	Drilling Parameters									
Rotate Hours:	0.00 Hrs	Mud Type:	Water	WOB:	K-LBS	R/T WT					
Rotate ROP:	FPH	Mud Weight:	8.4 #/Gal	Rotary:	RPM						
Reaming Hours	0.00 Hrs	Viscosity:	"/Qt	Motor:	RPM	P/U WT					
Circulate Hours	0.00 Hrs	Waterloss:	CC's	Torque:	FT/#						
Daily Motor Hours:	0.00 Hrs	Pump Stks:	87 SPM	SPP Off:	PSI	S/O WT					
		Volume Mud:	140 GPM	SPP On:	PSI						
Gas	Units	BIT No: 1				Target Information					
Trip Gas:		Manufacturer/Type: HUGHES				STX30	TVD				
Connection Gas:		Serial Number: 5061997					VS				
Background Gas:		Depth In: 8387					ANGLE				
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description					
24:00		0		From	To						
0:00											
4:00	4:00		Trip In			TIH					
5:00	1:00		Miscellaneous			Attempt to wash through window					
8:00	3:00		Trip Out			TOH with BHA #1					
8:30	0:30		BHA Operations			Lay down BHA #1					
9:30	1:00		Miscellaneous			Rig service					
10:00	0:30		BHA Operations			Pick up mills					
13:15	3:15		Trip In			Trip in hole with mills					
16:30	3:15		Milling			Mill window					
19:15	2:45		Trip Out			TOH with mills					
20:30	1:15		Miscellaneous			Wait on basket					
20:45	0:15		BHA Operations			Pick up basket					
0:00	3:15		Trip In			Trip in hole with basket					
<b>Comments:</b>											
MultiShot Daily Costs:\$7,500 Drillers:Lewis,Shirley Steering:Hirchert,Butschek											
<b>Billing Costs and Times</b>											
Costs reflect field estimates				Daily Costs: \$7,500.00							
				Cummulative Costs: \$28,750.00							

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Date: 24-Aug-05

# Multi-Shot Directional

Report No:

4

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	1	TOTALS	Today	Previous	Total	%		
Start Depth:	8388 Ft			Motor S/N:	37D111					
End Depth:	8394 Ft	<b>Sliding ROP</b>	3.8	Slide Footage:	51	0	51	100%		
Daily Footage:	6 Ft	<b>Rotating ROP</b>		Slide Hours:	13.50	0	13.50			
Vertical Section:	Ft			Rotate Footage:	0	0	0			
Slide Footage:	51 Ft	<b>Overall</b>		Rotate Hours:	0.00	0	0.00			
Slide Hours:	13.50 Hrs		3.8	Circ. & Ream Hrs:	0.00	0	0.00	Footage		
Slide ROP:	3.8 FPH			Cum. Motor Hrs:	13.50	0.00	13.50	51		
Rotate Footage:	0 Ft	<b>Drilling Parameters</b>								
Rotate Hours:	0.00 Hrs	Mud Type:	water	WOB:	K-LBS	R/T WT				
Rotate ROP:	FPH	Mud Weight:	8.5 #/Gal	Rotary:	RPM					
Reaming Hours	0.00 Hrs	Viscosity:	28 "/Qt	Motor:	RPM	P/U WT				
Circulate Hours	0.00 Hrs	Waterloss:	NC CC's	Torque:	FT/#					
Daily Motor Hours:	13.50 Hrs	Pump Stks:	90 SPM	SPP Off:	PSI	S/O WT				
		Volume Mud:	145 GPM	SPP On:	PSI					
Gas	Units	BIT No:	1	<b>Target Information</b>						
Trip Gas:		Manufacturer/Type:	HUGHES	STX30	TVD					
Connection Gas:		Serial Number:	5061997		VS					
Background Gas:		Depth In:	8387		ANGLE					
Time	Hours	Ftg.	Activity Code	<b>Drilling Depths</b>			<b>Operation Description</b>			
24:00	51			From	To					
0:00										
1:00	1:00		Fishing				Fish with basket			
4:00	3:00		Trip Out				TOH			
4:15	0:15		BHA Operations				Lay down basket			
4:45	0:30		BHA Operations				P/U & Test MMTR & Monels			
7:45	3:00		Trip In				TIH			
8:45	1:00		Miscellaneous				Swivel up / Pick up Gyro			
9:45	1:00		Wireline Operations				Run in hole with Gyro			
10:00	0:15		Miscellaneous				Orient / Pull gyro up 1000'			
11:15	1:15	2	Slide Drilling	8388	to	8390	Time drill/2.5 min/inch/ 275 GTF/ 65 strokes			
11:30	0:15	2	Slide Drilling	8390	to	8392	Time drill/1 min/inch/ 275 GTF/ 65 strokes			
11:45	0:15	2	Slide Drilling	8392	to	8394	Control drill/ 275 GTF/ 65 strokes			
16:45	5:00	39	Slide Drilling	8394	to	8433	Slide 275GTF/ 65 strokes/ 8K WOB			
17:15	0:30		Miscellaneous				Orient / 49 GTF			
23:00	5:45	5	Slide Drilling	8388	to	8393	Time drill/5 min/inch/ 49 GTF/ 65 strokes			
0:00	1:00	1	Slide Drilling	8393	to	8394	Time drill/2.5 min/inch/ 49 GTF/ 65 strokes			
<b>Comments:</b>										
MultiShot Daily Costs:\$7,500 Drillers:Lewis,Shirley Steering:Hirchert,Butschek										
<b>Billing Costs and Times</b>										
Costs reflect field estimates				Daily Costs:	\$7,500.00					
				Cummulative Costs:	\$36,250.00					

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Date: 25-Aug-05

# Multi-Shot Directional

Report No:

5

**Job Number:** 520420175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R #8

Daily Totals		BHA No:	1	TOTALS	Today	Previous	Total	%
Start Depth:	8394 Ft			Motor S/N:	37D111			
End Depth:	8447 Ft	<b>Sliding ROP</b>	5.8	Slide Footage:	142	51	193	100%
Daily Footage:	53 Ft	<b>Rotating ROP</b>		Slide Hours:	19.75	13.5	33.25	
Vertical Section:	Ft			Rotate Footage:	0	0	0	
Slide Footage:	142 Ft		<b>Overall</b>	Rotate Hours:	0.00	0	0.00	
Slide Hours:	19.75 Hrs			Circ. & Ream Hrs:	0.00	0	0.00	Footage
Slide ROP:	7.2 FPH			Cum. Motor Hrs:	19.75	13.50	33.25	193
<b>Drilling Parameters</b>								
Rotate Footage:	0 Ft	Mud Type:	Water	WOB:	K-LBS	R/T WT		
Rotate Hours:	0.00 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	RPM			
Rotate ROP:	FPH	Viscosity:	28 "/Qt	Motor:	RPM	P/U WT		
Reaming Hours	0.00 Hrs	Waterloss:	N/C CC's	Torque:	FT/#			
Circulate Hours	0.00 Hrs	Pump Stks:	93 SPM	SPP Off:	PSI	S/O WT		
Daily Motor Hours:	19.75 Hrs	Volume Mud:	150 GPM	SPP On:	PSI			
Gas	Units	BIT No:			Target Information			
Trip Gas:		Manufacturer/Type: HUGHES			STX30	TVD		
Connection Gas:		Serial Number: 5061997				VS		
Background Gas:		Depth In: 8387				ANGLE		
Time	Hours	Ftg.	Activity Code	Drilling Depths	Operation Description			
24:00	142			From To				
0:00								
2:15	2:15	4	Slide Drilling	8394 8398	Time drill/2.5 min/inch/ 49 GTF/ 65 strokes			
3:00	0:45	2	Slide Drilling	8398 8400	Time drill/1 min/inch/ 49 GTF/ 65 strokes			
8:30	5:30	29	Slide Drilling	8400 8429	Slide 49GTF/ 65 strokes/ 8K WOB			
9:30	1:00		Wireline Operations		Pull Gyro			
9:45	0:15		Trip Out		Swivel down/LD pups & jts #272 & 273			
10:00	0:15		Trip Out		TOH 2 stands to rocket			
10:45	0:45		Wireline Operations		Run in hole with steering tool			
11:00	0:15		Trip In		TIH 2 stands / Pick up jts #272 & #273			
11:30	0:30		Trip In		Swivel up / pick up jt #274			
11:45	0:15		Miscellaneous		Orient / line up surveys			
17:30	5:45	55	Slide Drilling	8429 8484	Slide 0HS TF/70 strokes/9K WOB/NE lateral			
20:45	3:15	38	Slide Drilling	8484 8522	Slide 0HS TF/80 strokes/9K WOB/NE lateral			
21:45	1:00		Miscellaneous		L/D 3, JTS. Orient into SW lateral, 75 TF			
0:00	2:15	14	Slide Drilling	8433 8447	Slide 0HS TF/70 strokes/9K WOB/SW lateral			

## Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Lewis,Shirley Steering:Hirchert,Butschek

## Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cummulative Costs:	\$44,350.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

# Multi-Shot Directional

Report No:

6

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	1	TOTALS	Today	Previous	Total	%
Start Depth:	8447 Ft			Motor S/N:	37D111			
End Depth:	8575 Ft	<b>Sliding ROP</b>	6.7	Slide Footage:	102	193	295	92%
Daily Footage:	128 Ft	<b>Rotating ROP</b>	20.8	Slide Hours:	10.75	33.25	44.00	
Vertical Section:	Ft			Rotate Footage:	26	0	26	8%
Slide Footage:	102 Ft	<b>Overall</b>		Rotate Hours:	1.25	0	1.25	
Slide Hours:	10.75 Hrs			Circ. & Ream Hrs:	1.25	0	1.25	Footage
Slide ROP:	9.5 FPH			Cum. Motor Hrs:	13.25	33.25	46.50	321
Drilling Parameters								
Rotate Footage:	26 Ft	Mud Type:	Water	WOB:	K-LBS	R/T WT		
Rotate Hours:	1.25 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	RPM			
Rotate ROP:	20.8 FPH	Viscosity:	28 "/Qt	Motor:	RPM	P/U WT		
Reaming Hours	0.00 Hrs	Waterloss:	N/C CC's	Torque:	FT/#			
Circulate Hours	1.25 Hrs	Pump Stks:	93 SPM	SPP Off:	PSI	S/O WT		
Daily Motor Hours:	13.25 Hrs	Volume Mud:	150 GPM	SPP On:	PSI			
Gas	Units	BIT No:			Target Information			
Trip Gas:		Manufacturer/Type: HUGHES			STX30	TVD		8479
Connection Gas:		Serial Number: 5061997				VS		0
Background Gas:		Depth In: 8387				ANGLE		
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description		
24:00	128			From	To			
0:00								
8:30	8:30	77	Slide Drilling	8447	8524	Slide 0HS TF/70 strokes/9K WOB/SW lateral		
9:45	1:15		Circulate			Circulate hole		
10:00	0:15		Trip Out			Swivel down/LD WC/LD jts#277,276,275,274		
10:15	0:15		Wireline Operations			Pull steering tool		
13:30	3:15		Trip Out			TOH with BHA #1 & 2		
14:00	0:30		Miscellaneous			Rig service		
15:00	1:00		BHA Operations			L/D & test BHA #1/2 / P/U & test BHA #3/4		
18:30	3:30		Trip In			TIH with BHA #3/4		
19:30	1:00		Wireline Operations			Run hang off line		
20:30	1:00		Trip In			Trip in, swivel up, Orient		
22:45	2:15	25	Slide Drilling	8524	8549	Slide 0HS TF/80 strokes/10K WOB/SW lateral		
0:00	1:15	26	Rotary Drilling	8549	8575	Rotate 10k WOB, 20 RPM		

## Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Lewis,Shirley Steering:Hirchert,Butschek

## Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cummulative Costs:	\$52,450.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Date: 27-Aug-05

# Multi-Shot Directional

Report No:

7

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	3	TOTALS	Today	Previous	Total	%		
Start Depth:	8575 Ft			Motor S/N:	37D184H					
End Depth:	8773 Ft	<b>Sliding ROP</b>	15.5	Slide Footage:	91	25	116	47%		
Daily Footage:	198 Ft	<b>Rotating ROP</b>	25.3	Slide Hours:	5.25	2.25	7.50			
Vertical Section:	Ft			Rotate Footage:	107	26	133	53%		
Slide Footage:	91 Ft	<b>Overall</b>	19.5	Rotate Hours:	4.00	1.25	5.25			
Slide Hours:	5.25 Hrs			Circ. & Ream Hrs:	0.00	0	0.00	Footage		
Slide ROP:	17.3 FPH			Cum. Motor Hrs:	9.25	3.50	12.75	249		
Drilling Parameters										
Rotate Footage:	107 Ft	Mud Type:	Water	WOB:	K-LBS	R/T WT				
Rotate Hours:	4.00 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	RPM					
Rotate ROP:	26.8 FPH	Viscosity:	28 "/Qt	Motor:	RPM	P/U WT				
Reaming Hours	0.00 Hrs	Waterloss:	N/C CC's	Torque:	FT/#					
Circulate Hours	0.00 Hrs	Pump Stks:	93 SPM	SPP Off:	PSI	S/O WT				
Daily Motor Hours:	9.25 Hrs	Volume Mud:	150 GPM	SPP On:	PSI					
Gas	Units	BIT No:			Target Information					
Trip Gas:		Manufacturer/Type: HUGHES			STX30	TVD				
Connection Gas:		Serial Number: 5061997				VS				
Background Gas:		Depth In: 8387				ANGLE				
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description				
24:00	198			From	To					
0:00										
0:15	0:15	7	Rotary Drilling	8575	to	8582	Rotate 10K WOB 130 GPM 20 RPM			
2:15	2:00	25	Slide Drilling	8582	to	8607	Slide 10K WOB 130 GPM 180 TF			
3:30	1:15	25	Rotary Drilling	8607	to	8632	Rotate 10K WOB 130 GPM 20 RPM			
4:15	0:45	10	Slide Drilling	8632	to	8642	Slide 10K WOB 130 GPM 180 TF			
5:00	0:45	26	Rotary Drilling	8642	to	8668	Rotate 10K WOB 130 GPM 20 RPM			
6:30	1:30	30	Slide Drilling	8668	to	8698	Slide 10K WOB 130 GPM 180 TF			
6:45	0:15	16	Rotary Drilling	8698	to	8714	Rotate 10K WOB 130 GPM 20 RPM			
7:45	1:00	26	Slide Drilling	8714	to	8740	Slide 10K WOB 130 GPM 180 TF			
9:15	1:30	33	Rotary Drilling	8740	to	8773	Rotate 10K WOB 130 GPM 20 RPM			
10:15	1:00		Survey & Connection				Survey and connection time			
11:00	0:45		Trip Out				S/D / L/D jts # 285,284,283,282			
11:15	0:15		Trip Out				TOH to rocket			
12:15	1:00		Wireline Operations				Pull steering tool / inspect and roll test			
14:30	2:15		Trip Out				TOH			
15:00	0:30		BHA Operations				L/D / inspect BHA #3			
21:30	6:30		Fishing				Wait on fishing tools			
0:00	2:30		Trip In				TIH with fishing tools			
<b>Comments:</b>										
MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Lewis,Shirley Steering:Hirchert,Butschek										
<b>Billing Costs and Times</b>										
Costs reflect field estimates				Daily Costs:		\$8,100.00				
				Cumulative Costs:		\$60,550.00				

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Date: 28-Aug-05

# Multi-Shot Directional

Report No:

8

**Job Number:** 520420175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R #8

Daily Totals		BHA No:	4	TOTALS	Today	Previous	Total	%
Start Depth:	8388 Ft			Motor S/N:	37D176H			
End Depth:	8396 Ft	<b>Sliding ROP</b>	1.0	Slide Footage:	8	0	8	100%
Daily Footage:	8 Ft	<b>Rotating ROP</b>		Slide Hours:	8.00	0	8.00	
Vertical Section:	Ft			Rotate Footage:	0	0	0	
Slide Footage:	8 Ft		<b>Overall</b>	Rotate Hours:	0.00	0	0.00	
Slide Hours:	8.00 Hrs			Circ. & Ream Hrs:	0.00	0	0.00	Footage
Slide ROP:	1.0 FPH			Cum. Motor Hrs:	8.00	0.00	8.00	8
Drilling Parameters								
Rotate Footage:	0 Ft	Mud Type:	Water	WOB:	K-LBS	R/T WT		
Rotate Hours:	0.00 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	RPM			
Rotate ROP:	FPH	Viscosity:	28 "/Qt	Motor:	RPM	P/U WT		
Reaming Hours	0.00 Hrs	Waterloss:	N/C CC's	Torque:	FT/#			
Circulate Hours	0.00 Hrs	Pump Stks:	93 SPM	SPP Off:	PSI	S/O WT		
Daily Motor Hours:	8.00 Hrs	Volume Mud:	150 GPM	SPP On:	PSI			
Gas	Units	BIT No:			Target Information			
Trip Gas:		Manufacturer/Type: Smith			XR30PS	TVD		
Connection Gas:		Serial Number: PB9798				VS		
Background Gas:		Depth In: 8388				ANGLE		
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description		
	24:00	8		From	To			
0:00								
0:45	0:45		Trip In					
1:30	0:45		Fishing					
2:30	1:00		Wireline Operations					
3:30	1:00		Wireline Operations					
6:30	3:00		Trip Out					
7:00	0:30		BHA Operations					
7:45	0:45		BHA Operations					
11:15	3:30		Trip In					
11:30	0:15		Miscellaneous					
12:30	1:00		Wireline Operations					
13:15	0:45		Miscellaneous					
19:00	5:45	5	Slide Drilling	8388	to	8393		
21:15	2:15	3	Slide Drilling	8393	to	8396		
22:00	0:45		Miscellaneous					
22:45	0:45		Wireline Operations					
23:15	0:30		Miscellaneous					
0:00	0:45		Trip Out					
<b>Comments:</b>								
MultiShot Daily Costs:\$7,500      Drillers:Lewis,Shirley      Steering:Hirchert,Butschek								
<b>Billing Costs and Times</b>								
Costs reflect field estimates				Daily Costs:		\$7,500.00		
				Cummulative Costs:		\$68,050.00		

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Multi-Shot Directional

Date: 29-Aug-05

Report No:

9

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	5	TOTALS	Today	Previous	Total	%
Start Depth:	8396 Ft	Sliding ROP		Motor S/N:	37D109			
End Depth:	8488 Ft		2.1	Slide Footage:	37	8	45	100%
Daily Footage:	92 Ft	Rotating ROP		Slide Hours:	13.50	8	21.50	
Vertical Section:	65 Ft			Rotate Footage:	0	0	0	
Slide Footage:	37 Ft	Overall		Rotate Hours:	0.00	0	0.00	
Slide Hours:	13.50 Hrs		2.1	Circ. & Ream Hrs:	0.00	0	0.00	Footage
Slide ROP:	2.7 FPH			Cum. Motor Hrs:	13.50	8.00	21.50	45
Rotate Footage:	0 Ft	Drilling Parameters						
Rotate Hours:	0.00 Hrs	Mud Type:		Water	WOB:	10 K-LBS	R/T WT	
Rotate ROP:	FPH	Mud Weight:		8.5 #/Gal	Rotary:	RPM		
Reaming Hours	0.00 Hrs	Viscosity:		28 "/Qt	Motor:	240 RPM	P/U WT	
Circulate Hours	0.00 Hrs	Waterloss:		N/C CC's	Torque:	FT/#		
Daily Motor Hours:	13.50 Hrs	Pump Stks:		93 SPM	SPP Off:	1000 PSI	S/O WT	
		Volume Mud:		150 GPM	SPP On:	900 PSI		
Gas	Units	BIT No:				Target Information		
Trip Gas:		Manufacturer/Type: Smith				TVD		8479
Connection Gas:		Serial Number: PB9798				VS		50
Background Gas:		Depth In: 8388				ANGLE		90.5
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description		
24:00	37			From	To			
0:00								
1:30	1:30		Trip Out			TOH		
2:30	1:00		BHA Operations			L/D BHA#4, P/U & test BHA#5		
6:00	3:30		Trip In			TIH		
7:30	1:30		Wireline Operations			Swivel up, run gyro		
7:45	0:15		Miscellaneous			Orient into Sidetrack #2		
8:30	0:45	2	Slide Drilling	8396	to	8398	T/D 210GTF, 65 STKS, 2.5 min. inch	
10:00	1:30	5	Slide Drilling	8398	to	8403	T/D 220GTF, 65 STKS, 1 min./inch	
10:15	0:15	2	Slide Drilling	8403	to	8405	C/D 230 GTF, 65 STKS 4K-8K WOB	
11:00	0:45	5	Slide Drilling	8405	to	8410	Slide 240 GTF, 65 STKS, 8K WOB	
12:15	1:15	7	Slide Drilling	8410	to	8417	Slide 260 GTF, 65 STKS, 8K WOB	
15:15	3:00	16	Slide Drilling	8417	to	8433	Slide 270 GTF, 65 STKS, 8K WOB	
16:00	0:45		Wireline Operations			Pull gyro		
16:15	0:15		Trip Out			Swivel down,L/D #274,pull 3 stds		
17:15	1:00		Wireline Operations			Run & seat steering tool		
18:00	0:45		Trip In			TIH 3 STDS, P/U jts #274, swivel up		
0:00	6:00		Slide Drilling			Slide 0HS, 75 STKS, 10K WOB		

## Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Lewis,Shirley Steering:Hirchert,Butschek

### Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cummulative Costs:	\$76,150.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

## Daily Drilling Report

Date: 30-Aug-05

## Multi-Shot Directional

Report No: 10

Job Number:	520420175		State:	South Dakota
Operator:	Continental Resources, Inc		County:	Harding
Well:	WBRRU 32-23		Rig:	J&R #8

Daily Totals		BHA No:	6	TOTALS	Today	Previous	Total	%
Start Depth:	8488 Ft	<b>Sliding ROP</b>		Motor S/N:	37D176H			
End Depth:	9277 Ft	8.2		Slide Footage:	183	45	228	27%
Daily Footage:	789 Ft	<b>Rotating ROP</b>		Slide Hours:	6.25	21.5	27.75	
Vertical Section:	849 Ft	105.4		Rotate Footage:	606	0	606	73%
Slide Footage:	183 Ft	<b>Overall</b>		Rotate Hours:	5.75	0	5.75	
Slide Hours:	6.25 Hrs			Circ. & Ream Hrs:	0.00	0	0.00	Footage
Slide ROP:	29.3 FPH			Cum. Motor Hrs:	12.00	21.50	33.50	834
Drilling Parameters								
Rotate Footage:	606 Ft	Mud Type:	Water	WOB:	10 K-LBS			R/T WT
Rotate Hours:	5.75 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	20 RPM			
Rotate ROP:	105.4 FPH	Viscosity:	28 "/Qt	Motor:	240 RPM			P/U WT
Reaming Hours	0.00 Hrs	Waterloss:	N/C CC's	Torque:	FT/#			
Circulate Hours	0.00 Hrs	Pump Stks:	93 SPM	SPP Off:	1000 PSI			S/O WT
Daily Motor Hours:	12.00 Hrs	Volume Mud:	150 GPM	SPP On:	900 PSI			
Gas	Units	BIT No:			Target Information			
Trip Gas:		Manufacturer/Type: Smith			XRD30PS	TVD		8479
Connection Gas:		Serial Number: PB9798				VS		50
Background Gas:		Depth In: 8388				ANGLE		90.5
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description		
	24:00	789		From	To			
0:00								
2:45	2:45	66	Slide Drilling	8488	to	8554	Slide 0HS, 72 STKS, 10K WOB	
3:00	0:15		Trip Out				Swivel down/L/D jt #278/L/D wet connect	
3:15	0:15		Trip Out				TOH 5 stands to rocket	
4:00	0:45		Wireline Operations				Pull steering tool	
6:00	2:00		Trip Out				TOH with BHA #5	
6:15	0:15		BHA Operations				Test & L/D BHA #5	
7:15	1:00		Miscellaneous				Slip & cut 23' drill line	
7:30	0:15		BHA Operations				P/U & test BHA #6	
10:15	2:45		Trip In				TIH,fill every 40 stds	
11:00	0:45		Wireline Operations				Run & seat steering tool	
12:15	1:15		Trip In				TIH,Swivel up on #278,tie in surveys	
13:15	1:00	21	Slide Drilling	8554	to	8575	Slide @ 30TF, 120 GPM, 10K WOB	
14:15	1:00	35	Rotary Drilling	8575	to	8610	Rotate,20 RPM,7 K WOB,120 GPM	
14:45	0:30	9	Slide Drilling	8610	to	8619	Slide @ 30TF, 145 GPM, 10K WOB	
16:15	1:30	62	Rotary Drilling	8619	to	8681	Rotate,20 RPM,7 K WOB,145 GPM	
16:30	0:15	15	Slide Drilling	8681	to	8696	Slide @ 45TF, 145 GPM, 10K WOB	
17:15	0:45	49	Rotary Drilling	8696	to	8745	Rotate,20 RPM,7 K WOB,145 GPM	
18:00	0:45	18	Slide Drilling	8745	to	8763	Slide @ 150TF, 145 GPM, 10K WOB	
18:30	0:30	39	Rotary Drilling	8763	to	8802	Rotate,20 RPM,7 K WOB,145 GPM	
18:45	0:15	10	Slide Drilling	8802	to	8812	Slide @ 150TF, 145 GPM, 10K WOB	
20:00	1:15	83	Rotary Drilling	8812	to	8895	Rotate,20 RPM,7 K WOB,145 GPM	
20:15	0:15	20	Slide Drilling	8895	to	8915	Slide @ 70TF, 145 GPM, 10K WOB	
20:30	0:15	39	Rotary Drilling	8915	to	8954	Rotate,20 RPM,7 K WOB,145 GPM	

### Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Harper,Lewis Steering:Hirchert,Butschek DD trainee-Stoner

### Billing Costs and Times

Costs reflect field estimates	Daily Costs:	\$8,100.00
	Cummulative Costs:	\$84,250.00

Drillers: Harper,Lewis,Shirley  
Guidance Co.: MultiShot Steering Tool

Customer Representative:  
Guidance Supervisor:

Sonny Honrud  
Hirchert,Butschek

**Daily Drilling Report**

Date: 30-Aug-05

**Multi-Shot Directional**

Report No: 10

Job Number: 520420175  
Operator: Continental Resources, Inc  
Well: WBRRU 32-23

State: South Dakota  
County: Harding  
Rig: J&R #8

Time	Hours	Ftg.	Activity Code	Drilling Depths			Operation Description
				From	To		
20:30							
20:45	0:15	12	Slide Drilling	8954	to	8966	Slide @ 90TF, 145 GPM, 10K WOB
21:00	0:15	230	Rotary Drilling	8966	to	9196	Rotate,20 RPM,7 K WOB,145 GPM
21:15	0:15	12	Slide Drilling	9196	to	9208	Slide @ 270TF, 145 GPM, 10K WOB
21:30	0:15	69	Rotary Drilling	9208	to	9277	Rotate,20 RPM,7 K WOB,145 GPM
0:00	2:30		Survey & Connection				Survey & connection time

# Daily Drilling Report

Date: 31-Aug-05

# Multi-Shot Directional

Report No: 11

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	6	TOTALS	Today	Previous	Total	%
Start Depth:	9277 Ft			Motor S/N:	37D176H			
End Depth:	10594 Ft			Sliding ROP	Slide Footage: 283	117	400	20%
Daily Footage:	1317 Ft			43.2	Slide Hours: 5.75	3.5	9.25	
Vertical Section:	2160 Ft			Rotating ROP	Rotate Footage: 1034	606	1640	80%
Slide Footage:	283 Ft			99.4	Rotate Hours: 10.75	5.75	16.50	
Slide Hours:	5.75 Hrs			Overall	Circ. & Ream Hrs: 0.00	0	0.00	Footage
Slide ROP:	49.2 FPH				Cum. Motor Hrs: 16.50	9.25	25.75	2040
Rotate Footage:	1034 Ft			Drilling Parameters				
Rotate Hours:	10.75 Hrs			Mud Type:	Water	WOB:	10 K-LBS	R/T WT
Rotate ROP:	96.2 FPH			Mud Weight:	8.5 #/Gal	Rotary:	20 RPM	78
Reaming Hours	0.00 Hrs			Viscosity:	28 "Qt	Motor:	240 RPM	P/U WT
Circulate Hours	0.00 Hrs			Waterloss:	N/C CC's	Torque:	2700 FT/#	88
Daily Motor Hours:	16.50 Hrs			Pump Stks:	93 SPM	SPP Off:	1000 PSI	S/O WT
				Volume Mud:	150 GPM	SPP On:	900 PSI	60
Gas	Units			BIT No:	2RR		Target Information	
Trip Gas:				Manufacturer/Type:	Smith	XR30PS	TVD	8479
Connection Gas:	2000			Serial Number:	PB9798		VS	50
Background Gas:	1000			Depth In:	8388		ANGLE	90.5
Time	Hours	Ftg.	Activity	Code	Drilling Depths		Operation Description	
24:00	1317				From	To		
0:00								
3:15	3:15	252	Rotary Drilling	9277	to	9529	Rotate, 20 RPM, 7 K WOB, 120 GPM	
3:30	0:15	15	Slide Drilling	9529	to	9544	Slide @ 315TF, 145 GPM, 10K WOB	
4:00	0:30	31	Rotary Drilling	9544	to	9575	Rotate, 20 RPM, 7 K WOB, 120 GPM	
4:45	0:45	25	Slide Drilling	9575	to	9600	Slide @ 270TF, 145 GPM, 10K WOB	
5:00	0:15	35	Rotary Drilling	9600	to	9635	Rotate, 20 RPM, 7 K WOB, 120 GPM	
5:15	0:15	20	Slide Drilling	9635	to	9655	Slide @ 300TF, 145 GPM, 10K WOB	
5:30	0:15	26	Rotary Drilling	9655	to	9681	Rotate, 20 RPM, 7 K WOB, 120 GPM	
6:30	1:00		Survey & Connection				Survey and connection time	
6:45	0:15	15	Slide Drilling	9681	to	9696	Slide @ 315TF, 145 GPM, 10K WOB	
7:00	0:15	16	Rotary Drilling	9696	to	9712	Rotate, 20 RPM, 7 K WOB, 120 GPM	
7:30	0:30	29	Slide Drilling	9712	to	9741	Slide @ 285TF, 145 GPM, 10K WOB	
8:15	0:45	32	Rotary Drilling	9741	to	9773	Rotate, 20 RPM, 7 K WOB, 120 GPM	
9:15	1:00	60	Slide Drilling	9773	to	9833	Slide @ 255TF, 145 GPM, 20K WOB	
10:30	1:15		Survey & Connection				Survey and connection time	
11:15	0:45	32	Rotary Drilling	9833	to	9865	Rotate, 20 RPM, 7 K WOB, 120 GPM	
11:30	0:15	12	Slide Drilling	9865	to	9877	Slide @ 345TF, 145 GPM, 20K WOB	
12:15	0:45	50	Rotary Drilling	9877	to	9927	Rotate, 20 RPM, 7 K WOB, 120 GPM	
13:00	0:45	30	Slide Drilling	9927	to	9957	Slide @ 270TF, 145 GPM, 20K WOB	
13:45	0:45	31	Rotary Drilling	9957	to	9988	Rotate, 20 RPM, 7 K WOB, 120 GPM	
14:00	0:15	12	Slide Drilling	9988	to	10000	Slide @ 345TF, 145 GPM, 20K WOB	
15:15	1:15	80	Rotary Drilling	10000	to	10080	Rotate, 20 RPM, 7 K WOB, 120 GPM	
16:00	0:45	29	Slide Drilling	10080	to	10109	Slide @ 345TF, 145 GPM, 20K WOB	
16:30	0:30	31	Rotary Drilling	10109	to	10140	Rotate, 20 RPM, 7 K WOB, 120 GPM	

MultiShot Daily Costs: \$7,500 Gamma: \$600 Drillers: Harper, Lewis, Shirley Steering: Sparks, Hirchert DD trainee: Stoner

## Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cumulative Costs:	\$92,350.00

Drillers: Harper, Lewis, Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert, Butschek

**Daily Drilling Report**

Date: 31-Aug-05

**Multi-Shot Directional**

Report No: 11

Job Number: 520420175  
Operator: Continental Resources, Inc  
Well: WBRRU 32-23

State: South Dakota  
County: Harding  
Rig: J&R #8

Time	Hours	Ftg.	Activity Code	Drilling Depths			Operation Description
				From		To	
16:30							
16:45	0:15	12	Slide Drilling	10140	to	10152	Slide @330ft, 145 gpm, 20k wob
17:00	0:15	120	Rotary Drilling	10152	to	10272	Rotate,20 RPM,7 K WOB,120 GPM
17:15	0:15	5	Slide Drilling	10272	to	10277	Slide @165TF 145 gpm, 20k wob
17:30	0:15	14	Rotary Drilling	10277	to	10291	Rotate,20 RPM,7 K WOB,120 GPM
17:45	0:15	9	Slide Drilling	10291	to	10300	Slide @165TF 145 gpm, 20k wob
18:00	0:15	73	Rotary Drilling	10300	to	10373	Rotate,20 RPM,7 K WOB,120 GPM
18:15	0:15	10	Slide Drilling	10373	to	10383	Slide @ 0HS TF 145 gpm, 20k wob
21:15	3:00		Survey & Connection				Survey and connection time
22:00	0:45	211	Rotary Drilling	10383	to	10594	Rotate,20 RPM,7 K WOB,120 GPM
0:00	2:00		Survey & Connection				Survey and connection time

# Daily Drilling Report

Date: 1-Sep-05

# Multi-Shot Directional

Report No: 12

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	6	TOTALS	Today	Previous	Total	%
Start Depth:	10594 Ft			Motor S/N:	37D176H			
End Depth:	10961 Ft	<b>Sliding ROP</b>	46.2	Slide Footage:	62	400	462	19%
Daily Footage:	367 Ft	<b>Rotating ROP</b>	100.5	Slide Hours:	0.75	9.25	10.00	
Vertical Section:	2525 Ft		<b>Overall</b>	Rotate Footage:	294	1640	1934	81%
Slide Footage:	62 Ft			Rotate Hours:	2.75	16.5	19.25	
Slide Hours:	0.75 Hrs			Circ. & Ream Hrs:	2.00	0	2.00	Footage
Slide ROP:	82.7 FPH			Cum. Motor Hrs:	5.50	25.75	31.25	2396
Rotate Footage:	294 Ft	<b>Drilling Parameters</b>						
Rotate Hours:	2.75 Hrs	Mud Type:	Water	WOB:	10 K-LBS	R/T WT		
Rotate ROP:	106.9 FPH	Mud Weight:	8.5 #/Gal	Rotary:	20 RPM			
Reaming Hours	0.00 Hrs	Viscosity:	28 "Qt	Motor:	240 RPM	P/U WT		
Circulate Hours	2.00 Hrs	Waterloss:	N/C CC's	Torque:	2700 FT/#			
Daily Motor Hours:	5.50 Hrs	Pump Stks:	93 SPM	SPP Off:	1000 PSI	S/O WT		
		Volume Mud:	150 GPM	SPP On:	900 PSI			
Gas	Units	BIT No:				<b>Target Information</b>		
Trip Gas:		Manufacturer/Type: Smith				XRD30PS	TVD	8479
Connection Gas:		Serial Number: PB9798					VS	50
Background Gas:		Depth In: 8388					ANGLE	90.5
Time	Hours	Ftg.	Activity	Code	Drilling Depths	Operation Description		
24:00	356				From To			
0:00								
0:15	0:15	4	Rotary Drilling	10605	to 10609	Rotate,20 RPM,7 K WOB,120 GPM		
0:15	0:00	7	Slide Drilling	10609	to 10616	Slide @ 90TF, 145 GPM, 10K WOB		
0:30	0:15	50	Rotary Drilling	10616	to 10666	Rotate,20 RPM,7 K WOB,120 GPM		
0:45	0:15	19	Slide Drilling	10666	to 10685	Slide @ 90TF, 145 GPM, 10K WOB		
2:30	1:45	214	Rotary Drilling	10685	to 10899	Rotate,20 RPM,7 K WOB,120 GPM		
4:30	2:00		Survey & Connection			Survey and connection time		
5:00	0:30	36	Slide Drilling	10899	to 10935	Slide @ 0HS TF, 145 GPM, 10K WOB		
5:30	0:30	26	Rotary Drilling	10935	to 10961	Rotate,20 RPM,7 K WOB,120 GPM		
7:30	2:00		Circulate			Circulate,pump sweep,work pipe		
9:00	1:30		Trip Out			Swivel down,L/D 84 jts		
13:15	4:15		Miscellaneous			Swivel up,attempt to wash into NE lateral		
13:30	0:15		Trip Out			Swivel down,pull 3 stds to rocket		
14:15	0:45		Wireline Operations			Pull steering tool		
16:30	2:15		Trip Out			TOH / 267 jts.		
17:00	0:30		BHA Operations			Test & L/D #6, P/U & Test #7		
21:15	4:15		Trip In			TIH / 267 jts,fill every 40 stds		
22:30	1:15		Wireline Operations			Run in hole with steering tool / re-head		
22:45	0:15		Trip In			TIH 3 stds from derrick. 273jts in hole.		
0:00	1:15		Miscellaneous			Swivel up jt. 274, attempt to enter NE lateral		

## Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Harper,Lewis Steering:Sparks, Hirchert DD trainee-Stoner

## Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cummulative Costs:	\$100,450.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Date: 2-Sep-05

# Multi-Shot Directional

Report No: 13

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	7	TOTALS	Today	Previous	Total	%
Start Depth:	8522 Ft			Motor S/N:	37D176H			
End Depth:	8522 Ft	<b>Sliding ROP</b>	46.2	Slide Footage:	0	462	462	19%
Daily Footage:	0 Ft	<b>Rotating ROP</b>	100.5	Slide Hours:	0.00	10	10.00	
Vertical Section:	Ft			Rotate Footage:	0	1934	1934	81%
Slide Footage:	0 Ft	<b>Overall</b>		Rotate Hours:	0.00	19.25	19.25	
Slide Hours:	0.00 Hrs			Circ. & Ream Hrs:	1.50	2	3.50	Footage
Slide ROP:	FPH			Cum. Motor Hrs:	1.50	31.25	32.75	2396
Rotate Footage:	0 Ft	<b>Drilling Parameters</b>						
Rotate Hours:	0.00 Hrs	Mud Type:	Water	WOB:	10 K-LBS	R/T WT		
Rotate ROP:	FPH	Mud Weight:	8.5 #/Gal	Rotary:	20 RPM			
Reaming Hours	0.00 Hrs	Viscosity:	28 "/Qt	Motor:	240 RPM	P/U WT		
Circulate Hours	1.50 Hrs	Waterloss:	N/C CC's	Torque:	2700 FT/#			
Daily Motor Hours:	1.50 Hrs	Pump Stks:	93 SPM	SPP Off:	1000 PSI	S/O WT		
		Volume Mud:	150 GPM	SPP On:	900 PSI			
Gas	Units	BIT No:			<b>Target Information</b>			
Trip Gas:	0	Manufacturer/Type: Smith			XRD30PS	TVD		8479
Connection Gas:		Serial Number: PB9798				VS		-2
Background Gas:		Depth In: 8522				ANGLE		89.5
Time	Hours	Ftg.	Activity Code	Drilling Depths	<b>Operation Description</b>			
24:00	0			From To				
0:00								
0:30	0:30		Miscellaneous		Attempt to enter into NE lateral.			
2:00	1:30		Miscellaneous		Wash to bottom of NE lateral.			
3:30	1:30		Circulate		Circulate.			
4:00	0:30		Miscellaneous		Swivel out jts 277-274.			
4:30	0:30		Trip Out		Swivel down, TOH 3 stds to rocket.			
5:15	0:45		Wireline Operations		Pull steering tool.			
7:15	2:00		Trip Out		TOH with BHA #7.			
7:30	0:15		BHA Operations		L/D / test BHA #7.			
8:15	0:45		Miscellaneous		Slip & cut drill line.			
8:30	0:15		BHA Operations		P/U & test BHA #8.			
12:00	3:30		Trip In		TIH/267 jts, fill every 40 stds.			
12:45	0:45		Wireline Operations		Run & seat steering tool.			
13:00	0:15		Trip In		TIH 3 stds.			
15:30	2:30		Miscellaneous		Swivel up #274; attempt to enter NE lateral.			
16:00	0:30		Trip Out		Swivel down, TOH 3 stds to rocket.			
16:30	0:30		Wireline Operations		Pull steering tool.			
19:00	2:30		Trip Out		TOH with BHA #8. 267 total jts.			
20:00	1:00		BHA Operations		Adjust 1.5 degree motor to 1.83 degree.			
23:45	3:45		Trip In		Trip in hole, fill every 40 stds.			
0:00	0:15		Wireline Operations		Run & seat steering tool.			

## Comments:

MultiShot Daily Costs:\$7,500 Drillers:Harper,Lewis Steering:Sparks, Hirchert DD trainee-Stoner

## Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$7,500.00
Cummulative Costs:	\$107,950.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

# Daily Drilling Report

Date: 3-Sep-05

# Multi-Shot Directional

Report No: 14

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	9	TOTALS	Today	Previous	Total	%						
Start Depth:		8522	Ft	<b>Sliding ROP</b>		Motor S/N: 37D176H								
End Depth:		8522	Ft	Slide Footage: 0		462	462	19%						
Daily Footage:		0 Ft		Slide Hours: 46.2		0.00	10	10.00						
Vertical Section:				<b>Rotating ROP</b>		Rotate Footage: 0	1934	1934						
Slide Footage:		0 Ft		Rotate Hours: 100.5		0.00	19.25	81%						
Slide Hours:		0.00 Hrs		<b>Overall</b>		Circ. & Ream Hrs: 0.00	3.5	3.50						
Slide ROP:			FPH	Cum. Motor Hrs: 81.9		0.00	32.75	Footage 32.75						
<b>Drilling Parameters</b>														
Rotate Footage:		0 Ft		Mud Type:	Water	WOB: 10	K-LBS	R/T WT						
Rotate Hours:		0.00 Hrs		Mud Weight:	8.5 #/Gal	Rotary: 20	RPM							
Rotate ROP:			FPH	Viscosity:	28 "/Qt	Motor: 240	RPM	P/U WT						
Reaming Hours		0.00 Hrs		Waterloss:	N/C CC's	Torque: 2700	FT/#							
Circulate Hours		0.00 Hrs		Pump Stks:	93 SPM	SPP Off: 1000	PSI	S/O WT						
Daily Motor Hours:		0.00 Hrs		Volume Mud:	150 GPM	SPP On: 900	PSI							
Gas	Units	BIT No: 2RR			<b>Target Information</b>									
Trip Gas:		Manufacturer/Type: Smith			TVD		8479							
Connection Gas:		Serial Number: PB9798			VS		-2							
Background Gas:		Depth In: 8522			ANGLE		89.5							
Time	Hours	Ftg.	Activity Code	Drilling Depths	<b>Operation Description</b>									
	24:00	0		From To										
0:00														
0:15	0:15		Wireline Operations											
0:30	0:15		Trip In											
7:30	7:00		Miscellaneous											
7:45	0:15		Trip Out											
8:30	0:45		Wireline Operations											
10:30	2:00		Trip Out											
10:45	0:15		Miscellaneous											
14:00	3:15		Trip In											
15:30	1:30		Miscellaneous											
17:00	1:30		Miscellaneous											
17:15	0:15		Miscellaneous											
18:00	0:45		Miscellaneous											
19:30	1:30		Miscellaneous											
19:45	0:15		Miscellaneous											
22:00	2:15		Miscellaneous											
22:15	0:15		Miscellaneous											
0:00	1:45		Miscellaneous											
<b>Comments:</b>														
MultiShot Daily Costs:\$7,500 Drillers:Harper,Lewis Steering:Sparks, Hirschert DD trainee-Stoner														
<b>Billing Costs and Times</b>														
Costs reflect field estimates				<b>Daily Costs:</b> \$7,500.00										
				<b>Cummulative Costs:</b> \$115,450.00										

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirschert,Butschek

# Daily Drilling Report

Date: 4-Sep-05

# Multi-Shot Directional

Report No: 15

Job Number:	520420175	State:	South Dakota									
Operator:	Continental Resources, Inc	County:	Harding									
Well:	WBRRU 32-23	Rig:	J&R #8									
Daily Totals		BHA No:	9	TOTALS	Today	Previous	Total	%				
Start Depth:	8522 Ft			Motor S/N:	37D176H							
End Depth:	8522 Ft	Sliding ROP	46.2	Slide Footage:	0	462	462	19%				
Daily Footage:	0 Ft	Rotating ROP	100.5	Slide Hours:	0.00	10	10.00					
Vertical Section:	Ft	Overall	Circ. & Ream Hrs:	Rotate Footage:	0	1934	1934	81%				
Slide Footage:	0 Ft		1.50	Rotate Hours:	0.00	19.25	19.25					
Slide Hours:	0.00 Hrs			Circ. & Ream Hrs:	1.50	3.5	5.00	Footage				
Slide ROP:	FPH			Cum. Motor Hrs:	1.50	32.75	34.25	2396				
Rotate Footage:	0 Ft	Drilling Parameters										
Rotate Hours:	0.00 Hrs	Mud Type:	Water	WOB:	10	K-LBS	R/T WT					
Rotate ROP:	FPH	Mud Weight:	8.5 #/Gal	Rotary:	20	RPM						
Reaming Hours	0.00 Hrs	Viscosity:	28 "/Qt	Motor:	240	RPM	P/U WT					
Circulate Hours	1.50 Hrs	Waterloss:	N/C CC's	Torque:	2700	FT/#						
Daily Motor Hours:	1.50 Hrs	Pump Stks:	93 SPM	SPP Off:	1000	PSI	S/O WT					
		Volume Mud:	150 GPM	SPP On:	900	PSI						
Gas	Units	BIT No:	2RR	Target Information								
Trip Gas:		Manufacturer/Type:	Smith	XRD30PS	TVD	8479						
Connection Gas:		Serial Number:	PB9798		VS	-2						
Background Gas:		Depth In:	8522		ANGLE	89.5						
Time	Hours	Ftg.	Activity Code	Drilling Depths	Operation Description							
	24:00	0		From To								
0:00												
2:00	2:00		Miscellaneous		Wait on sand to arrive.							
2:15	0:15		Trip In		Run in see if tag sand.							
3:45	1:30		Miscellaneous		Spot 20 sacks of sand down pipe							
5:15	1:30		Trip Out		POOH 5 stds, let sand fall to bottom.							
5:30	0:15		Trip In		Run in see if tag sand.							
6:30	1:00		Miscellaneous		Spot 20 sacks of sand down pipe							
7:00	0:30		Miscellaneous		Pump 1080 strokes to displace drill pipe							
7:15	0:15		Trip Out		Pull 5 stds							
8:30	1:15		Miscellaneous		SIDP,pump down annulus to 500 psi							
8:45	0:15		Trip In		TIH 5 stds,tag sand @ 8363'							
11:15	2:30		Trip Out		L/D 4 jts,pull 135 stds							
11:45	0:30		BHA Operations		P/U & test BHA #9							
15:30	3:45		Trip In		TIH 135 stds,fill every 40 stds							
15:45	0:15		Miscellaneous		Swivel up jt. 272.							
16:00	0:15		Miscellaneous		Wash to 8377'							
16:15	0:15		Circulate		Circulate @ 8362'							
17:15	1:00		Wireline Operations		Make up 20' of pups, run & seat gyro							
21:15	4:00		Miscellaneous		Try to enter NE lateral.							
22:30	1:15		Circulate		Circulate sand out of hole.							
23:15	0:45		Wireline Operations		Run steering tool.							
0:00	0:45		Wireline Operations		Re-head.							
<b>Comments:</b>												
MultiShot Daily Costs:\$7,500 Drillers:Harper,Lewis Steering:Sparks, Hirchert DD trainee-Stoner												
<b>Billing Costs and Times</b>												
Costs reflect field estimates				Daily Costs:		\$7,500.00						
				Cumulative Costs:		\$122,950.00						

Drillers: Harper,Lewis,Shirley  
Guidance Co.: MultiShot Steering Tool

Customer Representative:  
Guidance Supervisor:

Sonny Honrud  
Hirchert,Butschek

# Daily Drilling Report

# Multi-Shot Directional

Date: 5-Sep-05 Report No: 16

Job Number: 520420175  
 Operator: Continental Resources, Inc.  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	9	TOTALS	Today	Previous	Total	%
Start Depth:	8522 Ft			Motor S/N:	37D176H			
End Depth:	9621 Ft	<b>Sliding ROP</b>		Slide Footage:	114	462	576	16%
Daily Footage:	1099 Ft	39.7		Slide Hours:	4.50	10	14.50	
Vertical Section:	1121 Ft	<b>Rotating ROP</b>		Rotate Footage:	985	1934	2919	84%
Slide Footage:	114 Ft	92.7		Rotate Hours:	12.25	19.25	31.50	
Slide Hours:	4.50 Hrs	<b>Overall</b>		Circ. & Ream Hrs:	0.00	5	5.00	Footage
Slide ROP:	25.3 FPH	76.0		Cum. Motor Hrs:	16.75	34.25	51.00	3495
<b>Drilling Parameters</b>								
Rotate Footage:	985 Ft	Mud Type:	Water	WOB:	10	K-LBS	R/T WT	
Rotate Hours:	12.25 Hrs	Mud Weight:	8.5 #/Gal	Rotary:	20	RPM	78,000	
Rotate ROP:	80.4 FPH	Viscosity:	28 "/Qt	Motor:	240	RPM	P/U WT	
Reaming Hours	0.00 Hrs	Waterloss:	N/C CC's	Torque:	2700	FT/#	86,000	
Circulate Hours	0.00 Hrs	Pump Stks:	93 SPM	SPP Off:	1000	PSI	S/O WT	
Daily Motor Hours:	16.75 Hrs	Volume Mud:	150 GPM	SPP On:	900	PSI	68,000	
Gas	Units	BIT No:			Target Information			
Trip Gas:	0	Manufacturer/Type:	Smith		XRD30PS	TVD	8479	
Connection Gas:	2000	Serial Number:	PB9798			VS	-2	
Background Gas:	1200	Depth In:	8522			ANGLE	89.5	
Time	Hours	Ftg.	Activity	Code	Drilling Depths	Operation Description		
24:00	1099				From	To		
0:00								
0:15	0:15		Wireline Operations					Run in & seat steering tool.
0:45	0:30		Wireline Operations					Re-head
1:00	0:15		Trip In					Wash down to 8501'.
1:15	0:15		Miscellaneous					Swivel up jt # 277 & tie in surveys.
3:15	2:00	21	Slide Drilling	8522	to	8543		Slide 10 K WOB, 130 GPM, 45 TF
7:00	3:45	110	Rotary Drilling	8543	to	8653		Rotate, 7K WOB, 135 GPM, 18 RPM
7:45	0:45		Survey & Connection					Surveys & Connections
8:00	0:15	10	Slide Drilling	8653	to	8663		Slide 10 K WOB, 145 GPM, 315 TF
9:30	1:30	80	Rotary Drilling	8663	to	8743		Rotate, 8K WOB, 145 GPM, 20 RPM
9:45	0:15	10	Slide Drilling	8743	to	8753		Slide 10 K WOB, 145 GPM, 105 TF
10:15	0:30	35	Rotary Drilling	8753	to	8788		Rotate, 8K WOB, 145 GPM, 20 RPM
10:30	0:15	15	Slide Drilling	8788	to	8803		Slide 10 K WOB, 145 GPM, 105 TF
12:00	1:30	63	Rotary Drilling	8803	to	8866		Rotate, 8K WOB, 145 GPM, 20 RPM
12:30	0:30	15	Slide Drilling	8866	to	8881		Slide 10 K WOB, 145 GPM, 105 TF
12:45	0:15	9	Rotary Drilling	8881	to	8890		Rotate, 8K WOB, 145 GPM, 20 RPM
13:00	0:15	6	Slide Drilling	8890	to	8896		Slide 12 K WOB, 145 GPM, 165 TF
14:00	1:00	60	Rotary Drilling	8896	to	8956		Rotate, 8K WOB, 145 GPM, 20 RPM
15:00	1:00		Survey & Connection					Surveys & Connections
15:15	0:15	15	Slide Drilling	8956	to	8971		Slide 12 K WOB, 145 GPM, 75 TF
15:45	0:30	75	Rotary Drilling	8971	to	9046		Rotate, 8K WOB, 145 GPM, 20 RPM
16:15	0:30		Survey & Connection					Surveys & Connections
16:30	0:15	10	Slide Drilling	9046	to	9056		Slide 12 K WOB, 145 GPM, 75 TF
17:30	1:00	80	Rotary Drilling	9056	to	9136		Rotate, 8K WOB, 145 GPM, 20 RPM

### Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Harper,Lewis Steering:Sparks, Hirchert DD trainee-Stoner

### Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cummulative Costs:	\$131,050.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

**Daily Drilling Report**

Date: 5-Sep-05

**Multi-Shot Directional**

Report No:

16

**Job Number:** 520420175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R #8

Time	Hours	Ftg.	Activity Code	Drilling Depths			Operation Description
				From	To		
17:30							
17:45	0:15	6	Slide Drilling	9136	to	9142	Slide 12 K WOB, 145 GPM, 75 TF
19:30	1:45	281	Rotary Drilling	9142	to	9423	Rotate, 8K WOB, 145 GPM, 20 RPM
21:15	1:45		Survey & Connection				Surveys & connections
21:30	0:15	6	Slide Drilling	9423	to	9429	Slide 12 K WOB, 145 GPM, 115 TF
23:30	2:00		Survey & Connection				Surveys & connections
0:00	0:30	192	Rotary Drilling	9429	to	9621	Rotate, 8K WOB, 145 GPM, 20 RPM

# Daily Drilling Report

Date: 6-Sep-05

# Multi-Shot Directional

Report No: 17

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	9	TOTALS	Today	Previous	Total	%
Start Depth:		9621 Ft	<b>Sliding ROP</b>		Motor S/N: 37D176H			
End Depth:		10348 Ft	39.9		Slide Footage: 33	576	609	14%
Daily Footage:		727 Ft	<b>Rotating ROP</b>		Slide Hours: 0.75	14.5	15.25	
Vertical Section:		1882 Ft	90.9		Rotate Footage: 694	2919	3613	86%
Slide Footage:		33 Ft	<b>Overall</b>		Rotate Hours: 8.25	31.5	39.75	
Slide Hours:		0.75 Hrs			Circ. & Ream Hrs: 5.75	5	10.75	Footage
Slide ROP:		44.0 FPH			Cum. Motor Hrs: 14.75	51.00	65.75	4222
<b>Drilling Parameters</b>								
Rotate Footage:		694 Ft	Mud Type:	Water	WOB: 10	K-LBS	R/T WT	
Rotate Hours:		8.25 Hrs	Mud Weight:	8.5 #/Gal	Rotary: 25	RPM	78,000	
Rotate ROP:		84.1 FPH	Viscosity:	28 "/Qt	Motor: 240	RPM	P/U WT	
Reaming Hours		0.00 Hrs	Waterloss:	N/C CC's	Torque: 2700	FT/#	86,000	
Circulate Hours		5.75 Hrs	Pump Stks:	93 SPM	SPP Off: 1750	PSI	S/O WT	
Daily Motor Hours:		14.75 Hrs	Volume Mud:	150 GPM	SPP On: 1900	PSI	68,000	
Gas	Units		BIT No:	2RR	<b>Target Information</b>			
Trip Gas:			Manufacturer/Type:	Smith	XRD30PS	TVD	8479	
Connection Gas:	1500		Serial Number:	PB9798		VS	-2	
Background Gas:	1000		Depth In:	8522		ANGLE	89.5	
Time	Hours	Ftg.	Activity Code	Drilling Depths		Operation Description		
	24:00	727		From	To			
0:00								
0:45	0:45	62	Rotary Drilling	9621	to	9683	Rotate, 8K WOB, 145 GPM, 20 RPM	
1:00	0:15	6	Slide Drilling	9683	to	9689	Slide 14 K WOB, 145 GPM, 240 TF	
1:45	0:45	55	Rotary Drilling	9689	to	9744	Rotate, 8K WOB, 145 GPM, 20 RPM	
2:00	0:15		Miscellaneous				Change out drilling head rubber.	
2:30	0:30	31	Rotary Drilling	9744	to	9775	Rotate, 8K WOB, 145 GPM, 20 RPM	
2:45	0:15		Circulate				Circulate air kick out of hole.	
3:00	0:15	31	Rotary Drilling	9775	to	9806	Rotate, 8K WOB, 145 GPM, 20 RPM	
4:00	1:00		Circulate				Circulate air kick out of hole.	
5:30	1:30	164	Rotary Drilling	9806	to	9970	Rotate, 8K WOB, 145 GPM, 20 RPM	
6:15	0:45		Survey & Connection				Surveys & Connections	
6:30	0:15	12	Slide Drilling	9970	to	9982	Slide 14 K WOB, 145 GPM, 90 TF	
7:00	0:30	39	Rotary Drilling	9982	to	10021	Rotate, 8K WOB, 145 GPM, 20 RPM	
7:45	0:45		Miscellaneous				Change out drilling head rubber.	
9:00	1:15	92	Rotary Drilling	10021	to	10113	Rotate, 8K WOB, 145 GPM, 20 RPM	
9:30	0:30		Survey & Connection				Surveys & Connections	
9:45	0:15	15	Slide Drilling	10113	to	10128	Slide 14 K WOB, 145 GPM, 285 TF	
12:30	2:45	220	Rotary Drilling	10128	to	10348	Rotate, 8K WOB, 145 GPM, 20 RPM	
13:30	1:00		Survey & Connection				Surveys & Connections	
15:00	1:30		Circulate				Circulate & work pipe	
16:00	1:00		Trip Out				Swivel down, L/D 64 jts to rocket	
17:30	1:30		Circulate				Swivel up, wash to 8594' in west lateral	
19:00	1:30		Circulate				Pump sweep, circulate & work pipe	
19:30	0:30		Trip Out				Lay down to rocket.	

### Comments:

MultiShot Daily Costs:\$7,500 Gamma: \$600 Drillers:Harper, Steering:Sparks, Hirchert DD trainee-Stoner

### Billing Costs and Times

Costs reflect field estimates

Daily Costs:	\$8,100.00
Cumulative Costs:	\$139,150.00

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

**Daily Drilling Report**

Date: 6-Sep-05

**Multi-Shot Directional**

Report No: 17

Job Number: 520420175  
Operator: Continental Resources, Inc  
Well: WBRRU 32-23

State: South Dakota  
County: Harding  
Rig: J&R #8

Time	Hours	Ftg.	Activity Code	Drilling Depths	Operation Description
				From	To
19:30					
20:15	0:45		Wireline Operations		Pull steering tool.
21:45	1:30		Well Control		Pump 200 bbls 10# brine.
22:00	0:15		Trip Out		Lay down 273 joints. Layed down 4 jts.
0:00	2:00		Well Control		Monitor well pressure.

# Daily Drilling Report

Date: 7-Sep-05

# Multi-Shot Directional

Report No: 18

Job Number: 520420175  
 Operator: Continental Resources, Inc  
 Well: WBRRU 32-23

State: South Dakota  
 County: Harding  
 Rig: J&R #8

Daily Totals		BHA No:	9	TOTALS	Today	Previous	Total	%						
Start Depth:		10348 Ft		Motor S/N:		37D176H								
End Depth:		10348 Ft		<b>Sliding ROP</b>		Slide Footage:	0	609						
Daily Footage:		0 Ft		39.9		Slide Hours:	0.00	15.25						
Vertical Section:		1882 Ft		<b>Rotating ROP</b>		Rotate Footage:	0	3613						
Slide Footage:		0 Ft		90.9		Rotate Hours:	0.00	39.75						
Slide Hours:		0.00 Hrs		<b>Overall</b>		Circ. & Ream Hrs:	0.00	10.75						
Slide ROP:		FPH		76.8		Cum. Motor Hrs:	0.00	65.75						
Rotate Footage:		0 Ft		<b>Drilling Parameters</b>										
Rotate Hours:		0.00 Hrs		Mud Type:	Water	WOB:	K-LBS	R/T WT						
Rotate ROP:		FPH		Mud Weight:	8.5 #/Gal	Rotary:	RPM							
Reaming Hours		0.00 Hrs		Viscosity:	28 "/Qt	Motor:	RPM	P/U WT						
Circulate Hours		0.00 Hrs		Waterloss:	N/C CC's	Torque:	FT/#							
Daily Motor Hours:		0.00 Hrs		Pump Stks:	93 SPM	SPP Off:	PSI	S/O WT						
				Volume Mud:	150 GPM	SPP On:	PSI							
Gas	Units	BIT No:			Target Information									
Trip Gas:		Manufacturer/Type:			Smith	XR30PS	TVD	8479						
Connection Gas:		Serial Number:			PB9798		VS	-2						
Background Gas:		Depth In:			8522		ANGLE	89.5						
Time	Hours	Ftg.	Activity	Code	Drilling Depths	Operation Description								
					From	To								
0:00														
4:45	4:45		Well Control		Pump brine & monitor well.									
6:30	1:45		Trip Out		Trip into derrick with BHA #9.									
7:00	0:30		BHA Operations		L/D BHA #9,equipment released									
<b>Comments:</b>														
MultiShot Daily Costs:\$7,500 Drillers:Harper, Steering:Sparks, Hirchert DD trainee-Stoner														
<b>Billing Costs and Times</b>														
Costs reflect field estimates				Daily Costs:		\$7,500.00								
				Cummulative Costs:		\$146,650.00								

Drillers: Harper,Lewis,Shirley  
 Guidance Co.: MultiShot Steering Tool

Customer Representative:  
 Guidance Supervisor:

Sonny Honrud  
 Hirchert,Butschek

BHA Report

Date: 24-Aug-05

## Multi-Shot Directional

**Report No:**

1

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,218.63

BHA #	1
Date/Time In:	8/24/05 4:45
Date/Time Out:	8/26/05 13:45
Depth In:	8,388
Depth Out:	8,524
Total Ftg:	136
Footage R/S:	136
Drlg. Hours R/S:	17.5
ROP R/S:	7.8
Avg. ROP/% Sld.:	7.8 100.0
Circ. Hours:	1.25
Drlg/Hole Hrs:	17.5 18.8
Incl/Azm In:	1.3 262
Incl/Azm Out:	64.4 285.2
Average BUR:	60 /100'

BIT #		1
Run No:		1
Manufacturer:		HUGHES
Type:		STX30
Size:		41/2
Serial Number:		5061997
Jets:		OPEN
TFA:		0.920
Pressure Drop:		18
Drilling Hours:		17.5
Depth In:		8,388
Depth Out:		8,502
Total Footage:		135
Average ROP:		7.7
Bit Grade:		

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	28
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	0/10
Average GPM:	140
PSI On:	850
PSI Off:	750

Motor #		1
Serial Number:	37D111	
Mtr O.D. Size:	3 3/4	
Manufacturer:	MSLC	
Prev Mtr Hrs:		
Std / XL / XXL:	STD	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Brg Stab Size:	Slick	
Slk Brg Hsg Sz:		
Ajustable Size:		
Bent Hsg Size:	2.5	
Pad Thickness:		
No. of Art:	1	
Bit to Bend Lgth:		
Top Sub O.D.:	3.75	
Average DLS:		

**Comments:** #37D111, 2.5 fixed, slick, single art, 5/6 lobe, 3.8 stage. 2.0 RPG, motor tested in at 130 psi and tested out at 130 psi. Motor had 3/16" of play in gap upon visual inspection on surface. Bit box had play and moved somewhat by hand. No other problems were identified.

BHA Report

Date: 24-Aug-05

## Multi-Shot Directional

**Report No:**

2

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,218.63

BHA #	2
Date/Time In:	8/24/05 4:45
Date/Time Out:	8/26/05 13:45
Depth In:	8,388
Depth Out:	8,522
Total Ftg:	134
Footage R/S:	134
Drlg. Hours R/S:	23.8
ROP R/S:	5.6
Avg. ROP/% Sld.:	5.6 100.0
Circ. Hours:	
Drlg/Hole Hrs:	23.8 23.8
Incl/Azm In:	1.3 261.92
Incl/Azm Out:	64.5 48.9
Average BUR:	60.8 /100'

BIT #		1
Run No:		1
Manufacturer:		HUGHES
Type:		STX30
Size:		41/2
Serial Number:		5061997
Jets:		OPEN
TFA:		0.920
Pressure Drop:		19
Drilling Hours:		
Depth In:		8,388
Depth Out:		8,522
Total Footage:		134
Average ROP:		
Bit Grade:		

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	29
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	10/20
Average GPM:	145
PSI On:	850
PSI Off:	750

Motor #		1
Serial Number:	37D111	
Mtr O.D. Size:	3 3/4	
Manufacturer:	MSLC	
Prev Mtr Hrs:		
Std / XL / XXL:	STD	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Brg Stab Size:	Slick	
Slk Brg Hsg Sz:		
Ajustable Size:		
Bent Hsg Size:	2.5	
Pad Thickness:		
No. of Art:	1	
Bit to Bend Lgth:		
Top Sub O.D.:	3.75	
Average DLS:		

**Comments:** #37D111, 2.5 fixed, slick, single art, 5/6 lobe, 3.8 stage. 2.0 RPG, motor tested in at 130 psi and tested out at 130 psi. Motor had 3/16" of play in gap upon visual inspection on surface. Bit box had play and moved somewhat by hand. No other problems were identified.

BHA Report

Date: 26-Aug-05

## Multi-Shot Directional

**Report No:**

3

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,224.62

BHA #	3
Date/Time In:	8/26/05 13:45
Date/Time Out:	8/27/05 15:00
Depth In:	8,524
Depth Out:	8,773
Total Ftg:	249
Footage R/S:	133 116
Drlg. Hours R/S:	5.3 7.5
ROP R/S:	25.3 15.5
Avg. ROP/% Sld.:	19.5 46.6
Circ. Hours:	
Drlg/Hole Hrs:	12.8 12.8
Incl/Azm In:	64.4 285
Incl/Azm Out:	94.3 264.2
Average BUR:	16 /100'

BIT #	1 RR
Run No:	2
Manufacturer:	HUGHES
Type:	STX30
Size:	41/2
Serial Number:	5061997
Jets:	OPEN
TFA:	0.920
Pressure Drop:	19
Drilling Hours:	12.8
Depth In:	8,524
Depth Out:	8,773
Total Footage:	249
Average ROP:	19.5
Bit Grade:	

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	29
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	10/20
Average GPM:	145
PSI On:	850
PSI Off:	750

<b>Motor #</b>	
Serial Number:	37D184H
Mtr O.D. Size:	3 3/4
Manufacturer:	MSLC
Prev Mtr Hrs:	-
Std / XL / XXL:	STD
Lobe Config:	4/5
Rot/Stat Fit:	3.5
Lobe Config:	
Rot/Stat Fit:	
Brg Stab Size:	
Slk Brg Hsg Sz:	3.625
Ajustable Size:	3.75
Bent Hsg Size:	
Pad Thickness:	0.125
No. of Art:	
Bit to Bend Lgth:	4.79
Top Sub O.D.:	3.75
Average DLS:	

**Comments:** #37D184H, 4/5 ,3.5, 3.0° adj @ 1.5°, 1.6 RPG. Motor tested in at 180 psi. Mtr was drilling well until 3rd slide. Upon 3rd slide orientation seemed 180° out, Had no stalls, and torque was 2200-2300 ft/lbs. Pulled BHA for inspection. Pulled from open hole freely. Upon getting to surface, bent housing, rotor, bearing pack, bit box and bit were not with motor housing.

## BHA Report

Date: 29-Aug-05

## Multi-Shot Directional

Report No:

4

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,218.60

BHA #	4
Date/Time In:	8/28/05 7:45
Date/Time Out:	8/29/05 2:00
Depth In:	8,388
Depth Out:	8,396
Total Ftg:	8
Footage R/S:	8
Drlg. Hours R/S:	8.0
ROP R/S:	1.0
Avg. ROP/% Std.:	1.0 100.0
Circ. Hours:	
Drlg/Hole Hrs:	8.0
Incl/Azm In:	1.3 254.0
Incl/Azm Out:	1.1 291
Average BUR:	/100'

BIT #		2
Run No:		1
Manufacturer:		Smith
Type:		XR30PS
Size:		41/2
Serial Number:		PB9798
Jets:		OPEN
TFA:		0.920
Pressure Drop:		19
Drilling Hours:		8.0
Depth In:		8,388
Depth Out:		8,396
Total Footage:		8
Average ROP:		1.0
Bit Grade:		

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	29
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	10/20
Average GPM:	145
PSI On:	850
PSI Off:	750

Motor #		3
Serial Number:	37D159	
Mtr O.D. Size:	3 3/4	
Manufacturer:	MSLC	
Prev Mtr Hrs:		
Std / XL / XXL:	STD	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Brg Stab Size:	Slick	
Slk Brg Hsg Sz:		
Ajustable Size:		
Bent Hsg Size:	2.5	
Pad Thickness:		
No. of Art:	1	
Bit to Bend Lgth:		
Top Sub O.D.:	3.75	
Average DLS:		

**Comments:** #37D159, 2.5 fixed, slick, single art, 5/6 lobe, 3.8 stage. 2.0 RPG, motor tested in at 200 psi. Motor locked up while time drilling, tripped out of the hole and found articulation was missing pins and cover sleeve.

## BHA Report

Date: 29-Aug-05

## Multi-Shot Directional

**Report No:**

5

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc.  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,218.60

BHA #	5
Date/Time In:	8/29/05 2:30
Date/Time Out:	8/30/05 6:15
Depth In:	8,396
Depth Out:	8,554
Total Ftg:	158
Footage R/S:	158
Drlg. Hours R/S:	15.3
ROP R/S:	10.4
Avg. ROP/% Sld.:	10.4 100.0
Circ. Hours:	
Drlg/Hole Hrs:	15.3 27.8
Incl/Azm In:	1.1 291
Incl/Azm Out:	70.5 268.5
Average BUR:	55.2 /100'

BIT #	2RR
Run No:	2
Manufacturer:	Smith
Type:	XR30PS
Size:	41/2
Serial Number:	PB9798
Jets:	-
TFA:	0.920
Pressure Drop:	19
Drilling Hours:	15.5
Depth In:	8,396
Depth Out:	8,554
Total Footage:	158
Average ROP:	10.2
Bit Grade:	

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	29
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	10/20
Average GPM:	145
PSI On:	850
PSI Off:	750

Motor #		4
Serial Number:	37D109	
Mtr O.D. Size:	3 3/4	
Manufacturer:	MSLC	
Prev Mtr Hrs:		
Std / XL / XXL:	STD	
Lobe Config:	5/6	3.8
Rot/Stat Fit:		
Lobe Config:	5/6	
Rot/Stat Fit:		
Brg Stab Size:	Slick	
Slk Brg Hsg Sz:		
Ajustable Size:		
Bent Hsg Size:	2.5	
Pad Thickness:		
No. of Art:	1	
Bit to Bend Lgth:		
Top Sub O.D.:	3.75	
Average DLS:		

**Comments:** #37D109, 2.5 fixed, slick, single art, 5/6 lobe, 3.8 stage. 2.0 RPG, motor tested in at 160 psi & out @ 110 psi. Motor performed well.

## BHA Report

Date: 30-Aug-05

## Multi-Shot Directional

Report No:

6

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,224.78

BHA Report

Date: 1-Sep-05

## Multi-Shot Directional

Report No:

7

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,218.48

BHA #	7
Date/Time In:	9/1/05
Date/Time Out:	9/2/05
Depth In:	8,522
Depth Out:	8,522
Total Ftg:	
Footage R/S:	
Drlg. Hours R/S:	
ROP R/S:	
Avg. ROP/% Std.:	#DIV/0!
Circ. Hours:	3
Drlg/Hole Hrs:	14.5
Incl/Azm In:	64.5
Incl/Azm Out:	
Average BUR:	/100'

BIT #		2
Run No:		4
Manufacturer:		Smith
Type:		XR30PS
Size:		41/2
Serial Number:		PB9798
Jets:		OPEN
TFA:		0.920
Pressure Drop:		19
Drilling Hours:		
Depth In:		8,522
Depth Out:		8,522
Total Footage:		
Average ROP:		
Bit Grade:		

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	29
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	10/20
Average GPM:	145
PSI On:	850
PSI Off:	750

Motor #		6
Serial Number:	37D105	
Mtr O.D. Size:	3 3/4	
Manufacturer:	MSLC	
Prev Mtr Hrs:		
Std / XL / XXL:	STD	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Lobe Config:	5/6	
Rot/Stat Fit:	3.8	
Brg Stab Size:	Slick	
Slk Brg Hsg Sz:		
Ajustable Size:		
Bent Hsg Size:	2.5	
Pad Thickness:		
No. of Art:	1	
Bit to Bend Lgth:	2.95	
Top Sub O.D.:	3.75	
Average DLS:		

**Comments:** #37D176H, 2.5 fixed, slick, single art, 5/6 lobe, 3.8 stage. 2.0 RPG, motor tested in at 210 psi. Motor was used to wash into NE curve. Articulation sleeve was missing when motor reached surface. Motor was flushed with oil & drained but not tested. Motor will be sent in for repairs.

## BHA Report

Date: 2-Sep-05

## Multi-Shot Directional

**Report No:**

8

**Job Number:** 0520-420-175  
**Operator:** Continental Resources, Inc  
**Well:** WBRRU 32-23

**State:** South Dakota  
**County:** Harding  
**Rig:** J&R 8

Total Length: 8,224.78

## BHA Report

Date: 4-Sep-05

## Multi-Shot Directional

**Report No:**

9

**Job Number:** 0520-420-175

**State:** South Dakota

**Operator:** Continental Resources, Inc.

County: Harding

Well: WBRRU 32-23

Rig: J&R 8

Total Length: 8,224.78

BHA #		9
Date/Time In:	9/4/05	11:45
Date/Time Out:	9/7/05	7:00
Depth In:	8,522	
Depth Out:	10,348	
Total Ftg:	1,826	
Footage R/S:	1,664	162
Drlg. Hours R/S:	20.8	5.5
ROP R/S:	80.2	29.5
Avg. ROP/% Sld.:	69.6	8.9
Circ. Hours:	5	
Drlg/Hole Hrs:	26.3	67.3
Incl/Azm In:	84.1	49
Incl/Azm Out:	92.6	46.5
Average BUR:	24	/100'

BIT #		2
Run No:		6
Manufacturer:		Smith
Type:		XR30PS
Size:		41/2
Serial Number:		PB9798
Jets:		OPEN
TFA:		0.920
Pressure Drop:		19
Drilling Hours:		121.0
Depth In:		8,522
Depth Out:		10,348
Total Footage:		1826
Average ROP:		15.1
Bit Grade:		

Mud & Run	
Mud Type:	Water
Mud Weight:	8.5
Viscosity:	29
Water Loss:	N/C
PV:	-
YP:	-
% Solids:	0.2
% Sand:	-
Chlorides:	65000
Temperature:	190
WOB(R/S):	8/20
Average GPM:	145
PSI On:	1800
PSI Off:	1950

<b>Motor #</b>	<b>5RR</b>
Serial Number:	37D176H
Mtr O.D. Size:	3 3/4
Manufacturer:	MSLC
Prev Mtr Hrs:	34.5
Std / XL / XXL:	STD
Lobe Config:	4/5 3.5
Rot/Stat Fit:	
Lobe Config:	
Rot/Stat Fit:	
Brg Stab Size:	
Slk Brg Hsg Sz:	3.625
Ajustable Size:	1.83°
Bent Hsg Size:	
Pad Thickness:	0.125
No. of Art:	
Bit to Bend Lgth:	4.79
Top Sub O.D.:	3.75
Average DLS:	

**Comments:** #37D176H, 4/5 ,3.5,3.0° adj @ 1.83°,1.6 RPG. Motor tested in at160psi & tested out @ 110 psi. Motor drilled NE lateral. Motor performed well



### ***Support Staff***

*Montana Ops. Manager:* **Alan Pederson**

*Sales Engineer:* **Bill Moore**

*Planning Engineer(s):* **Chris Darland, Cindy Darland**

*Operations:* **Manny Sarmiento**

*Drilling Engineer(s):* **Steve Harper, Tracy Lewis  
Chris Shirley**

*Prepared By:* **Leanne Butler**

*Well:* **WBRRU 32-23**

*Location:* **Harding County, South Dakota**

*Rig:* **J&R #8**

# **ADMINISTRATIVE / SUNDRY REPORTS**



SEP 19 2011

DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RAPID CITY

## SUNDRY NOTICE AND REPORT ON WELLS

Operator Name	Telephone
Continental Resources	(580) 233-8955
Address	
PO Box 132, Enid, OK, 73702	

Permit #	API No.	Well Name and Number	Location (Qtr-Qtr, Sec, Twp, Rge, County)
		West Buffalo Red River Units	

**Notice of Intention To:**

- Temporarily Abandon
- Plug and Abandon
- Pull, Alter, or Test Casing
- Perforate
- Acidize
- Fracture Treatment
- Squeeze Cement
- Other \_\_\_\_\_

**Subsequent Report of :**

- Drilling Progress
- BOP Pressure Test/Program
- Gas/Oil Ratio
- Work-Over (Perf, Frac, Acidize)
- Shut-In Pressure
- Spill
- Mechanical Integrity Test
- Other \_\_\_\_\_

**Request for change of:**

- Location
- Elevation
- Producing Method
- Producing Formation
- Injection Pressure
- Injection Volume
- Injection Fluid
- Other Res. Pres.

Describe Proposed or Completed Operations (clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). Use additional page(s) if appropriate.

See attachment.

I hereby certify that the foregoing as to any work or operation performed is a true and correct report of such work or operation.

Signature

Peter MacIntyre

Name (Print)

Production Engineer

9/14/2011

Title

Date

### FOR OFFICE USE ONLY

Approved by: _____	Title: _____	Date: _____
Conditions, if any:		

**WEST BUFFALO RED RIVER UNIT (WBRRU)**

Well Name	Producing Method	Reservoir Pressure (PSI)	Fluid Level	GOR
WBRRU 32-36A	Flowing	1,334	N/A	27,542
WBRRU 14-31	Flowing	1,277	N/A	25,853
WBRRU 43-23B	Flowing	1,303	N/A	15,375
WBRRU 32-23	Flowing	1,271	N/A	22,571
WBRRU 11-7	Pumping	3,437	768	2,000
WBRRU 33-6	Pumping	3,563	188	1,429
WBRRU 34-36	Pumping	177	8,244	4,056
WBRRU 42-26	Pumping	673	7,203	4,772
WBRRU 21-23	Pumping	1,335	5,482	3,375
WBRRU 12-6	Pumping	560	7,486	8,273
WBRRU 34-25	Pumping	602	7,301	45,324
WBRRU 31-25H	Pumping	497	7,581	1,968
WBRRU 14-10	TA'd			
WBRRU 14-19	TA'd			
WBRRU 14-24	TA'd			
WBRRU 21-20	TA'd			
WBRRU 32-25	TA'd			
WBRRU 23-25	TA'd			



FORM 4

RECEIVED

MAY 22 2006

DEPT OF ENVIRONMENT & NATURAL  
RESOURCES - RCRG

## WELL COMPLETION OR RECOMPLETION REPORT

Type of Completion:

 Oil Well  Gas Well  Injection  Workover  Deepen  Plug Back  Other Horizontal Re-entry

Name and Address of Operator:

Continental Resources, Inc P.O. Box 1032, Enid, OK 73702

Telephone

(580) 233-8955

Name and Address of Drilling Contractor and Rig No:

J&amp;R Well Service, Rig 8 791 Lane 9, Powell, WY 82435

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available):  
1920' FNL & 1748' FEL, Sec 23-21N-3E

If Directional, top of pay and bottom hole location from nearest lines of section:

#1 BHL 1700' FNL &amp; 1000' FWL, Sec 23-21N-3E    #2 BHL 700' FNL &amp; 300' FEL, Sec 23-21N-3E

Well Name and No.			Field and Pool, or Wildcat		Permit No.	API No.	Date Issued
WBRRU 32-23			Buffalo		1759	.01 40-063-05037	7/29/2005
Spud Date	TD Date	Compl Date	Elevation	Total Depth (MD & TVD)		Plug Back TD (MD & TVD)	
8/24/2005	9/6/2005	9/8/2005	3156	#1 10961' MD/8470' TVD #2 10348' MD/8511' TVD			
Producing Interval(s), this Completion, Top, Bottom, Name (MD & TVD)					No. of DST's Run (see page 2)	Was Well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes List Intervals:	
#1 TOPI 8493' MD/8478' TVD BOPI 10961' MD/8470' TVD #2 TOPI 8632' MD/8482' TVD BOPPI 10348' MD/8511' TVD							
Type Electric and Other Logs Run: GR					Date Directional Survey Submitted		

### CASING RECORD (Report all strings set in well)

Hole Size	Casing Size	Weight (lb/ft)	Depth Set	Amount Pulled	Sacks and Type of Cement	Top of Cement Surface
	10 3/4" 5 1/2"	32.7# 17#	700' 4705'			

### TUBING RECORD

### LINER RECORD

Size	Weight (lb/ft)	Depth Set	Packer Type & Depth	Size	Depth Interval	Sacks and Type of Cement
2 7/8"		8354	8350'			

### PERFORATION RECORD

Interval/Depth 8493'MD-10961'MD 8632'MD-10348'MD	Holes Per Ft. OH OH	Formation Isolated Red River "B"	Amount and Type of Cement used (indicate if squeeze cemented). Amount and Type of Acid and/or Sand used. Use additional page(s) if needed.
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Continued on Next Page →

**PRODUCTION**

Date First Production 09/17/2005		Producing Method (Flowing, gas lift, pumping - size and type of pump) Flowing			Well Status (Producing or shut-in) Producing		
Date of Test 09/17/2005	Hours Tested 24	Choke Size 15/64	<b>Production For Test →</b>	Oil (Bbls) 36	Gas (Mcf) 0	Water (Bbls & %) 325	Oil Gravity - API (Corr.) 32.8
Flowing Tbg Pressure 1250		Casing Pressure	<b>Calculate 24 Hour Rate →</b>	Oil (Bbls) 36	Gas (Mcf) 0	Water (Bbls & %) 325	Gas-Oil Ratio
Disposition of Oil (Purchaser and Transporter), and Gas (sold, used for fuel, vented, etc.) <b>Purchaser-Independent Trade &amp; Transportation Transporter-Plains Pipeline, LP</b>					Test Witnessed By		
List of Attachments/Comments							

**GEOLOGIC MARKERS**

FORMATION NAME AND BRIEF DESCRIPTION	MEASURED DEPTH	TRUE VERTICAL DEPTH
Gunton		8342
Red River		8446
Red River "B"		8480

Use additional page(s) if needed.

**DRILL STEM TEST DATA**

<input type="checkbox"/> Drill Stem Test Results Attached	If not attached, list Depth Interval Tested, Cushion Used, Time Tool Open, Flowing and Shut-in Pressures, and Recoveries.		
Use additional page(s) if needed.			
I hereby certify that the information herein provided is true, complete, and correct as determined from all available records.			
 Signature	Becky Barnes Name (Print)	Regulatory Compl Title	5/19/2006 Date

**FOR OFFICE USE ONLY**

Approved By: _____	Title: _____	Date: _____
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# CORRESPONDENCE



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

2050 West Main, Suite #1  
Rapid City, SD 57702  
Telephone 605-394-2229  
FAX Number 605-394-5317

July 19, 2005

South Dakota Department of Game, Fish & Parks  
3305 W South St  
Rapid City SD 57702

Attn: Stan Michals:

We have received three applications to drill horizontal re-entries oil test wells in Harding County as follows.

21N-3E-23 SWNE  
20N-4E-3 NWSE  
20N-4E-6 SWNW

Please direct your regulatory requirements directly to the operator as follows:

Continental Resources, Inc.  
P O Box 1032  
Enid, OK 73702

I plan to issue the permit after July 28, 2005.

Sincerely,

Fred V Steele  
Oil and Gas Supervisor

FVS/jd



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

2050 West Main, Suite #1

Rapid City, SD 57702

Telephone 605-394-2229

FAX Number 605-394-5317

July 19, 2005

Archaeological Research Center  
P O Box 1257  
Rapid City SD 57709-1257

Attn: Michael Fosha

We have received three applications to drill horizontal re-entries oil test wells in Harding County as: follows.

21N-3E-23 SWNE  
20N-4E-3 NWSE  
20N-4E-6 SWNW

Please direct your regulatory requirements directly to the operator as follows:

Continental Resources, Inc.  
P O Box 1032  
Enid, OK 73702

I plan to issue the permit after July 28, 2005.

Sincerely,

Fred V Steele  
Oil and Gas Supervisor

FVS/jd

# MISCELLANEOUS

NO MISCELLANEOUS  
INFORMATION FOR THIS  
WELL AS OF 8/25/2014