



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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 FEB 27 2012

DEPT OF ENVIRONMENT & NATURAL  
 RESOURCES - RAPID CITY

State of South Dakota  
 Department of Environment  
 and Natural Resources

APPLICATION FOR PERMIT TO DRILL

Type of work:  
 Drill New Well  Re-center Well  Drill Directional Well  
 Other \_\_\_\_\_

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

Name and Address of Operator: Telephone  
**Continental Resources, Inc.** **P.O. Box 1032, Enid, OK** **(580) 233-8955**

Name and Address of Surface Owner:  
**David Niemi** **P.O. Box 227, Buffalo, SD 57720**

Name and Address of Drilling Contractor and Rig Number:  
**Cyclone Drilling, Inc. #1** **5800 Mohan Rd, Gillette, WY 82718-6937**

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available):  
**SWNE Sec 32 T21N R4E, Harding Co., 1735' FNL & 2265' FEL; Lat: 45 44 34.847, Long: -103 39 14.709**

If Directional, top of pay and bottom hole location from nearest lines of section:  
**Top of Pay: 8817' MD 1356' FNL & 2567' FEL Sec 32; BHL: 800' FSL & 1000' FWL Sec 28 T21N R4E**

Acres in Spacing (Drilling) Unit Description of Spacing Unit  
**20,648** **Unitized; South Buffalo Red River Unit; Order #4-97**

Well Name and Number	Elevation	Field and Pool, or Wildcat	Proposed Depth and Formation
<b>SBRRU 32-32H</b>	<b>3118</b>	<b>Buffalo</b>	<b>11,568' MD Red River "B"</b>

Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (amount, type, additives)	Depth
1) <b>13 1/2</b>	<b>9 5/8</b>	<b>36</b>	<b>1440</b>	<b>657 sks Type 3; Type III Celloflake</b>	
2) <b>8 3/4</b>	<b>7</b>	<b>23-29</b>	<b>8820</b>	<b>922 sks 60/40 Type III; Class "G"</b>	
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.  
**The SBRRU 32-32H well is a horizontal Red River "B" test located in section 32 T21N R4E, Harding County, South Dakota. The well will be drilled vertically to approximately the top of the Siluran Interlake formation before drilling a medium radius build section to the northwest and a 7" casing set a foot or so above the Red River "B" porosity zone. The lateral will then be drilled to the bottom hole as shown on the attached maps.**

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

*Terry L. Olson* **Terry L. Olson** **Reg. Compliance** **02/20/2012**  
 Signature Name (Print) Title Date

FOR OFFICE USE ONLY

Approved By: *Robert Townsend* Title: Administration, Minerals & Mining Dept.  
 Permit No. 2008 API No. 4006320731 Date Issued: 3/7/2012  
 Conditions, if any, on attached page.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

*Minerals & Mining Program*  
2050 West Main Street, Suite #1  
Rapid City, SD 57702-2493  
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Fax: 605-394-5317

**PERMIT CONDITIONS**

CRI: 32-32H SBRRU  
21N-4E-32 SWNE, Harding County

Permit: #2008  
API: 40 063 20731

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

1. This permit is conditioned on compliance with all applicable requirements of South Dakota Codified Laws 45-9 and Administrative Rules of South Dakota 74-12.
2. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
3. Surface runoff must be diverted around the drill site.
4. The surface hole must be drilled with fresh water.
5. Cement must be circulated to the ground surface on the surface casing.
6. If horizontally drilled:
  - A. The coordinates of the production casing shoe and the well terminus must be filed with the department.
  - B. The azimuth of the horizontal segment of the well must be filed with the department along with the results of periodic down hole surveys.
7. If production casing (long string) is set:
  - A. Sufficient cement must be circulated on the long string to cover any fresh water aquifer not covered by the surface casing. Freshwater resources at this site include: Madison, Minnelusa, Minnekahta, Canyon Springs, and Inyan Kara.
  - B. A cement bond log must be run and filed with the department.
8. If abandoned:
  - A. With long string, sufficient cement must 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. Freshwater resources at this site include: Madison, Minnelusa, Minnekahta, Canyon Springs, and Inyan Kara.
    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 must 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, Minnelusa, Minnekahta, Canyon Springs, and Inyan Kara.
      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 must be used between all plugs.
  - D. The casing string must be cut off at least three feet below the final ground surface contour. A plate with the name of the operator, well name and number, and legal location by quarter-quarter section, township and range must be welded to the casing stub. The location of the abandoned well must be surveyed with high resolution global positioning system equipment or other appropriate survey methods sufficient to accurately locate the well. Survey coordinates must be included in the final abandonment report.

9. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
10. A washed set of sample cuttings (or cores, if cut) must be shipped, free of charge, to:

Derric Iles  
Geological Survey Program  
Akeley-Lawrence Science Center  
University of South Dakota  
414 E. Clark Street  
Vermillion, SD 57069-2390

11. Please notify this office prior to plugging so a witness can be on location. If plugging will occur after regular business hours, call Lucy Dahl at 605-773-6257.