



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  
**RECEIVED**

**JAN 18 2013**

DEPT OF ENVIRONMENT & NATURAL RESOURCES - RAPID CITY



**APPLICATION FOR PERMIT TO DRILL**

Type of work:  Drill New Well  Reenter Well  Drill Directional Well  Other \_\_\_\_\_

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

Name and Address of Operator: Continental Resources, Inc. P.O. Box 268870, Oklahoma City, OK 73126 Telephone (405) 234-9000

Name and Address of Surface Owner: Tim and Tracy Brown 10723 Table Mountain Rd., Buffalo, SD 57720

Name and Address of Drilling Contractor and Rig Number: Cyclone Drilling, Inc. #1 P.O. Box 908, Gillette, WY 82717-0908

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available):

SWSW Sec 31(Lot4), T22N R4E, Harding, 660' FSL & 700' FWL; Lat: 45 49 19.09; Long: -103 41 01.96

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

Top of Pay: 1135' FSL & 700' FWL Sec 31; BHL: NWNW (Lot1) Sec 30 T22N R4E, 660' FNL, 700' FWL

Acres in Spacing (Drilling) Unit: 4469.7 Description of Spacing Unit: Central Buffalo Red River Unit

Well Name and Number	Elevation	Field and Pool, or Wildcat	Proposed Depth and Formation
CBRRU 14-31NH	3099 FRGE	Central Buffalo	17,694' MD; Red River "B"

Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (amount, type, additives)	Depth
1) 13 1/2	9 5/8	36	1440	657 sks Type III	
2) 8 3/4	7	23, 26, 29	8938	602 sks 60/40 Type III/Pozz; Class G	
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 CBRRU 14-31NH is a horizontal Red River "B" test located in Section 31 T22N R4E, Harding County, South Dakota. The well will be drilled vertically, approximately to the Silurian Interlake formation, before drilling an 8 3/4" hole at 12 degrees/ft BUR to the North, and 7" casing will be set approximately one foot above the Red River "B" porosity zone. The lateral will then be drilled to the bottom hole at 660' FNL and 700' FWL of Sec 30 T22N R4E. The estimated date to begin dirt work is 1/21/2013.

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 01/10/2013  
 Signature Name (Print) Title Date

**FOR OFFICE USE ONLY**

Approved By: Robert Townsend Title: Administrator Minerals & Mining Div.

Permit No. 2024 API No. 40 063 20741 Date Issued: 1/29/2013

Conditions, if any, on attached page.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

PMB 2020  
JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3182  
[www.state.sd.us/denr](http://www.state.sd.us/denr)

**PERMIT CONDITIONS**

CRI: CBRRU 14-31NH  
22N-4E-31 SWSW, Harding County

Permit: 2024  
API: 40 063 20741

Approval has been granted to drill this location as detailed on the attached Application for Permit to Drill (Form #2) with the spacing unit description corrected to read "N/2 Section 12 T21N R3E" and the following additional conditions:

1. The well cannot be produced until operatorship of the Central Buffalo Red River Unit has been transferred through an order.
2. 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.
3. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
4. Surface runoff must be diverted around the drill site.
5. The surface hole must be drilled with fresh water.
6. Cement must be circulated to the ground surface on the surface casing.
7. 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.
8. If production casing (long string) is set:
  - A. The cement program approved as submitted with the application shall be followed.
  - B. A cement bond log must be run and filed with the department within 60 days after completion of the well as required by Administrative Rules of South Dakota 74:12:02:12.
9. If abandoned, a plugging plan must be submitted to the department for review and approval. The plugging plan should address all requirements found in Administrative Rules of South Dakota 74:12:03.
  - A. If production casing is left in the wellbore, a mechanical integrity test must be conducted to verify the integrity of the casing as required by rule 74:12:03:02(4)(b)(ii).
  - B. 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.
10. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
11. 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

12. Please notify this office prior to plugging or MIT so a witness can be on location. If plugging or MIT will occur after regular business hours, call Jeff Klenner at (605) 929-1414.