



**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: \_\_\_\_\_ Telephone \_\_\_\_\_  
**Continental Resources, Inc.   P.O. Box 268870, Oklahoma City, OK 73126   (405) 234-9000**

Name and Address of Surface Owner:  
**Clarkson & Company   12233 Rasmus Road, Buffalo, SD 57740**

Name and Address of Drilling Contractor and Rig Number:  
**Cyclone Drilling, Inc. #1   P.O. Box 908, Gillette, WY 84717-0908**

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

**NENW Sec 20 T21N R4E, Harding Co., 925' FNL & 1425' FWL; Lat: 45 46 26.789; Long: -103 39 37.397**

If Directional, top of pay and bottom hole location from nearest lines of section:  
**Top of Pay: 8851' MD BHL: 2200' FNL & 300' FEL SENE Sec 17 T21N R4E**

Acres in Spacing (Drilling) Unit	Description of Spacing Unit
7675.65	Buffalo Red River Unit

Well Name and Number	Elevation	Field and Pool, or Wildcat	Proposed Depth and Formation
BRRU 21-20H	3106	Buffalo	13,927' 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 3; Type III	
2) 8 3/4	7	23, 26, 29	8851	953 sks Type III	
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 BRRU 21-20H is a horizontal Red River "B" test located in Sec. 20-T21N-R4E, Harding County, South Dakota. The well will be drilled vertically, approximately to the Silurian Interlake formation, before drilling an 8.75" build section to the northeast and setting 7" casing approximately one foot above the Red River "B" porosity zone. The lateral will then be drilled to the way point, 1600' FSL and 2800' FWL of Sec. 17-T21N-R4E, and continue to the bottom hole at 2200' FNL and 300' FEL of Sec. 17-T21N-R4E.**

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   11/19/2012  
 Signature   Name (Print)   Title   Date

**FOR OFFICE USE ONLY**

Approved By: Robert T. Johnson   Title: Administrator Minerals & Mining Prog.  
 Permit No. 2021   API No. 40 063 20738   Date Issued: 12/17/2012  
 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: BRRU 21-20H  
21N-4E-20 NENW, Harding County

Permit: 2021  
API: 40 063 20738

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. The casing and cementing program 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.
8. 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.
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 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.