



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
 Minerals & Mining Program  
 2050 West Main, Suite #1, Rapid City, SD 57702-2493  
 Telephone: 605-773-4201, FAX: 605-394-5317

FORM 2  
**RECEIVED**  
 MAR 17 2014

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: Luff Exploration Company, 1580 Lincoln Street, Suite 850, Denver, CO 80203 Telephone: 303-861-2468

Name and Address of Surface Owner: Patrick & Carla Kelly, 15 1st Ave SW, Bowman, ND 58623

Name and Address of Drilling Contractor and Rig Number: Cyclone Drilling, Inc., 5800 Mohan Road, Gillette, WY 82718; Rig #11

Surface Location of well: Qtr-Qtr, Sec, Twp, Rge, County, feet from nearest lines of section, and latitude and longitude (if available): SWSW, Sec. 35, T23N, R6E, Harding Co., 130' FSL & 290' FWL, Lat: 45° 54' 25.67" N, Long: 103° 21' 17.85" W

If Directional, top of pay and bottom hole location from nearest lines of section:  
 TOP: 680' FSL & 844' FWL, SWSW, Sec. 35, T23N, R6E BHL: 550' FNL x 1445' FWL, NENW, Sec. 35, T23N, R6E

Acres in Spacing (Drilling) Unit: 320 Description of Spacing Unit: W/2 Sec. 35, T23N, R6E

Well Name and Number:	Elevation:	Field and Pool, or Wildcat:	Proposed Depth and Formation:
Carla 1-35H	2833.5' ground	Corey Butte	13750' MD, 8917' TVD, Red River B

Size of Hole:	Size of Casing:	Weight per Foot:	Depth:	Cementing Program (amount, type, yield, additives)	Depth:
1) 13 1/2"	9 5/8"	36#	1443'	476 sks Lite, Tail w/200 sks Premium	Surface
2) 8 3/4"	7"	23, 26, 29#	9509'	360 sks Lite, Tail w/250 sks Premium	2928'
3) 6 1/8"	None		13750'		
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.

This is an existing oil well in Corey Butte Field. Original Permit # 1858 issued to Continental Resources, Inc on 3/4/08. Original API # 40 063 20635. Propose to set cement retainer in 7" casing at 9480' MD and squeeze original open hole horizontal lateral with 225 sxs cement from 9480' MD to 11000'+/- MD. Drill out cement to 9561' MD. Drill one 6-1/8" horizontal lateral sidetrack from 9561' MD to 13750' MD (8917' TVD) and a BHL 550' FNL x 1445' FWL Sec 35-T23N-R6E with fresh water. Estimated start date for location construction is 4/10/14. Estimated start date for cement squeeze is 4/20/14. Estimated start date for drilling is 5/15/14.

Pit Liner Specifications: All drilling fluids and cuttings will be contained in a pit 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.

 Signature Richard D. George Name (Print) Manager of Engineering Title 3/14/14 Date

**FOR OFFICE USE ONLY**

Approved By: P. Let Tammoual Title: Administrator Minerals & Mining Program

Permit No.: 2049 API No.: 40 063 20635.01 Date Issued: 4/4/2014

Conditions, if any, on attached page.



**DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3182  
denr.sd.gov



**PERMIT CONDITIONS**

Luff: Carla 1-35H  
21N-4E-2 NWNE, Harding County

Permit: 2049  
API: 40 063 20635.01

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

1. The well cannot be produced until operatorship of the Carla 1-35H well has been transferred.
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. If drilling does not commence within one year from the issuance date, this permit will expire.
4. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
5. Surface runoff must be diverted around the drill site.
6. The surface hole must be drilled with fresh water.
7. Cement must be circulated to the ground surface on the surface casing.
8. 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.
9. 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.
10. 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.
11. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
12. 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

13. 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.