



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
 Minerals & Mining Program - Oil & Gas Section  
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JUN 14 2006

DEPT OF ENVIRONMENT & NATURAL RESOURCES - RCRO

**APPLICATION FOR PERMIT TO DRILL**

SOUTH DAKOTA  
 STATE GEOLOGICAL SURVEY  
 WESTERN FIELD OFFICE

Type of Work:

- Drill New 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

Merle R. & Bettyna Johnson, Box 25, Scranton, North Dakota 58651

Name and Address of Drilling Contractor and Rig Number:

Patterson Drilling Company, 1512 Larimer Street, Suite 730, Denver, CO 80202, Rig #463. (Vertical section)  
 C&H Well Service, Inc., PO Box 2556, Gillette, Wyoming 82717-2556, Rig #104 (Horizontal laterals)

Surface Location of Well: Qtr-Qtr, Sec, Twp, Rge, County, Feet from Nearest Lines of section, and latitude and longitude (if available):

SESW Sec. 5-T22N-R6E, Harding County; 1780' FWL x 850' FSL; Lat = 45 53' 40.57", Long = 103 24' 39.12"

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

West Lateral: Top est @ 8924' MD = 8860' TVD; BHL 220' FEL x 1350' FSL, Sec. 6-T22N-R6E

East Lateral: Top est @ 8914' MD = 8860' TVD; BHL 500' FEL x 850' FSL, Sec. 5-T22N-R6E

Acres in Spacing (Drilling) Unit

Description of Spacing Unit

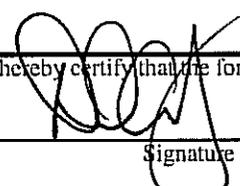
Unit well in East Harding Springs Red River Unit

Well Name and Number		Elevation	Field and Pool, or Wildcat		Proposed Depth and Formation
EHSRRU'N-SH		2890.6 GL	EHSRRU Red River B		9000 TVD; 11820 MD; RR
Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (amount, type, additives)	Depth
1) 12-1/4"	8-5/8"	24#	2000'	635 sx Premium Lite & Class G, 3% salt + misc	surf
2) 7-7/8"	5-1/2"	15.5# & 17#	9000	750 sx Premium Lite & Glass G + various additives	3500'
3)					
4)					

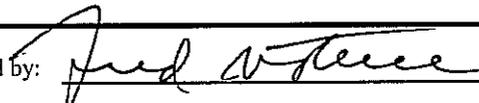
Describe Proposed Operations (Clearly State all Pertinent Details, and Give Pertinent Dates, Including Estimated Date of Starting any Proposed Work). Use Additional Page(s) if appropriate.

Drill vertical portion of well to 9000'. Drill 7-7/8" hole, run 5-1/2" casing. A directional survey will be run @ 100' intervals to determine the BHL of the vertical well. Move out rotary tools and move in smaller rig, mill casing windows and drill dual horizontal laterals in the Red River "B". East lateral KOP approx 8764' TVD, west lateral KOP approx 8744' TVD. Drill 4-1/2" horizontal laterals in the "B" zone. West lateral to approx 10,872' MD = 8860' TVD and the east lateral to approx 11,820' MD = 8860' TVD. An oil base mud will be used in the vertical portion of the well and a fresh water/polymer in the horizontal sections. All drilling fluids and cuttings will be contained in a pit lined with 12 mil plastic. All liquids will be disposed of in an approved site, the liner and the cuttings will be buried in place. See attached Preliminary Drilling Prognosis for additional details. Completion will be open hole in the horizontal sections. The estimated start date is August 1, 2006.  
 Blanket South Dakota bond #4127010.

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 Name (Print) Operations Manger Title June 12, 2006 Date

**FOR OFFICE USE ONLY**

Approved by:  \_\_\_\_\_ Title: Oil and Gas Supervisor  
 Permit No. 1786 API No. 40 063 20607 Date Issued: June 27, 2006  
 Conditions, if any, on attached page.