5-2010

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
Minerals & Mining Program - Oil & Gas Section
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FORM 2

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MAY 20 2010
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:
[x] Drill New Well [x] Reenter Well [ ] Drill Directional Well
[ ] Other

Type of Well:
[x] 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
State of SD School & Public Lands, 500 E. Capital Ave., Pierre, SD 57501

Name and Address of Drilling Contractor and Rig Number:
Vertical: Ensign Drilling Inc., 1700 Broadway, Suite 777, Denver, CO 80290, Rig # 71
Horizontal: Key Energy Services, Inc., 115 34th Street West, Williston, ND 58801, Rig # 233

Surface Location of Well: Qtr-Qtr, Sec, Twp, Rge, County, Feet from Nearest Lines of section, and latitude and longitude (if available):
SENE, Sec. 25, T23N, R3E, Harding Cty, 1970' FNL x 600' FEL; Lat: 45° 55' 49.67", Long: 103° 41' 18.91"

If Directional, top of pay and bottom hole location from nearest lines of section:
Southwest Lateral: Top of pay est @ 9,011' MD = 8,949 TVD; BHL @ 500' FSL & 2,140' FEL Sec 25-T23N-R3E
Northeast Lateral: Top of pay est @ 9,018' MD = 8,949 TVD; BHL @ 500' FNL & 2,061' FWL Sec 30-T23N-R4E

Acres in Spacing (Drilling) Unit
Approximately 480 Acres

Description of Spacing Unit
E/2 Sec. 25 T23N R3E & NW/4 Sec. 30 T23N R4E

Well Name and Number	Elevation	Field and Pool, or Wildcat	Proposed Depth and Formation
State H-25H	3079' Graded 3095' KB	Table Mountain Field	SW = 12,103'MD, 8,949'TVD, RR "B" NE = 11,938'MD, 8,949'TVD, RR "B"

Size of Hole	Size of Casing	Weight per Foot	Depth	Cementing Program (amount, type, additives)	Depth
1) 12-1/4"	8-5/8"	24# & 32#	2,000'	355 sks Lite tailed w/ 200 sks Premium	Surface
2) 7-7/8"	5-1/2"	17# & 23#	9,200'	1st Stage: 125 sks Lite tailed with 165 sks Premium	6,500'
3)				2nd Stage: 85 sks Lite tailed with 195 sks Premium	4,200'
4) 4-1/2"	None		12,103' MD	None	

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 a vertical well and case, then drill two short radius horizontal laterals in the Red River 'B" formation: Drill 12-1/4" surface hole to approximately 2,000' with fresh water. Run 8-5/8" casing and cement to surface. Drill 7-7/8" vertical hole to TD at approximately 9,200'. Vertical section to be drilled with invert oil mud. Run DST's as needed. Run logs. Run 5-1/2"casing and cement to 4,200'. Set whipstock at approximately 209 degree azimuth and mill Southwest lateral window approximately 8,835'-8,841'. Drill 4-1/2" Southwest lateral build section approximately 8,841'-9,011'MD = 8,949'TVD with a BHL approximately 95' south and 52' west of surface location. Drill 4-1/2" Southwest horizontal lateral in the Red River "B" zone to approximately 12,103' MD = 8,949' TVD at BHL approximately 500' FSL and 2,140' FEL Sec 25-T23N-R3E. Set whipstock at approximately 61 degree azimuth and mill Northeast lateral window approximately 8,823'-8,829'. Drill 4-1/2" Northeast lateral build section approximately 8,829'-9,018'MD = 8,949'TVD with a BHL approximately 58' north and 105' east of surface location. Drill 4-1/2" Northeast horizontal lateral in Red River "B" zone to approximately 11,938'MD = 8,949'TVD at BHL approximately 500' FNL and 2,061' FWL Sec 30-T23N-R4E. Horizontal laterals to be drilled with fresh water/polymer. All drilling fluids and cuttings will be contained in a pit lined with a 12 mil plastic. All liquids will be disposed of in an approved method, the liner and cuttings will be buried in place. The estimated start date for location construction is 6/1/10. Estimated start date for drilling is 7/15/10.

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)	Title	Date
Bill Organ	Bill Organ	Drilling Consultant	5/17/10

FOR OFFICE USE ONLY

Approved by: [signature] Title: Oil and Gas Supervisor

Permit No. 1973 API No. 40 063 20709 Date Issued: June 7, 2010

Conditions, if any, on attached page.