STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
BOARD OF MINERALS AND ENVIRONMENT

RECEIVED
DEC 14 2010
DEPT OF ENVIRONMENT & NATURAL RESOURCES - RAPID CITY

IN THE MATTER OF THE PETITION OF OF LUFF EXPLORATION COMPANY FOR AN ORDER APPROVING THE DISPOSAL OF OIL FIELD PRODUCED WATER INTO THE INYAN KARA FORMATION (ALSO KNOWN AS THE DAKOTA SANDSTONE OF THE DAKOTA FORMATION), SOUTH IN THE WELLBORE OF THE STEARNS #2 WELL, LOCATED IN THE NE/4NW/4 OF SECTION 25, TOWNSHIP 23 NORTH, RANGE 3 EAST, MEDICINE POLE HILLS FIELD, HARDING COUNTY, SOUTH DAKOTA.	)	**PETITION**

COMES NOW the petitioner, Luff Exploration Company, and respectfully alleges as follows:

1. It is the operator of a number of wells in the vicintiy of the Stearns #2 well, located in the NE/4NW/4 of Section 25, Township 23 North, Range 3 East, Harding County, South Dakota.

2. By application dated December 2, 2010, it requested approval under the Underground Injection Control (UIC) regulations for the injection of water into the Inyan Kara formation, also known as the Dakota Sandstone of the Dakota Formation, through the Stearns #2 well. At least initially, the water to be disposed of in the well is produced from the State H-25H well, located in the SE/4NE/4 of Section 25, Township 23 North, Range 3 East, Harding County, South Dakota, although further development in the area is anticipated and it is likely that water from other wells will ultimately be disposed of the well.

3. By separate application, applicant is seeking an aquifer exemption for the Dakota/Inyan Kara formation in the vicinity of the Stearns #2 well. Through this application, applicant seeks approval of the disposal into the Dakota formation.

4. Luff has filed a UIC Application with the Department of Environment and Natural Resources setting forth the details of its proposal. Said application requests that the injection at a maximum daily injection rate of 1,500 barrels per day at a surface injection pressure of 1,200 pounds per square inch be authorized, until such time as 5,475,000 barrels of water is injected.

5. The Dakota zone is isolated from any fresh water zones by impermeable rock. Although the current condition of the wellbore, which has been plugged and abandoned, is unknown, applicant will re-enter the wellbore, undertake any necessary corrective action, and pressure test the wellbore prior to commencing any injection to ensure the mechanical integrity of the wellbore and to insure that any shallow fresh water zones are adequately protected by production casing and cement.

6. The Stearns #2 well is currently plugged and abandoned. Applicant intends to the re-enter the well and perform any necessary remedial work before commencing injection. Applicant anticipates that approval of this application will be contingent upon such remedial work being performed and the injection zone being properly isolated.

7. Applicant requests that injection be allowed in accordance with the application hit has submitted to the DENR. In applicant's opinion, allowing such injection will not cause any degradation of any fresh water resources.

WHEREFORE, applicant respectfully requests that this matter be set for hearing at the regularly scheduled hearings in February, 2010 or such other date as may be established by the Board and that thereafter the Board enter its order granting the relief requested.

Dated this 13th day of December, 2010.

LUFF EXPLORATION COMPANY

John W. Morrison
CROWLEY FLECK PLLP
Suite 600, 400 East Broadway
PO Box 2798
Bismarck, ND 58502

MAY, ADAM, GERDES & THOMPSON, L.L.P.
503 South Pierre Street
PO Box 160
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By: _____

STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
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DEPT OF ENVIRONMENT & NATURAL RESOURCES - RAPID CITY

IN THE MATTER OF THE PETITION OF OF LUFF EXPLORATION COMPANY FOR AN ORDER APPROVING AN AQUIFER EXEMPTION TO ALLOW THE DISPOSAL OF OIL FIELD PRODUCED WATER INTO THE INYAN KARA FORMATION (ALSO KNOWN AS THE DAKOTA SANDSTONE OF THE DAKOTA FORMATION), SOUTH MEDICINE POLE HILLS FIELD, HARDING COUNTY, SOUTH DAKOTA.	)	**PETITION**

COMES NOW the petitioner, Luff Exploration Company, and respectfully alleges as follows:

1. It is the operator of a number of wells in the vicinity of the Stearns #2 well, located in the NE/4NW/4 of Section 30, Township 23 North, Range 3 East, Harding County, South Dakota.

2. By application dated December 2, 2010, it requested approval under the Underground Injection Control (UIC) regulations for the injection of water into the Inyan Kara formation, also known as the Dakota Sandstone of the Dakota Formation, through the Stearns #2 well. At least initially, the water to be disposed of in the well is produced from the State H-25H well, located in the SE/4NE/4 of Section 25, Township 23 North, Range 3 East, Harding County, South Dakota, although applicant anticipates further development in the area and ultimately water produced from other wells will likely be disposed of in the well.

3. Samples of Dakota formation water in the Stearns #2 well are not currently available. However, based upon water analyses in the area, it is anticipated that the total dissolved solids contained in the water are less than 10,000 milligrams per liter. However, the Dakota formation does not currently serve as a source of drinking water in Harding County, and is not expected to serve as a source of drinking water in the future because of its depth and, on the basis of water analyses from the Dakota formation in the region, it is so contaminated that it would economically and technologically impractical to render the water fit for human consumption.

4. The Dakota zone is isolated from any fresh water zones by impermeable rock and any such shallow zones are protected by production casing and cement in the injection well.

5. Applicant requests that an aquifer exemption should be granted for the Dakota Sandstone of the Dakota Formation, also known as the Inyan Kara formation. In applicant's opinion, granting such an exemption and allowing injection in accordance with the separate application will not cause any degradation of any fresh water resources.

WHEREFORE, applicant respectfully requests that this matter be set for hearing at the regularly scheduled hearings in February, 2010 or such other date as may be established by the Board and that thereafter the Board enter its order granting the relief requested.

Dated this 13th day of December, 2010.

LUFF EXPLORATION COMPANY

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STATE OF SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
BOARD OF MINERALS AND ENVIRONMENT

IN THE MATTER OF THE APPLICATION OF LUFF EXPLORATION COMPANY, DENVER, COLORADO, FOR AN ORDER APPROVING A PERMIT TO INJECT FOR THE DISPOSAL OF OIL FIELD PRODUCED WATER INTO THE INYAN KARA FORMATION AT A DEPTH OF APPROXIMATELY 4,770 - 4,840 FEET BELOW LAND SURFACE, INTO THE #2 STEARNS WELL LOCATED EIGHT MILES NORTH-NORTHEAST OF LADNER, SOUTH DAKOTA, IN THE NE1/4 NW1/4 OF SECTION 30, TOWNSHIP 23 NORTH, RANGE 4 EAST, SOUTH MEDICINE POLE HILLS FIELD, HARDING COUNTY, SOUTH DAKOTA; AND APPROVING AN AQUIFER EXEMPTION FOR THE INYAN KARA FORMATION.	NOTICE OF RECOMMENDATION AND HEARING FOR A PERMIT TO INJECT AND AQUIFER EXEMPTION CASE NO. 19-2010

Notice is hereby given to Luff Exploration Company, Denver, Colorado, and to all interested persons that the Board of Minerals and Environment (board) will hold a contested case hearing on the above described matter on Thursday, February 17, 2011, at 10:15 a.m. CST in the Matthew Environmental Education and Training Center, 523 East Capitol Avenue, Pierre, South Dakota. The case involves disposal of produced water into the Inyan Kara Formation (also referred to as the Dakota Formation in the application) using the #2 Stearns well located eight miles north-northeast of Ladner, South Dakota, in the NE1/4 NW1/4 of Section 30, Township 23 North, Range 4 East, South Medicine Pole Hills Field, Harding County, South Dakota, and approving an aquifer exemption for the Inyan Kara Formation.

The Secretary of the Department of Environment and Natural Resources (department) recommends the board approve the application for a permit to inject with the following conditions:

1. Injection operations authorized by the department must be conducted in accordance with South Dakota Codified Laws (SDCL) Chapter 45-9 and Administrative Rules of South Dakota (ARSD) 74:10, and any other applicable orders or rules promulgated by the board.

2. Before commencement of injection, an aquifer exemption for this operation must also be approved by the United States Environmental Protection Agency, if water quality data from the Inyan Kara Group in this well is below 10,000 milligrams per liter (parts per million) total dissolved solids.

3. Water compatibility evaluations must be completed on the injection zone and results must be approved by the department prior to commencement of injection into that zone. Incompatibility of waters will require action be taken to prevent damage to the proposed injection zone.

4. The maximum injection rate may not exceed 1,500 barrels of water per day.

5. The maximum life of the permit may not exceed 10 years or 5,475,000 barrels.

6. The maximum injection pressure may not exceed 1,200 pounds per square inch.

7. A mechanical integrity test must be successfully conducted prior to the commencement of injection activity. The well must pass the mechanical integrity test at a minimum pressure of 1,000 pounds per square inch. The operator is required to notify the department a minimum of 72 hours prior to running a mechanical integrity test.

8. Once mechanical integrity is established, the well must retested at least once every five years to ensure that mechanical integrity of the well is maintained, unless the department indicates differently.

9. If an unsuccessful pressure test result occurs, the operator must cease operations immediately if it is determined the injection may threaten any underground source of drinking water. If the failure does not threaten an underground source of drinking water, the operator must cease operations within 48 hours after receipt of the department's notice, and take corrective action on the well as soon as feasible. Corrective action options include repairing the well so a successful test result can be obtained, plugging and abandoning the well, or any other action approved by the department.

In accordance with ARSD 74:10:09:14, the board will also hear Luff's request for approval of an aquifer exemption for the Inyan Kara Formation that must be established before injection may commence. The department has determined the appropriate aquifer exemption radius surrounding the #2 Stearns well is one-quarter mile.

The board has jurisdiction and legal authority to issue orders for the development of the oil and gas resources of the state pursuant to SDCL Chapter 45-9 and Chapter 1-26 and further pursuant to ARSD 74:09 and 74:10. The hearing is an adversary proceeding and any party has the right to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. The board may approve, conditionally approve, or deny the application. The board's decision will be based upon the evidence received at the hearing. The board's decision may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the amount in controversy exceeds two thousand five hundred dollars or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17.

Any person who wishes to intervene in this proceeding as a party must file a petition to intervene pursuant to ARSD 74:09:01:04 on or before February 8, 2011.

Notice is further given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the public hearing if you have a disability for which special arrangements must be made at the hearing by calling the telephone number listed below.

The applicant's application and notice of hearing are also posted on the department's website at: http://denr.sd.gov/des/og/oghome.aspx. Additional information about this petition is available from Fred V. Steece, Oil and Gas Supervisor, Department of Environment and Natural Resources, 2050 West Main Street, Suite #1, Rapid City, South Dakota 57702, telephone 605.394.2229, email fred.steece@state.sd.us.

Dated: January 7, 2011

Steven M. Pirner
Secretary

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