## STATE OF SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOUR BOARD OF MINERALS AND ENVIRONMENT

MAR 2 6 2018

IN THE MATTER OF THE PETITION OF LUFF EXPLORATION COMPANY, DENVER, CO., FOR AN ORDER **APPROVING** OPERATION OF A PORTION OF THE COREY BUTTE FIELD AND PETE'S CREEK FIELD CONSISTING OF ALL OF SECTION 34 AND THE W/2 OF SECTION 35, TOWNSHIP 23 NORTH, RANGE 6 EAST, AND ALL OF SECTION 3, TOWNSHIP 22 NORTH, RANGE 6 EAST, HARDING COUNTY, SOUTH DAKOTA AS THE CROOKED CREEK RED RIVER UNIT; PROVIDING FOR THE RECOVERY OF RISK COMPENSATION FROM OWNERS WHO ELECT TO HAVE THEIR SHARE OF UNIT EXPENSES CARRIED; APPROVING THE UNIT **AGREEMENT** AND UNIT OPERATING AGREEMENT FOR THE UNIT; **DESIGNATING** LUFF **EXPLORATION** COMPANY AS UNIT OPERATOR; AND GRANT SUCH OTHER RELIEF AS THE BOARD DEEMS APPROPRIATE.

DEPT OF ENVIRONMENT & NATURAL RESOURCES - RAPID CITY

## PETITION

Case No. 6 -2018

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

- 1. Luff represents the owners of interests in the oil and gas leasehold estate underlying all or portions of all of Section 34 and the West Half of Section 35, Township 23 North, Range 6 East of the Black Hills Meridian; and all of Section 3, Township 22 North, Range 6 East of the Black Hills Meridian. All of said lands are located in Harding County, South Dakota.
- 2. Said lands (the "Unit Area") consist of 1600 acres, more or less. The Unit Area is included within either the Corey Butte Field or the Pete's Creek Field.
- 3. Pursuant to Order No. 3-1975a, said Sections 34 and 35 were included in the Corey Butte Field. The Red River "B" zone underlying Section 34 was spaced on a 640-acre basis pursuant to Order No. 17-1997. The Red River "B" zone underlying Section 35 was spaced on a 640-acre basis pursuant to Order No. 19-2007; this spacing unit was vacated by Order No. 64-

2013, which additionally established a 320-acre spacing unit consisting of the West Half of Section 35.

- 4. Pursuant to Order No. 18-1997, said Section 3 was included in the Pete's Creek Field, and the Red River "B" zone underlying the section was spaced on a 640-acre basis.
- 5. In Luff's opinion, the Red River "B" reservoir underlying all of said lands is part of the same common source of supply. Since the majority of the Unit Area is in the Corey Butte Field, Luff proposes that said Section 3 also be included in the Corey Butte Field.
- 6. Three producing wells, each originally drilled by Continental Resources, Inc. and now operated by Luff, have been drilled in the Unit Area. The Travers 1-34H well was drilled in 2007, and currently produces from a spacing unit consisting of all of said Section 34. The Carla 1-35H was drilled in 2008 and was abandoned shortly after; however, in 2014 Luff re-entered the wellbore and isolated the original lateral, drilled a new lateral, and reestablished production. The Carla 1-35H currently produces from a spacing unit consisting of the West Half of said Section 35. The Fowler 1-3H well was originally drilled in 2007, and Luff drilled two additional laterals in 2015. The Fowler 1-3H currently produces from a spacing unit consisting of all of said Section 3.
- 7. Luff operates a number of Red River "B" secondary recovery units in Harding County, South Dakota and Bowman County, North Dakota, including the Pete's Creek Red River Unit directly adjacent to the Unit Area and the nearby East Harding Springs Red River Unit. Based on Luff's experience with other Red River "B" wells and units, Luff believes that unitization of the Unit Area and implementation of a secondary recovery project consisting of a water flood will substantially increase the recovery of oil and gas from the Red River "B" formation underlying the Unit Area. At the hearing in this matter, or at an earlier date if a hearing is not held, Luff will submit exhibits addressing, among other things, the matters set forth in ARSD 74:12:06:01, including the costs of the proposed water flood and the value of the additional hydrocarbons Luff expects to produce as a result of the secondary recovery operation.

- 8. At the present time, Luff anticipates drilling one additional horizontal well in the Unit Area, a medium radius Red River "B" well that will start in Northwest Quarter of Section 3, cross a portion of Section 34, and end in Section 35. Luff's current plan is to produce oil and gas from this well for a period of nine months to one year, and then convert the new well to water injection service. Luff will obtain approval pursuant to ARSD Chapter 74:12:07 prior to commencing injection in this well or any other well in the Unit Area.
- 9. To protect the correlative rights of all owners of interests within the Unit Area, Luff believes that production from the proposed unit should be allocated on the basis of a two-phase formula, with Phase I including parameters for Current Rate and Remaining Primary Recovery, and Phase II including parameters for Mobile (Movable) Oil in Place and Estimated Ultimate Recovery from Primary Recovery (Primary EUR). At the hearing in this matter, or at an earlier date if a hearing is not held, Luff will submit a proposed plan for unit operations consisting of a unit agreement and unit operating agreement addressing, among other things, the matters set forth in Section 45-9-39 of the South Dakota Codified Laws.
- 10. Luff proposes that that the name of the proposed unit be the "Crooked Creek Red River Unit" and that it be designated as unit operator.
- 11. Luff requests that the Board authorize the inclusion in the unit operating agreement of a provision allowing the recovery of risk compensation in accordance with ARSD Chapter 74:12:10 from interest owners who elect not to participate in the risk and cost of unit operations after being afforded a reasonable opportunity to do so.
- 12. The establishment of a secondary recovery unit and implementation of a secondary recovery program is reasonably necessary to increase substantially the ultimate recovery of oil and gas from the lands.
- 13. The value of the estimated additional recovery of oil and gas exceeds the estimated additional cost incident to conducting such operation.

- 14. The proposed unit area is of such size and shape as may be reasonably required for the conduct of the unit operations and the conduct of such operation will have no adverse effect upon other portions of the pool.
- 15. The Board has authority to hear and decide this matter pursuant to, and the subject of this petition involves, SDCL Sections 45-9-37 through 45-9-49 and ARSD 74:12:06:01.

WHEREFORE, applicant respectfully requests that the Board issue its notice of opportunity for hearing and, if any interested party intervenes in accordance with said notice, set this matter for hearing at the regularly scheduled hearings in May 2018, or such other date as may be established by the Board, and that the Board enter its order granting the relief requested.

Dated this 33day of March, 2018.

## LUFF EXPLORATION COMPANY

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