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

IN THE MATTER OF THE PETITION OF **LUFF EXPLORATION** COMPANY, DENVER, CO, TO AMEND **BOARD** ORDER NOS. 2, 8-95, 20-97, AND ANY OTHER APPLICABLE ORDERS FOR THE BUFFALO FIELD TO ESTABLISH A 960-ACRE SPACING UNIT CONSISTING OF ALL OF SECTION 22 AND THE N/2 OF SECTION 27, TOWNSHIP 22 NORTH, RANGE 4 EAST, HARDING COUNTY, SD, AND AUTHORIZE THE DRILLING OF A HORIZONTAL WELL WITH ONE OR MORE LATERALS TO BE COMPLETED IN THE RED RIVER "B" ZONE AT ANY LOCATION NOT CLOSER THAN FEET TO THE BOUNDARY OF SAID SPACING UNIT; TO EXPAND OUTLINE OF THE BUFFALO FIELD TO INCLUDE ALL SAID LANDS: AUTHORIZE THE ISSUANCE OF A PERMIT FOR SUCH HORIZONTAL WELL; AND FOR OTHER RELIEF AS THE BOARD DEEMS APPROPRIATE.

OIL AND GAS CASE NO. 11-2018

ORDER

SECRETARY'S ORDER UNDER SDCL 45-9-74

A Petition ("Petition") of Luff Exploration Company ("Luff") was submitted to the South Dakota Board of Minerals and Environment ("Board") on May 23, 2018. The Board prepared and published a Notice of Opportunity for Hearing ("Notice") and Luff caused a copy of the Petition and the Notice to be served by mail or personally on each party affected by the petition. No petitions to intervene were filed in accordance with the Notice. Therefore, pursuant to South Dakota Codified Laws (SDCL) 45-9-74, SDCL 45-9-20 through 29, and Administrative Rules of South Dakota (ARSD) 74:12:02:06, and based upon Luff's Petition and the supporting documents filed by Luff, the Secretary makes and enters the following order:

Luff represents the owners of interests in the oil and gas leasehold estate underlying all or portions of Section 22, and the North Half of Section 27, all in Township 22 North, Range 4 East of the Black Hills Meridian, Harding County, SD.

In Order No. 2, the Board established 160-acre spacing for the Buffalo Field. Numerous subsequent orders of the Board have extended the boundaries of the field and amended the spacing units established for the field. In Order No. 20-97, the Board extended the boundaries of the Buffalo Field and established 640-acre spacing units for horizontal drilling within the "B" zone of the Buffalo Field, Red River pool.

Said Sections 22 and 27, which border the Buffalo Field, are not currently included within any field; however, in Order No. 8-95 the Board established 640-acre spacing for directional drilling in Sections 22 and 27. Evidence submitted by Luff indicates that Section 22, and the North Half of Section 27, are part of the same common source of supply.

Luff desires to drill a horizontal well in the Red River "B" zone of the proposed spacing unit, in a northwest-to-southeast direction. Evidence submitted by Luff indicates there are additional recoverable hydrocarbons in the Red River "B" zone underlying the proposed spacing unit.

Such a spacing unit is not smaller than the maximum area that can be efficiently and economically drained by the proposed well and the size, shape and location of the spacing unit will result in the efficient and economic development of the pool as a whole.

IT IS THEREFORE ORDERED

- A. Section 22, and the North Half of Section 27, both in Township 22 North, Range 4 East, are hereby included in the Buffalo Field
- B. A spacing unit consisting of all of Section 22, and the North Half of Section 27, Township 22 North, Range 4 East is hereby established in the Buffalo Field.
- C. One horizontal well is authorized to be drilled on this spacing unit in the Red River "B" zone, with the wellbore located not closer than 500 feet to the spacing unit boundary.

D. This order amends prior orders concerning the above-described land, including

without limitation Order Nos. 2, 8-95, and 20-97. Because only the Red River "B" zone is

included in this order, this order does not affect the Red River "C" and "D" zone spacing in the

area.

E. That all portions of previous orders of the Board, if any, which are not amended

by this Order shall remain in full force and effect until further order of the Board or Secretary.

F. That upon filing all required further information and forms with the Department

of Environment and Natural Resources, drilling permits may be issued for the horizontal well on

the spacing unit established above.

Dated and signed this 6th day of July 2018.

Steven M. Pirner

Secretary

Department of Environment and Natural Resources