

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

<p>IN THE MATTER OF THE PETITION OF LUFF EXPLORATION COMPANY TO AMEND BOARD ORDER NOS. 2, 12-84, 8-95, 20-97, AND ANY OTHER APPLICABLE ORDERS FOR THE BUFFALO FIELD TO ESTABLISH A 960-ACRE SPACING UNIT FOR THE BUFFALO FIELD CONSISTING OF THE SE/4 OF SECTION 9, THE SW/4 OF SECTION 10, THE W/2 OF SECTION 15 AND THE E/2 OF SECTION 16, TOWNSHIP 22 NORTH, RANGE 4 EAST, HARDING COUNTY, SOUTH DAKOTA, AND AUTHORIZE THE DRILLING OF A HORIZONTAL WELL WITH ONE OR MORE LATERALS IN THE RED RIVER "B" ZONE AT ANY LOCATION NOT CLOSER THAN 500 FEET TO THE BOUNDARY OF SAID SPACING UNIT; TO AUTHORIZE THE ISSUANCE OF A PERMIT FOR SUCH HORIZONTAL WELL; AND FOR OTHER RELIEF AS THE BOARD DEEMS APPROPRIATE.</p>	<p style="text-align:center">OIL AND GAS CASE NO. 5-2014</p> <p style="text-align:center">ORDER</p>
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**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 March 25, 2014. 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 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 owners of interests in the oil and gas leasehold estate in all or portions of the SE/4 of Section 9, the SW/4 of Section 10, the W/2 of Section 15, and the E/2 of Section 16, Township 22 North, Range 4 East, Harding County, South Dakota.

Pursuant to Order Nos. 2-78, 20-97, 2-10 and 6-13, all of these lands other than the W/2 of Section 15 are included within the Buffalo Field. Sections 9 and 16 constitute 640-acre spacing units for horizontal drilling pursuant to Order No. 20-97 and Order No. 12-84, respectively. Pursuant to Order No. 4-14, the NE/4 of Section 10, together with the NW/4 of Section 11, the E/2 of Section 3 and the W/2 of Section 2 constitute a 960-acre spacing unit. The W/2 of Section 15 is not currently included in any field established by order of the Board, but it is adjacent to the current outline of the Buffalo Field and evidence submitted by Luff indicates it is likely to be productive of hydrocarbons from the same Red River "B" pool currently included within the Buffalo Field.

Luff desires to drill a horizontal well in the Red River "B" Formation in a generally northwest/southeast orientation across the 960 acres included in the proposed spacing unit. The proposed spacing unit accommodates the wellbore planned by Luff and is also consistent with other spacing orders entered by the Board in the area.

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. The outline of the Buffalo Field is extended to include the W/2 of Section 15, Township 22 North, Range 4 East, Harding County, South Dakota. A spacing unit consisting of the SE/4 of Section 9, the SW/4 of Section 10, the W/2 of Section 15, and the E/2 of Section 16,

Township 22 North, Range 4 East, is hereby established in the Buffalo Field.

B. A horizontal well with one or more laterals is allowed to be drilled on this spacing unit in the Red River "B" pool with any such laterals located not closer than 500 feet to the spacing unit boundary.

C. This order amends prior orders concerning the above described land, including without limitation Order Nos. 2, 12-84, 8-95 and 20-97.

D. 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.

E. That upon filing all required further information and forms with the Department of Environment and Natural Resources; a drilling permit may be issued for the horizontal well on the spacing unit established above.

Dated and signed this 19<sup>th</sup> day of May 2014.

A handwritten signature in black ink, appearing to read 'S. Pirmer', with a horizontal line extending to the right.

Steven M. Pirmer  
Secretary  
Department of Environment and Natural Resources