### BEFORE THE INDUSTRIAL COMMISSION

#### OF THE STATE OF NORTH DAKOTA

CASE NO. 7533 ORDER NO. 8852

IN THE MATTER OF A HEARING CALLED ON A MOTION OF THE COMMISSION TO CONSIDER ELIMINATING THE INTERWELL DISTANCE AND AMENDING THE SURFACE CASING, GAS-OIL RATIO, AND BOTTOM HOLE PRESSURE TESTING REQUIREMENTS FOR ALL SECONDARY RECOVERY PROJECTS AND POOLS LOCATED IN THE FOLLOWING FIELDS WITHIN BURKE COUNTY, NORTH DAKOTA: BATTLEVIEW, BLACK SLOUGH, BOWBELLS, CARTER, COLUMBUS, COTEAU, CUSTOMS, DALE, FLAXTON, FOOTHILLS, LAKESIDE, LIGNITE, LITTLE BUTTE, LUCY, MINNESOTA, NIOBE, NORTH STAR, NORTH TIOGA, NORTHEAST FOOTHILLS, PERELLA, PICKETT, PORTAL, RENNIE LAKE, RIVAL, SHORT CREEK, SOUTH COTEAU, SPIRAL, STONEVIEW, STONY RUN, THOMPSON LAKE, TIOGA, UPPER DES LACS, VANVILLE, VIKING, WOBURN.

### ORDER OF THE COMMISSION

## THE COMMISSION FINDS:

- (1) This cause came on for hearing at 9:00 a.m. on the 20th day of December, 2000. Order No. 8799, dated January 4, 2001, continued this matter for 60 days or until further order of the Commission.
- (2) Special field rules are currently in effect for the Battleview-Madison Pool, Black Slough-Madison Pool, Bowbells-Madison Pool, Carter-Madison and Midale/Nesson Pools, Columbus-Madison Pool, Coteau-Madison Pool, Customs-Midale/Nesson Pool, Dale-Madison Pool, East Flaxton Madison Unit, Flaxton-Madison Pool, Foothills-Madison Pool, Lakeside-Midale/Nesson Pool, Lignite-Madison Pool, Little Butte-Madison Pool, Lucy-Madison Pool, Minnesota-Madison Pool, Niobe-Madison Pool, North Star-Madison Pool, North Tioga-Bakken, Madison, Red river, Stonewall and Winnipegosis Pools, Northeast Foothills Madison Unit, Northeast Foothills-Madison and Mission Canyon Pools, Perella-Madison Pool, Pickett-Madison Pool, Portal-Madison Pool, Rennie Lake-Madison Pool, Rival Madison Unit, Rival-Madison Pool, Short Creek-Madison Pool, South Coteau-Madison Pool, Spiral-Madison Pool, Stoneview-Bakken, Duperow, Madison, Red River, Stonewall and Winnipegosis Pools, Stony Run-Madison Pool, Thompson Lake-Madison Pool, Tioga-Devonian, Madison, Minnelusa, Ordovician, Silurian, Stonewall and Winnipeg/Deadwood Pools, Upper Des Lacs-Madison Pool, Vanville-Madison Pool, Viking-Madison Pool, Woburn-Madison Pool in Burke County, North Dakota. Said rules require the following:
  - (a) Surface casing is not required to be set at a point deep enough to protect the fresh waters found within the Fox Hills Formation.
  - (b) All wells drilled must maintain an interwell setback

from any well permitted to or producing from each respective pool.

- (c) Semiannual gas-oil ratio tests must be conducted.
- (d) Annual reservoir pressure tests must be conducted.
- (3) Potable waters are located within the Fox Hills Formation and sufficient surface casing should be set to protect such waters.
- (4) An interwell setback prevents operators from drilling a well at an optimum location in the reservoir. A well drilled at an optimum location may produce oil that might otherwise not be produced, therefore, the interwell setback should be eliminated.
- (5) Semiannual gas-oil ratio tests are a financial burden on operators and should be required annually only when the gas is not being marketed, although additional tests conducted by the operator may provide valuable information and should be submitted to the Commission.
- (6) Annual reservoir pressure tests on existing wells are a financial burden on operators and should be required only when a new well is completed in the pool, although additional tests conducted by the operator may provide valuable information and should be submitted to the Commission.
  - (7) There were no objections to this case.
- (8) The aforementioned protection of potable waters and relief from certain field rules will prevent waste, avoid the drilling of unnecessary wells, and protect correlative rights.

# IT IS THEREFORE ORDERED:

- (1) Commission orders establishing special field rules for the aforementioned pools in paragraph (2) above are hereby amended to provide for the following:
  - (a) Surface casing shall be set and cemented at a point not less than 50 feet below the base of the Fox Hills Formation.
  - (b) No interwell setback shall be required to a well permitted to or producing from any respective pool.
  - (C) The gas-oil ratio of all wells not connected to a gas gathering system shall be measured annually during the month of May. The reservoir pressure shall be measured within 45 days in all wells hereinafter completed in any pool. Drill stem test pressures are acceptable for determining reservoir pressure. Pressure measurements shall be made at or adjusted to its respective subsea datum after the well has been shut in for a minimum of 48 hours. All gas-oil ratio and reservoir pressure determinations shall be made by methods approved by the Director and reported to the Director within 15 days following the end of the month in which they are determined. The Director is authorized to waive these requirements if the necessity therefor can be demonstrated to his satisfaction. All additional gas-oil ratio and reservoir pressure determinations conducted on any well, but not specifically required herein, shall be reported to the Director within 15 days following the end of the month in which they are determined.

- (2) Paragraph (8) of Commission Order No. 8589, which sets forth the gas-oil ratio and reservoir pressure requirements for the North Tioga-Red River Pool, shall remain in full force and effect until further order of the Commission.
- (3) This order shall remain in full force and effect until further order of the Commission.

Dated this 15th day of February, 2001.

# INDUSTRIAL COMMISSION STATE OF NORTH DAKOTA

- /s/ John Hoeven, Governor
- /s/ Wayne Stenehjem, Attorney General
- /s/ Roger Johnson, Commissioner of Agriculture