

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

CASE NO. 7145
(CONTINUED)
ORDER NO. 8351

IN THE MATTER OF A HEARING
CALLED ON A MOTION OF THE
COMMISSION TO CONSIDER THE
APPLICATION OF LYCO OPERATING
COMPANY FOR AN ORDER
ESTABLISHING 320-ACRE TEMPORARY
SPACING FOR THE DEVELOPMENT OF
AN OIL AND/OR GAS POOL IN THE
INTERLAKE FORMATION UNDERLYING
THE SE/4 OF SECTION 24, AND THE
NE/4 OF SECTION 25, T.161N., R.99W.,
DIVIDE COUNTY, NORTH DAKOTA,
DISCOVERED BY APPLICANT'S #25-2
PLUMER-LUNDQUIST WELL, AND
ENACTING SUCH SPECIAL FIELD RULES
AS MAY BE NECESSARY AND/OR
ADVISABLE.

TEMPORARY ORDER OF THE COMMISSION

THE COMMISSION FINDS:

(1) This cause came on for hearing at 9:00 a.m. on the 21st day of October, 1998.

(2) The record was left open until October 28, 1998 for the submission of additional evidence.

(3) Geological and engineering evidence presented to the Commission relative to the matter of well spacing indicates that the Burg-Silurian Pool, as classified and defined in this order, should be developed on a pattern of one well to 320 acres in order to drain efficiently the recoverable oil from said pool, assure rapid development, avoid the drilling of unnecessary wells, and prevent waste in a manner that will protect correlative rights.

(4) Temporary 320-acre spacing in the Silurian Pool in this field will result in the efficient and economical development of the field as a whole and will operate so as to prevent waste and provide maximum ultimate recovery, will avoid the drilling of unnecessary wells, and will protect correlative rights.

(5) The unrestricted flaring of gas produced from the Burg-Silurian Pool could be considered waste, and in order to minimize such, production from the pool should be restricted until the wells producing therefrom are connected to a gas gathering and processing facility.

(6) Certain special field rules are necessary to prevent waste and protect against the contamination and pollution of surface lands and fresh waters.

IT IS THEREFORE ORDERED:

(1) The following described tracts of land in Divide County, North Dakota, be, and the same are hereby redesignated the Burg Field:

TOWNSHIP 161 NORTH, RANGE 99 WEST, 5TH PM
THE SE/4 OF SECTION 24 AND THE NE/4 OF SECTION 25,

together with those additional quarter sections or governmental lots corresponding thereto as may be proven productive by wells drilled on lands within one mile of the boundaries of the field as set forth above, provided further that such extensions of the field boundaries shall include only sufficient acreage to form a spacing unit for such wells, and any intervening lands.

(2) The Burg-Silurian Pool be, and the same is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Ashern Formation to above the top of the Middle Member of the Interlake Formation within the limits of the field as set forth above.

(3) Effective this date, the temporary spacing for the development of the Burg-Silurian Pool be, and the same is hereby set at one well to 320 acres.

(4) All wells hereafter drilled to said pool shall be located not less than 660 feet from a spacing unit boundary nor closer than 1980 feet to a well permitted to or producing from the pool. Wells presently permitted to or producing from the pool that do not conform to this spacing pattern shall be considered exceptions.

(5) The SE/4 of Section 24 and the NE/4 of Section 25, Township 161 North, Range 99 West, Divide County, North Dakota, is designated a 320-acre spacing unit for the Burg-Silurian Pool.

(6) Spacing units in the Silurian Pool in the Burg Field shall consist of two adjacent quarter sections, or governmental lots corresponding thereto within the same section. The configuration of spacing units, either standup or laydown, shall be determined by the location of the first well in the section, such that the aforesaid well will be nearest to the center of the spacing unit. Spacing units for wells being equi-distant from the mid-section lines shall be designated by the operator; however, the Commission shall have continuing jurisdiction, and in the event that spacing units hereafter formed by this policy do not coincide with the geological and physical nature of the reservoir, the Commission may alter specific spacing units upon application by any interested party, after due notice and hearing.

(7) No well shall be drilled hereafter in the Burg-Silurian Pool except in conformity with the regulations above without special order of the Commission after due notice and hearing.

(8) The following rules concerning the casing, tubing and equipping of the wells shall apply to the subsequent drilling and operation of wells in the Burg-Silurian Pool:

- (a) The surface casing shall consist of new or reconditioned pipe that has been previously tested to 1000 pounds per square inch. The casing shall be set and cemented at a point not less than 50 feet below the base of the Fox Hills Formation. Sufficient cement shall be used to fill the annular space outside the pipe to the surface of the ground, or the bottom of the cellar, and sufficient scratchers and centralizers shall be used to assure a good cement job. Cement shall be allowed to stand a minimum of 12 hours before drilling the plug or initiating tests. The quality of cement shall conform to the standards provided under North Dakota Administrative Code (NDAC) Section 43-02-03-21;
- (b) The producing or oil string shall consist of new or reconditioned pipe that has been previously tested to 2000 pounds per square inch. Casing shall be set and cemented at a point not higher than the top of the producing

formation, or at a point approved by the Director. Sufficient cement shall be used and applied in such manner as to adequately protect and isolate all formations containing oil and/or gas, protect the pipe through salt sections encountered, and to isolate the Dakota-Lakota Series. The cement shall be allowed to stand a minimum of 15 hours before drilling the plug or initiating tests. The quality of cement shall conform to the standards provided under NDAC Section 43-02-03-21. After cementing, the casing shall be tested by application of pump pressure of at least 2000 pounds per square inch. If, at the end of 30 minutes this pressure has dropped 150 pounds per square inch or more, the casing shall be repaired. Thereafter, the casing shall again be tested in the same manner. Further work shall not proceed until a satisfactory test has been obtained;

- (c) All well-head fittings and connections shall have a working pressure in excess of that to which they are expected to be subjected; and,
- (d) All wells shall be equipped with tubing and all flowing wells shall be equipped with tubing and tubing packer; all tubing shall be of sufficient internal diameter to allow the passage of a bottom hole pressure gauge for the purpose of obtaining bottom hole pressure measurements.

(9) The gas-oil ratio of each well shall be measured during the months of May and November, and the reservoir pressure of flowing wells shall be measured in the months of May and November, and in pumping wells when the rods are pulled but at least once annually and reported to the Commission within 15 days following the end of the month in which they are determined. Pressure measurements shall be made at or adjusted to a subsea datum of 8320 feet after the well has been shut in for 48 hours. All gas-oil ratios and reservoir pressure determinations shall be made by methods approved by the Director. The Director is authorized to waive these requirements if the necessity therefore can be demonstrated to his satisfaction.

(10) No salt water, drilling mud, crude oil or waste oil shall be stored in pits in this field, except in an emergency, and approved by the Director.

(11) For the purposes of division of production to owners of interests in spacing units established by this order, and proven productive prior to the date hereof, this order shall be retroactive to the date of first production.

(12) All wells in the Burg-Silurian Pool shall be allowed to produce at an unrestricted rate for a period of 60 days commencing on the first day oil is produced through well-head equipment into tanks from the ultimate producing interval after casing has been run; after that, oil production from such wells shall not exceed an average of 200 barrels per day for a period of 60 days; after that, oil production from such wells shall not exceed an average of 150 barrels per day for a period of 60 days, thereafter, oil production from such wells shall not exceed an average of 100 barrels of oil per day; if and when such wells are connected to a gas gathering and processing facility the foregoing restrictions shall be removed, and the wells shall be allowed to produce at a maximum efficient rate.

(13) If the flaring of gas produced with crude oil from the Burg-Silurian Pool causes, or threatens to cause, degradation of ambient air quality, production from the pool shall be further restricted.

(14) This order shall cover all of the Burg-Silurian Pool, common source of supply of crude oil and/or natural gas as herein defined, and

shall continue in full force and effect until the 31st day of May, 2000.
That the proper spacing for the pool will be considered by the Commission
on or before the regularly scheduled meeting in April, 2000.

Dated this 4th day of November, 1998.

INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA

/s/ Edward T. Schafer, Governor

/s/ Heidi Heitkamp, Attorney General

/s/ Roger Johnson, Commissioner of Agriculture