

BEFORE THE INDUSTRIAL COMMISSION  
OF THE STATE OF NORTH DAKOTA

CASE NO. 13244  
ORDER NO. 15517

IN THE MATTER OF A HEARING CALLED ON  
A MOTION OF THE COMMISSION TO  
CONSIDER THE APPLICATION OF HALEK  
OPERATING ND LLC FOR AN ORDER  
AMENDING THE FIELD RULES FOR THE  
DICKINSON-LODGEPOLE POOL TO CREATE A  
SPACING UNIT COMPRISED OF THE N/2 OF  
SECTION 6 LESS THOSE LANDS CURRENTLY  
WITHIN THE DICKINSON-LODGEPOLE UNIT,  
T.139N., R.96W., STARK COUNTY, ND,  
AUTHORIZING THE DRILLING OF A WELL AT  
A LOCATION NOT LESS THAN 500 FEET  
FROM THE BOUNDARY OF SAID PROPOSED  
SPACING, AND SUCH OTHER RELIEF AS IS  
APPROPRIATE.

ORDER OF THE COMMISSION

THE COMMISSION FINDS:

- (1) This cause came on for hearing at 9:00 a.m. on the 16th day of September, 2010.
- (2) Halek Operating North Dakota LLC (Halek) made application to the Commission for an order amending the field rules for the Dickinson-Lodgepole Pool to create and establish a spacing unit comprised of the N/2 of Section 6, less those lands currently within the Dickinson-Lodgepole Unit, Township 139 North, Range 96 West, Stark County, North Dakota (Section 6), authorizing the drilling of a well at any location not less than 500 feet from the boundary of said proposed spacing unit, and such other relief as is appropriate.
- (3) Order No. 6861 entered in Case No. 5933, created the Dickinson-Lodgepole Unit. The Unit became effective on July 1, 1994 with the signing of Commission Order No. 6862 entered in Case No. 5935.
- (4) Order No. 6932 entered in Case No. 5964, the most recent spacing order for the Dickinson-Lodgepole Pool, established proper spacing at one well per 320 acres and requires wells to be located not less than 660 feet from a spacing unit boundary. Halek indicated they have no

objection to locating their proposed well 660 feet from their proposed spacing unit in paragraph (2) above.

(5) The N/2 of Section 6 is within the boundary of the Dickinson Field, although the N/2 and SE/4 of Lot 1, the N/2 of Lot 2 and the NE/4 of Lot 3 are located within the boundary of the Dickinson-Lodgepole Unit. The Commission notes Lot 1 comprises of the NE/4 NE/4, Lot 2 comprises of the NW/4 NE/4, and Lot 3 comprises of the NE/4 NW/4. The lots contain approximately 40 acres each and the proposed spacing unit contains approximately 250 acres.

(6) Conoco Inc. drilled their Walton #84 well, located in the NE/4 NW/4 of Section 6, to the Dickinson-Lodgepole Pool. The well encountered noncommercial production in the Lodgepole Pool and was plugged as a dry hole on January 29, 1994.

(7) Halek, using proprietary photo mapping, believes a Lodgepole mound exists in the N/2 of Section 6, which is a separate reservoir from the Dickinson-Lodgepole Unit.

(8) Due to the geological conditions, the creation of the proposed spacing unit is necessary to protect correlative rights and the proposed location is the most advantageous point to drill a test well.

(9) Pursuant to Section 38-08-07 of the North Dakota Century Code, spacing units must be of uniform size and shape for the entire pool, except when found necessary to prevent waste, avoid the drilling of unnecessary wells, or to protect correlative rights, the Commission is authorized to divide any pool into zones and establish spacing units for each zone, which units may differ in size and shape from those established in any other zone.

(10) There were no objections to this application.

(11) If Halek's activities are successful, greater ultimate recovery of oil and gas from the pool will be achieved which will prevent waste and the drilling of unnecessary wells in a manner which will not have a detrimental effect on correlative rights. In order to prevent waste, and to protect correlative rights, this application should be granted.

**IT IS THEREFORE ORDERED:**

(1) The N/2 of Section 6, less the N/2 and SE/4 of Lot 1, the N/2 of Lot 2 and the NE/4 of Lot 3, Township 139 North, Range 96 West, Stark County, North Dakota, is hereby established as a 250-acre spacing unit in the Dickinson-Lodgepole Pool and Zone VI is hereby created to include said spacing unit.

(2) The Commission shall have continuing jurisdiction in this matter and specifically reserves the authority, upon its own motion or the motion of any interested party, to determine whether the 250-acre spacing unit herein established is justified.

(3) The Dickinson Field is hereby redefined as the following described tracts of land in Stark County, North Dakota:

TOWNSHIP 140 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 13, 22, 23, 24, 25, 26, 27, 33, 34, 35 AND 36,

TOWNSHIP 140 NORTH, RANGE 96 WEST, 5TH PM  
ALL OF SECTIONS 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 27, 28, 29, 30, 31, 32, AND 33,

TOWNSHIP 139 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 1, 2, AND 3, AND THE NE/4 OF SECTION 4,

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM  
ALL OF SECTIONS 5 AND 6,

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.

(4) The Dickinson-Lodgepole Pool is hereby defined as the following described tracts of land in Stark County, North Dakota:

ZONE I (320)

TOWNSHIP 140 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 13, 22, 23, 24, 26, 27, 33, AND 34, AND THE N/2 AND SW/4 OF SECTION 25,

TOWNSHIP 140 NORTH, RANGE 96 WEST, 5TH PM  
ALL OF SECTIONS 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 27, AND 28, THE N/2 AND SE/4 OF SECTION 29, AND THE N/2 AND SW/4 OF SECTION 30,

TOWNSHIP 139 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 1 AND 3,

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM  
THE S/2 OF SECTION 6,

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.

ZONE II (Dickinson-Lodgepole Unit)

TOWNSHIP 140 NORTH, RANGE 96 WEST, 5TH PM

ALL OF SECTION 31, THE S/2 S/2 SW/4 OF SECTION 29, THE SE/4 SE/4 SE/4 OF SECTION 30, THE W/2, THE W/2 W/2 SE/4, THE W/2 SW/4 NE/4, AND THE SW/4 NW/4 NE/4 OF SECTION 32,

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

THE N/2 OF SECTION 5 AND THE N/2 AND SE/4 OF LOT 1, THE N/2 OF LOT 2, AND THE NE/4 OF LOT 3 OF SECTION 6.

ZONE III (West Dickinson-Lodgepole Unit)

TOWNSHIP 140 NORTH, RANGE 97 WEST, 5TH PM

ALL OF SECTION 36, THE S/2 S/2 SE/4 OF SECTION 25, AND THE NE/4, THE E/2 SE/4, THE N/2 NW/4 SE/4, AND THE SE/4 NW/4 SE/4 OF SECTION 35.

ZONE IV (Duck Creek-Lodgepole Unit)

TOWNSHIP 140 NORTH, RANGE 97 WEST, 5TH PM

THE SW/4, THE SW/4 NW/4 SE/4, AND THE SW/4 SE/4 OF SECTION 35,

TOWNSHIP 139 NORTH, RANGE 97 WEST, 5TH PM

THE N/2 AND THE N/2 N/2 SW/4 OF SECTION 2.

ZONE V (Subdivision-Lodgepole Unit)

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

THE S/2 OF SECTION 5.

ZONE VI (250)

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

THE N/2 OF SECTION 6, LESS THE N/2 AND SE/4 OF LOT 1, THE N/2 OF LOT 2 AND THE NE/4 OF LOT 3.

(5) The Dickinson-Lodgepole Pool is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Mission Canyon Formation to above the top of the Bakken Formation within the limits of the field as set forth above.

(6) The proper spacing for the development of Zone I in the Dickinson-Lodgepole Pool is hereby set at one well per 320 acres.

(7) All wells hereafter drilled in Zone I in the Dickinson-Lodgepole Pool shall be located not less than 660 feet from a spacing unit boundary. Wells presently permitted to or producing from the pool that do not conform to this spacing pattern shall be considered exceptions.

(8) The S/2 of Section 6, Township 139 North, Range 96 West, Stark County, North Dakota, is hereby designated a 320-acre spacing unit in Zone I in the Dickinson-Lodgepole Pool.

(9) Spacing units hereafter created in Zone I in the Dickinson-Lodgepole Pool 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 center of each spacing unit 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

(10) Zone II consists of the Dickinson-Lodgepole Unit. Unit operations shall be conducted pursuant to Commission Order No. 6861.

(11) Zone II in the Dickinson-Lodgepole Pool shall not be extended except by further order of the Commission after due notice and hearing.

(12) Zone III consists of the West Dickinson-Lodgepole Unit. Unit operations shall be conducted pursuant to Commission Order No. 8092.

(13) Zone III in the Dickinson-Lodgepole Pool shall not be extended except by further order of the Commission after due notice and hearing.

(14) Zone IV consists of the Duck Creek-Lodgepole Unit. Unit operations shall be conducted pursuant to Commission Order No. 7411.

(15) Zone IV in the Dickinson-Lodgepole Pool shall not be extended except by further order of the Commission after due notice and hearing.

(16) Zone V consists of the Subdivision-Lodgepole Unit. Unit operations shall be conducted pursuant to Commission Order No. 8402.

(17) Zone V in the Dickinson-Lodgepole Pool shall not be extended except by further order of the Commission after due notice and hearing.

(18) The proper spacing for the development of Zone VI in the Dickinson-Lodgepole Pool is hereby set at one well per 250 acres.

(19) All wells hereafter drilled in Zone VI in the Dickinson-Lodgepole Pool shall be located not less than 660 feet from a spacing unit boundary. Wells presently permitted to or producing from the pool that do not conform to this spacing pattern shall be considered exceptions.

(20) The N/2 of Section 6, less the N/2 and SE/4 of Lot 1, the N/2 of Lot 2 and the NE/4 of Lot 3, Township 139 North, Range 96 West, Stark County, North Dakota, are hereby designated a 250-acre spacing unit in Zone VI in the Dickinson-Lodgepole Pool.

(21) Spacing units hereafter created in Zone VI in the Dickinson-Lodgepole Pool shall be determined after due notice and hearing.

(22) Zone VI in the Dickinson-Lodgepole Pool shall not be extended except by further order of the Commission after due notice and hearing.

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

(24) The following rules concerning the casing, tubing and equipping of the wells shall apply to the subsequent drilling and operation of wells in the Dickinson-Lodgepole 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 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 a manner as to protect and isolate all formations containing oil and/or gas, protect the pipe through salt sections encountered, and 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 1500 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; a tubing packer must also be utilized in flowing wells unless a waiver is obtained from the Director after demonstrating the casing will not be subjected to excessive pressure or corrosion; 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.

(25) 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 the Dickinson-Lodgepole Pool. Drill stem test pressures are acceptable for determining reservoir pressure. Pressure measurements shall be made at or adjusted to a subsea datum of 3030 feet 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.

(26) 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.

(27) All wells in the Dickinson-Lodgepole Pool connected to a gas gathering and processing facility shall be allowed to produce at a maximum efficient 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. Immediately after the completion of any well in the Dickinson-Lodgepole Pool, the operator shall file with the Director a completion report (Form 6). Within 30 days, or a reasonable time thereafter, following the filing of a completion report, a hearing shall be docketed to have the operator show cause why the production restriction imposed herein should not remain in place until such time a plan of unitization and secondary recovery operations for the reservoir is submitted and considered by the Commission.

(28) All wells in the Dickinson-Lodgepole Pool not connected to a gas gathering and processing facility shall be allowed to produce at a maximum efficient rate for a period of 30 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; 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 production rates of wells shall be in accordance with paragraph (20) above. The Director is authorized to issue an administrative order allowing unrestricted production at a maximum efficient rate for a period not to exceed 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, if the necessity therefor can be demonstrated to his satisfaction.

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

(30) This order shall cover all of the Dickinson-Lodgepole Pool common source of supply of crude oil and/or natural gas as herein defined, and shall continue in full force and effect until

further order of the Commission or until the last well in the pool has been plugged and abandoned.

Dated this 14th day of October, 2010.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

By the Director, on behalf of the Commission

/s/ Lynn D. Helms, Director