

BEFORE THE INDUSTRIAL COMMISSION  
OF THE STATE OF NORTH DAKOTA

CASE NO. 16305  
ORDER NO. 18570

IN THE MATTER OF A HEARING CALLED ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF BURLINGTON RESOURCES OIL & GAS CO. LP FOR AN ORDER EXTENDING THE OUTLINE AND AMENDING THE APPLICABLE ORDERS FOR THE SOUTH HEART FIELD AND SUCH OTHER FIELDS AS MAY BE APPROPRIATE SO AS TO DESIGNATE SECTIONS 18 AND 19; SECTIONS 30 AND 31, T.139N., R.96W.; SECTIONS 1 AND 12; SECTIONS 2 AND 11; SECTIONS 3 AND 10, T.139N., R.97W.; SECTIONS 25 AND 36; SECTIONS 26 AND 35; SECTIONS 27 AND 34; AND SECTIONS 28 AND 33, T.140N., R.97W., STARK COUNTY, ND, AS 1280-ACRE DRILLING OR SPACING UNITS, ELIMINATING THE 1220-FOOT SETBACK POLICY FOR WELLS DRILLED ON SUCH UNITS, EXTENDING THE STRATIGRAPHIC INTERVAL INCLUDED WITHIN ANY POOL IN WHICH SAID UNITS MAY BE INCLUDED TO INCLUDE TO DEPTH OF 100 FEET BELOW THE TOP OF THE THREE FORKS FORMATION, 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 14th day of December, 2011.
- (2) The engineering witness for Burlington Resources Oil & Gas Company LP (Burlington) provided telephonic testimony in this matter pursuant to North Dakota Administrative Code (NDAC) Section 43-02-03-88.2. A Telephonic Communication Affidavit was received on January 3, 2012; therefore, such testimony may be considered evidence.
- (3) Burlington made application to the Commission for an order extending the outline and amending the applicable orders for the South Heart Field and such other fields as may be appropriate so as to designate Sections 25 and 36; Sections 26 and 35; Sections 27 and 34; Sections 28 and 33, Township 140 North, Range 97 West (Sections 25, 36, 26, 35, 27, 34, 28, and 33);

Sections 1 and 12; Sections 2 and 11; Sections 3 and 10, Township 139 North, Range 97 West (Sections 1, 12, 2, 11, 3, and 10); Sections 18 and 19; and Sections 30 and 31, Township 139 North, Range 96 West (Sections 18, 19, 30, and 31), Stark County, North Dakota, as 1280-acre drilling or spacing units, eliminating the 1220-foot setback policy for wells drilled on such units, extending the stratigraphic interval included within any pool in which said units may be included to include to depth of 100 feet below the top of the Three Forks Formation, and such other relief as is appropriate.

(4) Burlington withdrew its requests to grant an exception to the Commission's 1220-foot setback policy and to extend the stratigraphic interval of the Bakken Pool.

(5) Section 28 is within the South Heart Field. Sections 25, 26, 27, 33, 34, 35, 36, 1, 2, and 3 are within the Dickinson Field. Sections 11, 12, 18, and 19, the SW/4 SE/4, S/2 SW/4, and the S/2 NW/4 SW/4 of Section 2, the E/2 SE/4 of Section 3, and the E/2 E/2 of Section 10 are within the Eland Field. Sections 30 and 31 are adjacent to or within one-half mile of the Versippi Field.

(6) The Bakken Pool is not spaced in the Dickinson, Eland, or Versippi Fields.

(7) The Commission does not as a matter of practice, establish pools without prior establishment of production in the field. However, in order to ease confusion and provide for orderly development in the area, the Dickinson, Eland, and Versippi-Bakken Pools should be established to prevent waste, avoid the drilling of unnecessary wells, and protect correlative rights. The operator of the first producing well in the Dickinson, Eland, and Versippi-Bakken Pools should submit exhibits to be included in the record for this case similar to those typically submitted in a temporary spacing hearing, subsequent to completing the first producing well in each respective Bakken Pool.

(8) The Commission requested Burlington submit the proposed surface locations of the proposed horizontal wells in the proposed 1280-acre spacing units so the Commission could establish the spacing units in the field in which the surface location is located. Burlington failed to supply such information so the Commission should establish Sections 28 and 33; Sections 1 and 12; and Sections 2 and 11 as 1280-acre drilling units.

(9) Burlington proposes to develop each standup 1280-acre spacing or drilling unit described as Sections 25 and 36; Sections 26 and 35; Sections 27 and 34; Sections 28 and 33; Sections 1 and 12; Sections 2 and 11; Sections 3 and 10; Sections 18 and 19; and Sections 30 and 31 by drilling a horizontal well in the upper Three Forks Formation in the Bakken Pool 1980 feet from the west boundary. Utilization of horizontal drilling technology as proposed would result in the wells being completed at a location or locations not in compliance with current applicable spacing orders for the Bakken Pool or NDAC Section 43-02-03-18. The horizontal well design proposed may be preliminary and could be changed for various reasons which is permissible as long as the horizontal well design still justifies the proposed spacing or drilling unit.

(10) The Commission will take administrative notice of the testimony given in Case No. 12246 which was scheduled on a motion of the Commission to consider amending the current Bakken Pool field rules to eliminate or reduce the setbacks currently established for the heel and toe of horizontal wells in North Dakota, and such other relief as is appropriate, heard on March 23, 2010. Order No. 14498 entered in Case No. 12246 amended all current 660 or 500-foot setback

requirements in any established Bakken Pool spacing unit or drilling unit relative to the heel and toe of a horizontal well to 200 feet.

(11) Case No. 16610, heard on the January 18, 2012 docket, is an application by Whiting Oil & Gas Corporation (Whiting) for an order amending the applicable orders for Zone II of the Dutch Henry Butte-Bakken Pool, Stark County, North Dakota, to allow up to four horizontal wells to be drilled on each spacing unit contained within the pool, and such other relief as is appropriate. Sections 15 and 22, Township 140 North, Range 97 West, Stark County, North Dakota, are currently a standup 1280-acre spacing unit in Zone II in the Dutch Henry Butte-Bakken Pool. The Whiting #21-15TFH Havelka well (File No. 21625) is a horizontal well permitted in the Dutch Henry Butte-Bakken Pool in the standup 1280-acre spacing unit described as said Sections 15 and 22. Removing said Sections 15 and 22 from the Dutch Henry Butte Field and placing them in the Dickinson Field will ease confusion and provide for orderly development.

(12) Case No. 16625 heard on the January 18, 2012 docket, is an application by Hess Corporation for an order extending the outline and amending the applicable orders for the St. Anthony-Bakken Pool to include Sections 5 and 8, Township 140 North, Range 96 West, Stark County, North Dakota, as a 1280-acre spacing unit, or alternatively designating said lands as a 1280-acre drilling unit, and allowing up to six horizontal wells to be drilled thereon, and such other relief as is appropriate.

(13) Case No. 16942 heard on the February 28, 2012 docket, is an application by Burlington for an order establishing five 1280-acre drilling units consisting of Sections 14 and 23; Sections 15 and 22; Sections 16 and 21; Sections 17 and 20; and Sections 18 and 19, Township 140 North, Range 96 West, Stark County, North Dakota, and allowing a horizontal well to be drilled in the Bakken Formation on each such drilling unit, and such other relief as is appropriate.

(14) Case No. 17009 heard on the February 29, 2012 docket, is an application by Fidelity Exploration & Production Company (Fidelity) for an order extending the field boundaries and amending the field rules for the Dutch Henry Butte-Bakken Pool to create and establish two 1280-acre spacing units comprised of Section 2 and 11, Township 140 North, Range 97 West; and Sections 6 and 7, Township 140 North, Range 96 West, Stark County, North Dakota, authorizing the drilling of one horizontal well on each spacing unit, and such other relief as is appropriate.

(15) Case No. 17209 heard on the March 28, 2012 docket, is an application by Fidelity for an order creating two 1280-acre drilling units comprised of Sections 13 and 24; and Sections 14 and 23, Township 140 North, Range 97 West, Stark County, North Dakota, authorizing the drilling of a horizontal well within each drilling unit, and such other relief as is appropriate.

(16) Geological and engineering evidence and testimony presented to the Commission relative to the matter of well spacing indicates the Eland and Versippi-Bakken Pools, as classified and defined in this order, should be developed on a pattern of one horizontal well per 1280 acres, and the Dickinson-Bakken Pool should be developed on a pattern of one horizontal well per 1280 acres in Zone I, up to four horizontal wells per 1280 acres in Zone II, and up to six horizontal wells per 1280 acres in Zone III, for the effective, economical, and efficient recovery of oil from said pools, to assure rapid development and provide maximum ultimate recovery, to avoid the drilling of unnecessary wells, and to prevent waste in a manner that will protect correlative rights.

(17) There were no objections to this application.

(18) Certain special field rules for the Dickinson, Eland, and Versippi-Bakken Pools are necessary to prevent waste and protect against the contamination and pollution of surface lands and fresh waters.

IT IS THEREFORE ORDERED:

(1) Sections 28 and 33, Township 140 North, Range 97 West; Sections 1 and 12; and Sections 2 and 11, Township 139 North, Range 97 West, Stark County, North Dakota, are hereby established as standup 1280-acre drilling units for the exclusive purpose of drilling one horizontal well within each said drilling unit within the Bakken Pool.

(2) Sections 25 and 36; Sections 26 and 35; Sections 27 and 34, Township 140 North, Range 97 West; and Sections 3 and 10, Township 139 North, Range 97 West, Stark County, North Dakota, are hereby established as standup 1280-acre spacing units for the exclusive purpose of drilling one horizontal well within each said spacing unit within the Dickinson-Bakken Pool and Zone I is hereby created to include said spacing units. Existing and future vertical and directional wells drilled within the spacing units herein established shall not be subject to this order.

(3) Sections 18 and 19, Township 139 North, Range 96 West, Stark County, North Dakota, are hereby established as a standup 1280-acre spacing unit for the exclusive purpose of drilling one horizontal well within said spacing unit within the Eland-Bakken Pool. Existing and future vertical and directional wells drilled within the spacing unit herein established shall not be subject to this order.

(4) Sections 30 and 31, Township 139 North, Range 96 West, Stark County, North Dakota, are hereby established as a standup 1280-acre spacing unit for the exclusive purpose of drilling one horizontal well within said spacing unit within the Versippi-Bakken Pool. Existing and future vertical and directional wells drilled within the spacing unit herein established shall not be subject to this order.

(5) The operator of the first producing well in the Dickinson, Eland, or Versippi-Bakken Pools shall submit exhibits to be included in the record for this case, Case No. 16305, similar to those typically submitted in a temporary spacing hearing. Such exhibits shall be submitted within 120 days after completing said wells.

(6) The Director is hereby authorized to exercise continuing jurisdiction in this matter to determine whether a horizontal well proposed or drilled upon the 1280-acre spacing or drilling units herein established has justified the creation of such unit, to require amendments or modifications to the permit to drill for such horizontal well, and to deny a permit to drill in the event a well is proposed to be drilled in a manner inconsistent with the evidence that justified such spacing or drilling unit.

(7) For purposes of this order as it pertains to the drilling units herein established, the Bakken Pool is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Lodgepole Formation to 100 feet below the top of the Three Forks Formation.

(8) All portions of the well bore not isolated by cement of any horizontal well permitted or drilled within the Bakken Pool in the drilling units herein established, shall be no closer than 500 feet to the east or west boundary and 200 feet to the north or south boundary of the drilling unit. Measurement inaccuracies in the directional survey equipment need not be considered except when deemed necessary by the Director.

(9) The operator of a horizontally drilled well in the drilling units herein established shall cause to be made a directional survey of the well bore. The directional survey contractor shall file a certified survey with the Commission within 30 days after completion of the well in accordance with NDAC Section 43-02-03-25. The survey shall be of sufficient quality to enable the Commission to determine the entire completion location of the well and its terminus.

(10) No well shall be drilled or produced in the Bakken Pool in the drilling units herein established, except in conformity with the regulations above, without special order of the Commission after due notice and hearing.

(11) This order as it pertains to the drilling units herein established shall remain in full force and effect until further order of the Commission.

(12) The operator of the first producing well in the Dickinson-Bakken Pool shall submit exhibits to be included in the record for this case, Case No. 16305, similar to those typically submitted in a temporary spacing hearing. Such exhibits shall be submitted within 120 days after completing said well.

(13) Provisions established herein for the Dickinson-Bakken Pool are for the exclusive purpose of drilling horizontal wells. Existing and future vertical and directional wells drilled within the area defined in paragraph (14) below shall not be subject to this order.

(14) 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, 14, 15, 22, 23, 24, 25, 26, 27, 33, 34, 35 AND 36,

TOWNSHIP 140 NORTH, RANGE 96 WEST, 5TH PM

ALL OF SECTIONS 5, 6, 7, 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\*, 3\* AND 10\*,

\*The SW/4 SE/4, the S/2 SW/4, and the S/2 NW/4 SW/4 of Section 2, the E/2 SE/4 of Section 3, and the E/2 E/2 of Section 10 are also within the Eland Field.

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

ALL OF SECTIONS 5 AND 6.

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

ZONE I (1280H-STANDUP)

TOWNSHIP 140 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 13, 14, 23, 24, 25, 26, 27, 34, 35 AND 36,

TOWNSHIP 140 NORTH, RANGE 96 WEST, 5TH PM  
ALL OF SECTIONS 6, 7, 14, 15, 16, 17, 18, 19, 20, 21, 22 AND 23,

TOWNSHIP 139 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 3\* AND 10\*.

\*The E/2 SE/4 of Section 3, and the E/2 E/2 of Section 10 are also within the Eland Field.

ZONE II (4/1280H-STANDUP)

TOWNSHIP 140 NORTH, RANGE 97 WEST, 5TH PM  
ALL OF SECTIONS 15 AND 22.

ZONE III (6/1280H-STANDUP)

TOWNSHIP 140 NORTH, RANGE 96 WEST, 5TH PM  
ALL OF SECTIONS 5 AND 8.

(16) The Dickinson-Bakken Pool is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Lodgepole Formation to 100 feet below the top of the Three Forks Formation within the limits of the field as set forth above.

(17) The temporary spacing for the development of Zone I in the Dickinson-Bakken Pool is hereby set at one horizontal well per standup 1280-acre spacing unit.

(18) All portions of the well bore not isolated by cement of any horizontal well in Zone I in the Dickinson-Bakken Pool shall be no closer than 500 feet to the east or west boundary and 200 feet to the north or south boundary of the spacing unit. Measurement inaccuracies in the directional survey equipment need not be considered except when deemed necessary by the Director.

(19) Sections 13 and 24; Sections 14 and 23; Sections 25 and 36; Sections 26 and 35; Sections 27 and 34, Township 140 North, Range 97 West; Sections 6 and 7; Sections 14 and 23; Sections 15 and 22; Sections 16 and 21; Sections 17 and 20; Sections 18 and 19, Township 140 North, Range 96 West; and Sections 3\* and 10\*, Township 139 North, Range 97 West, Stark County, North Dakota, are hereby designated standup 1280-acre spacing units in Zone I in the Dickinson-Bakken Pool.

\*The E/2 SE/4 of Section 3, and the E/2 E/2 of Section 10 are also within the Eland Field.

(20) Spacing units hereafter created in Zone I in the Dickinson-Bakken Pool shall be standup spacing units consisting of two adjacent governmental sections.

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

(22) The temporary spacing for the development of Zone II in the Dickinson-Bakken Pool is hereby set at up to four horizontal wells per standup 1280-acre spacing unit.

(23) All portions of the well bore not isolated by cement of any horizontal well in Zone II in the Dickinson-Bakken Pool shall be no closer than 500 feet to the east or west boundary and 200 feet to the north or south boundary of the spacing unit. Measurement inaccuracies in the directional survey equipment when calculating the bottom hole location in a horizontal well need not be considered.

(24) Sections 15 and 22, Township 140 North, Range 97 West, Stark County, North Dakota, are hereby designated a standup 1280-acre spacing unit in Zone II in the Dickinson-Bakken Pool.

(25) Spacing units hereafter created in Zone II in the Dickinson-Bakken Pool shall be standup spacing units consisting of two adjacent governmental sections.

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

(27) The temporary spacing for the development of Zone III in the Dickinson-Bakken Pool is hereby set at up to six horizontal wells per standup 1280-acre spacing unit.

(28) All portions of the well bore not isolated by cement of any horizontal well in Zone III in the Dickinson-Bakken Pool shall be no closer than 500 feet to the east or west boundary and 200 feet to the north or south boundary of the spacing unit. Measurement inaccuracies in the directional survey equipment when calculating the bottom hole location in a horizontal well need not be considered.

(29) Sections 5 and 8, Township 140 North, Range 96 West, Stark County, North Dakota, are hereby designated a standup 1280-acre spacing unit in Zone III in the Dickinson-Bakken Pool.

(30) Spacing units hereafter created in Zone III in the Dickinson-Bakken Pool shall be standup spacing units consisting of two adjacent governmental sections.

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

(32) The operator of any horizontally drilled well in the Dickinson-Bakken Pool shall cause to be made a directional survey of the well bore. The directional survey contractor shall file a certified survey with the Commission within 30 days after completion of the well in accordance with NDAC Section 43-02-03-25. The survey shall be of sufficient quality to enable the Commission to determine the entire completion location of the well and its terminus.

(33) The Director is hereby authorized to exercise continuing jurisdiction to determine whether any well proposed or drilled upon any spacing unit herein established has justified the

creation of such unit, to require amendments or modifications to the permit to drill for such well, and to deny a permit to drill in the event a well is proposed to be drilled in a manner inconsistent with the evidence that justified the spacing requirements in the Dickinson-Bakken Pool.

(34) 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: (1) review the spacing requirements for the Dickinson-Bakken Pool; (2) determine whether the separate zones of spacing established herein are warranted; and, (3) make such further amendments or modifications to the spacing requirements for the Dickinson-Bakken Pool as the Commission deems appropriate.

(35) No well shall be hereafter drilled or produced in the Dickinson-Bakken Pool, as defined herein, except in conformity with the regulations above without special order of the Commission after due notice and hearing.

(36) The following rules concerning the casing, tubing and equipping of wells shall apply to the subsequent drilling and operation of wells in the Dickinson-Bakken 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. 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 shall have 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;
- (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 to 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 1500 pounds per square inch. If, at the end of 30 minutes this pressure shall have 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.

(37) 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 in any well completed in the Dickinson-Bakken Pool if deemed necessary by the Director. Drill stem test pressures are acceptable for determining reservoir pressure. Pressure measurements shall be made at or adjusted to a subsea datum of 7450 feet. 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 therefore can be demonstrated to his satisfaction. All additional gas-oil ratio and reservoir pressure determinations conducted on any well, but not specially required herein, shall be reported to the Director within 15 days following the end of the month in which they are determined.

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

(39) 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.

(40) All wells completed in the Dickinson-Bakken Pool shall be allowed to produce at a maximum efficient rate through August 31, 2012.

(41) After August 31, 2012, all wells in the Dickinson-Bakken Pool 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; 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. The Director is authorized to issue an administrative order allowing unrestricted production at a maximum efficient rate for a period not to exceed 120 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.

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

(43) This portion of this order shall cover all of the Dickinson-Bakken 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, 2015. If the Dickinson-Bakken Pool is still producing, the proper spacing for the pool will be considered by the Commission on or before its regularly scheduled hearing date in April, 2015. If, however, the Dickinson-Bakken Pool is no longer producing when the proper spacing is to be considered, the Commission, at its own discretion, may refrain from scheduling a proper spacing hearing and may, without further notice, enter an order dismissing the proper spacing matter.

(44) The operator of the first producing well in the Eland-Bakken Pool shall submit exhibits to be included in the record for this case, Case No. 16305, similar to those typically submitted in a temporary spacing hearing. Such exhibits shall be submitted within 120 days after completing said well.

(45) Provisions established herein for the Eland-Bakken Pool are for the exclusive purpose of drilling horizontal wells. Existing and future vertical and directional wells drilled within the area defined in paragraph (46) below shall not be subject to this order.

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

TOWNSHIP 139 NORTH, RANGE 97 WEST, 5TH PM

ALL OF SECTIONS 11, 12 AND 13, THE SW/4 SE/4, THE S/2 SW/4, AND THE S/2 NW/4 SW/4 OF SECTION 2\*, THE E/2 SE/4 OF SECTION 3\*, THE E/2 E/2 OF SECTION 10\*, THE S/2, NE/4, E/2 NW/4, AND SW/4 NW/4 OF SECTION 14, THE NE/4 AND THE NE/4 NW/4 OF SECTION 23, AND THE N/2, N/2 SW/4, N/2 SE/4, AND SE/4 SE/4 OF SECTION 24,

\*The SW/4 SE/4, the S/2 SW/4, and the S/2 NW/4 SW/4 of Section 2, the E/2 SE/4 of Section 3, and the E/2 E/2 of Section 10 are also within the Dickinson Field.

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

ALL OF SECTIONS 18 AND 19, AND THE W/2 OF SECTION 7.

(47) The Eland-Bakken Pool is hereby defined as the following described tracts of land in Stark County, North Dakota:

ZONE I (1280H-STANDUP)

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

ALL OF SECTIONS 18 AND 19.

(48) The Eland-Bakken Pool is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Lodgepole Formation to 100 feet below the top of the Three Forks Formation within the limits of the field as set forth above.

(49) The temporary spacing for the development of Zone I in the Eland-Bakken Pool is hereby set at one horizontal well per standup 1280-acre spacing unit.

(50) All portions of the well bore not isolated by cement of any horizontal well in Zone I in the Eland-Bakken Pool shall be no closer than 500 feet to the east or west boundary and 200 feet to the north or south boundary of the spacing unit. Measurement inaccuracies in the directional survey equipment need not be considered except when deemed necessary by the Director.

(51) Sections 18 and 19, Township 139 North, Range 96 West, Stark County, North Dakota, are hereby designated a standup 1280-acre spacing unit in Zone I in the Eland-Bakken Pool.

(52) Spacing units hereafter created in Zone I in the Eland-Bakken Pool shall be standup spacing units consisting of two adjacent governmental sections.

(53) Zone I in the Eland-Bakken Pool shall not be extended except by further order of the Commission after due notice and hearing.

(54) The operator of any horizontally drilled well in the Eland-Bakken Pool shall cause to be made a directional survey of the well bore. The directional survey contractor shall file a certified survey with the Commission within 30 days after completion of the well in accordance with NDAC Section 43-02-03-25. The survey shall be of sufficient quality to enable the Commission to determine the entire completion location of the well and its terminus.

(55) The Director is hereby authorized to exercise continuing jurisdiction to determine whether any well proposed or drilled upon any spacing unit herein established has justified the creation of such unit, to require amendments or modifications to the permit to drill for such well, and to deny a permit to drill in the event a well is proposed to be drilled in a manner inconsistent with the evidence that justified the spacing requirements in the Eland-Bakken Pool.

(56) 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: (1) review the spacing requirements for the Eland-Bakken Pool; and, (2) make such further amendments or modifications to the spacing requirements for the Eland-Bakken Pool as the Commission deems appropriate.

(57) No well shall be hereafter drilled or produced in the Eland-Bakken Pool, as defined herein, except in conformity with the regulations above without special order of the Commission after due notice and hearing.

(58) The following rules concerning the casing, tubing and equipping of wells shall apply to the subsequent drilling and operation of wells in the Eland-Bakken 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. 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 shall have 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;

- (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 to 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 1500 pounds per square inch. If, at the end of 30 minutes this pressure shall have 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.

(59) 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 in any well completed in the Eland-Bakken Pool if deemed necessary by the Director. Drill stem test pressures are acceptable for determining reservoir pressure. Pressure measurements shall be made at or adjusted to a subsea datum of 7400 feet. 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 therefore can be demonstrated to his satisfaction. All additional gas-oil ratio and reservoir pressure determinations conducted on any well, but not specially required herein, shall be reported to the Director within 15 days following the end of the month in which they are determined.

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

(61) 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.

(62) All wells completed in the Eland-Bakken Pool shall be allowed to produce at a maximum efficient rate through August 31, 2012.

(63) After August 31, 2012, all wells in the Eland-Bakken Pool 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; 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. The Director is authorized to issue an administrative order allowing unrestricted production at a maximum efficient rate for a period not to exceed 120 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.

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

(65) This portion of this order shall cover all of the Eland-Bakken 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, 2015. If the Eland-Bakken Pool is still producing, the proper spacing for the pool will be considered by the Commission on or before its regularly scheduled hearing date in April, 2015. If, however, the Eland-Bakken Pool is no longer producing when the proper spacing is to be considered, the Commission, at its own discretion, may refrain from scheduling a proper spacing hearing and may, without further notice, enter an order dismissing the proper spacing matter.

(66) The operator of the first producing well in the Versippi-Bakken Pool shall submit exhibits to be included in the record for this case, Case No. 16305, similar to those typically submitted in a temporary spacing hearing. Such exhibits shall be submitted within 120 days after completing said well.

(67) Provisions established herein for the Versippi-Bakken Pool are for the exclusive purpose of drilling horizontal wells. Existing and future vertical and directional wells drilled within the area defined in paragraph (68) below shall not be subject to this order.

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

TOWNSHIP 139 NORTH, RANGE 96 WEST, 5TH PM

ALL OF SECTIONS 30 AND 31, THE SW/4 OF SECTION 20, AND THE NW/4 OF SECTION 29.

(69) The Versippi-Bakken Pool is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Lodgepole Formation to 100 feet below the top of the Three Forks Formation within the limits of the field as set forth above.

(70) The temporary spacing for the development of the Versippi-Bakken Pool is hereby set at one horizontal well per standup 1280-acre spacing unit.

(71) All portions of the well bore not isolated by cement of any horizontal well in the Versippi-Bakken Pool shall be no closer than 500 feet to the east or west boundary and 200 feet to the north or south boundary of the spacing unit. Measurement inaccuracies in the directional survey equipment need not be considered except when deemed necessary by the Director.

(72) Sections 30 and 31, Township 139 North, Range 96 West, Stark County, North Dakota, are hereby designated a standup 1280-acre spacing unit in the Versippi-Bakken Pool.

(73) Spacing units hereafter created in the Versippi-Bakken Pool shall be standup spacing units consisting of two adjacent governmental sections.

(74) The Versippi-Bakken Pool shall not be extended except by further order of the Commission after due notice and hearing.

(75) The operator of any horizontally drilled well in the Versippi-Bakken Pool shall cause to be made a directional survey of the well bore. The directional survey contractor shall file a certified survey with the Commission within 30 days after completion of the well in accordance with NDAC Section 43-02-03-25. The survey shall be of sufficient quality to enable the Commission to determine the entire completion location of the well and its terminus.

(76) The Director is hereby authorized to exercise continuing jurisdiction to determine whether any well proposed or drilled upon any spacing unit herein established has justified the creation of such unit, to require amendments or modifications to the permit to drill for such well, and to deny a permit to drill in the event a well is proposed to be drilled in a manner inconsistent with the evidence that justified the spacing requirements in the Versippi-Bakken Pool.

(77) 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: (1) review the spacing requirements for the Versippi-Bakken Pool; and, (2) make such further amendments or modifications to the spacing requirements for the Versippi-Bakken Pool as the Commission deems appropriate.

(78) No well shall be hereafter drilled or produced in the Versippi-Bakken Pool, as defined herein, except in conformity with the regulations above without special order of the Commission after due notice and hearing.

(79) The following rules concerning the casing, tubing and equipping of wells shall apply to the subsequent drilling and operation of wells in the Versippi-Bakken 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. 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 shall have 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;
- (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 to 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 1500 pounds per square inch. If, at the end of 30 minutes this pressure shall have 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.

(80) 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 in any well completed in the Versippi-Bakken Pool if deemed necessary by the Director. Drill stem test pressures are acceptable for determining reservoir pressure. Pressure measurements shall be made at or adjusted to a subsea datum of 7350 feet. 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 therefore can be demonstrated to his satisfaction. All additional gas-oil ratio and reservoir pressure determinations conducted on any well, but not specially required herein, shall be reported to the Director within 15 days following the end of the month in which they are determined.

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

(82) 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.

(83) All wells completed in the Versippi-Bakken Pool shall be allowed to produce at a maximum efficient rate through August 31, 2012.

(84) After August 31, 2012, all wells in the Versippi-Bakken Pool 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; 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. The Director is authorized to issue an administrative order allowing unrestricted production at a maximum efficient rate for a period not to exceed 120 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.

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

(86) This portion of this order shall cover all of the Versippi-Bakken 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, 2015. If the Versippi-Bakken Pool is still producing, the proper spacing for the pool will be considered by the Commission on or before its regularly scheduled hearing date in April, 2015. If, however, the Versippi-Bakken Pool is no longer producing when the proper spacing is to be considered, the Commission, at its own discretion, may refrain from scheduling a proper spacing hearing and may, without further notice, enter an order dismissing the proper spacing matter.



Dated this 18th day of May, 2012.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

By the Director, on behalf of the Commission

/s/ Lynn D. Helms, Director