

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

CASE NO. 13547
ORDER NO. 15823

IN THE MATTER OF A HEARING CALLED ON
A MOTION OF THE COMMISSION TO
CONSIDER THE TEMPORARY SPACING TO
DEVELOP AN OIL AND/OR GAS POOL
DISCOVERED BY THE HESS CORP. #0211H-1,
AV-SCHWARTZ-163-93, LOT 1, SECTION 2,
T.163N., R.93W., BURKE COUNTY, ND, DEFINE
THE FIELD LIMITS, AND ENACT SUCH
SPECIAL FIELD RULES AS MAY BE
NECESSARY.

TEMPORARY ORDER OF THE COMMISSION

THE COMMISSION FINDS:

- (1) This cause came on for hearing at 9:00 a.m. on the 18th day of November, 2010.
- (2) The witnesses for Hess Corporation (Hess) provided telephonic testimony in this matter pursuant to North Dakota Administrative Code (NDAC) Section 43-02-03-88.2. Telephonic Communication Affidavits were received on December 15, 2010; therefore, such testimony may be considered evidence.
- (3) The AV-Schwartz-163-93 #0211H-1 well (File No. 19347), with a surface location 254 feet from the north line and 887 feet from the east line of Section 2, Township 163 North, Range 93 West, Burke County, North Dakota (Section 2), was drilled horizontally through the Bakken Pool on a 1280-acre drilling unit, described as Section 2 and Section 11, Township 163 North, Range 93 West, Burke County, North Dakota (Section 11), pursuant to Order No. 14497.
- (4) The AV-Schwartz-163-93 #0211H-1 well was drilled as a dual stacked-lateral horizontal well in the upper Three Forks Formation and the middle member of the Bakken Formation to bottom hole locations approximately 321 feet from the south line and 2619 feet from the west line of Section 11, and 306 feet from the south line and 2612 feet from the east line of Section 11, respectively.
- (5) Hess requested the following lands be included in the field and pool established for the AV-Schwartz-163-93 #0211H-1 well:

TOWNSHIP 163 NORTH, RANGE 93 WEST, 5TH PM
ALL OF SECTIONS 2 AND 11.

(6) Hess requested Sections 2 and 11 be established as a standup 1280-acre spacing unit with one horizontal well allowed.

(7) Sections 2 and 11 are adjacent or adjoining to the Short Creek Field.

(8) The AV-Schwartz-163-93 #0211H-1 well discovered the Short Creek-Bakken Pool.

(9) Order No. 14497 entered in Case No. 12245 also established Sections 1 and 12, Township 163 North, Range 93 West, Burke County, North Dakota, as a 1280-acre drilling unit for the exclusive purpose of drilling one horizontal well within said drilling unit within the Bakken Pool. This drilling unit will be included as a spacing unit in the Short Creek-Bakken Pool.

(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) Geological and engineering evidence and testimony presented to the Commission relative to the matter of well spacing indicates the Short Creek-Bakken Pool, as classified and defined in this order, should be developed on a pattern of one horizontal well per 1280 acres, for the effective, economical, and efficient recovery of oil from said pool, 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.

(12) There were no objections in this matter.

(13) Certain special field rules for the Short Creek-Bakken Pool are necessary to prevent waste and protect against the contamination and pollution of surface lands and fresh waters.

IT IS THEREFORE ORDERED:

(1) Order No. 14497 as it pertains to Sections 1 and 12; and Sections 2 and 11, Township 163 North, Range 93 West, Burke County, North Dakota, is hereby rescinded.

(2) Sections 1 and 12; and Sections 2 and 11, Township 163 North, Range 93 West, Burke 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 Short Creek-Bakken Pool. Existing and future vertical and directional wells drilled within the spacing units herein established shall not be subject to this order.

(3) 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 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 unit.

(4) Provisions established herein for the Short Creek-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 (5) below shall not be subject to this order.

(5) The Short Creek Field is hereby redefined as the following described tracts of land in Burke County, North Dakota:

TOWNSHIP 163 NORTH, RANGE 93 WEST, 5TH PM
ALL OF SECTIONS 1, 2, 11 AND 12.

(6) The Short Creek-Bakken Pool is hereby defined as that accumulation of oil and gas found in the interval from 50 feet above the top of the Bakken Formation to 50 feet below the top of the Three Forks Formation within the limits of the field as set forth above.

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

(8) All portions of the well bore not isolated by cement of any horizontal well in the Short Creek-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.

(9) Sections 1 and 12; and Sections 2 and 11, Township 163 North, Range 93 West, Burke County, North Dakota, are hereby designated standup 1280-acre spacing units in the Short Creek-Bakken Pool.

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

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

(12) The operator of any horizontally drilled well in the Short Creek-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.

(13) 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 Short Creek-Bakken Pool.

(14) 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 Short Creek-Bakken Pool; and (2) make such further amendments or

modifications to the spacing requirements for the Short Creek-Bakken Pool as the Commission deems appropriate.

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

(16) The following rules concerning the casing, tubing and equipping of wells shall apply to the subsequent drilling and operation of wells in the Short Creek-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;
- (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.

(17) 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 Short Creek-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 5200 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.

(18) 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.

(19) 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.

(20) All wells in the Short Creek-Bakken Pool shall be allowed to produce at a maximum efficient rate through October 31, 2011.

(21) After October 31, 2011, all wells in the Short Creek-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.

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

(23) This order shall cover all of the Short Creek-Bakken Pool, common source of supply of crude oil and/or natural gas as herein defined, and continues in full force and effect until the 31st day of January, 2013. If the Short Creek-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 December, 2012. If, however, the Short Creek-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 1st day of August, 2011.

INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA

By the Director, on behalf of the Commission

/s/ Lynn D. Helms, Director