

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING CALLED  
BY THE OIL CONSERVATION DIVISION  
FOR THE PURPOSE OF CONSIDERING:**

**NOMENCLATURE  
CASE NO. 12916  
ORDER NO. R-11885**

**APPLICATION OF OCEAN ENERGY, INC. FOR POOL CREATION AND THE  
PROMULGATION OF SPECIAL POOL RULES, EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on October 24, 2002, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 9<sup>th</sup> day of January, 2003, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Ocean Energy, Inc. ("Ocean"), seeks the creation of a new pool for the production of oil from the lower Bone Spring formation underlying the NW/4 of Section 10, Township 21 South, Range 27 East, NMPM, Eddy County, New Mexico.

(3) Ocean further seeks to establish special pool rules for the proposed Bone Spring pool, including provisions for:

- (a) 160-acre spacing and proration units;
- (b) wells to be located no closer than 660 feet to the outer boundary of their spacing and proration units nor closer than 330 feet to a quarter-quarter section line or subdivision inner boundary;
- (c) a limiting gas/oil ratio of 4000 cubic feet of gas for each barrel of oil produced; and

- (d) an effective date retroactive to April 1, 2002.
- (4) There are five Bone Spring pools within a mile-and-a-half of the proposed pool:
- (a) The East Avalon-Bone Spring Pool (3713), created in 1984 by Division Order No. R-7437, is currently governed under Division Rule 104.B (1), which requires 40-acre oil spacing and proration units and wells to be located no closer than 330 feet to the outer boundary of the unit. This pool is assigned a top unit allowable of 107 barrels of oil per day and a limiting gas/oil ratio of 5,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 535 MCF per day, as provided by Division Order No. R-8897.
  - (b) The Avalon-Lower Bone Spring Pool (3714), created in 1984 by Division Order No. R-7708, is currently governed under Division Rule 104.B (1), which requires 40-acre oil spacing and proration units and wells to be located no closer than 330 feet to the outer boundary of the unit. This pool is assigned a top unit allowable of 80 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 160 MCF per day.
  - (c) The Magruder-Bone Springs Gas Pool (80887), created in 1989 by Division Order No. R-8892, is an "unprorated" shallow gas pool in southeast New Mexico and therefore not subject to Part H of the Division's statewide rules entitled "*Gas Proration and Allocation*" (Rules 601 through 605); however, this pool is currently governed by Division Rules 104.C (3) and D (3), which provide for 160-acre spacing units, require wells to be no closer than 660 feet to the outer boundary of their assigned units nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary, and preclude the drilling, recompletion, and production of a second gas well within a single 160-acre gas spacing unit.
  - (d) The Cedar Hills-Bone Spring Pool (11560), created in 1988 by Division Order No. R-8627, is currently governed under

Division Rule 104.B (1), which requires 40-acre oil spacing and proration units and wells to be located no closer than 330 feet to the outer boundary of the unit. This pool is assigned a top unit allowable of 230 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 460 MCF per day.

- (e) The East Carlsbad-Bone Spring Pool (96144), created in 1993 by Division Order No. R-9981, is currently governed under Division Rule 104.B (1), which requires 40-acre oil spacing and proration units and wells to be located no closer than 330 feet to the outer boundary of the unit. This pool is assigned a top unit allowable of 187 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 374 MCF per day.

(5) The testimony presented by the applicant and Division records indicate that Ocean's Cerf Federal Com. Well No. 2 (API No. 30-015-21884), located 1980 feet from the North and West lines (Unit F) of Section 10, Township 21 South, Range 27 East, NMPM, Eddy County, New Mexico, was originally drilled in 1976 to a total depth of 11,572 feet by Monsanto Company and dually completed in the Burton Flat-Strawn Gas Pool (73360) and Burton Flat-Morrow Gas Pool (21884). By Division Administrative Order DHC-1225, dated April 12, 1996, both the Strawn and Morrow gas producing intervals were commingled downhole. In April, 2002 Ocean recompleted this well to include the Bone Spring formation through perforations from 8362 feet to 8492 feet. The initial potential ("IP") from this interval measured a rate of 770 barrels of oil per day and 1041 thousand cubic feet of gas per day. Under Division Rule 7.G (5), this production classified the well as an "oil well."

- (6) The evidence presented by Ocean associated with land issues shows that the:

- (a) NW/4 of Section 10 is comprised of two federal leases, U. S. Government lease No. NM 14768 covering the N/2 NW/4 and SE/4 NW/4 of Section 10 and U. S. Government lease No. NM-17097 covering the SW/4 NW/4 of Section 10; and
- (b) working interest ownership is common throughout the entire NW/4 of Section 10 under a joint operating agreement.

- (7) Ocean's evidence associated with geology demonstrates that the:

- (a) above-described Cerf Federal Well No. 2 is producing from a carbonate interval in the lower Bone Spring formation and is anywhere between 1,000 to 3,000 feet lower than the intervals being produced in the other Bone Spring pools in the immediate area, some of which produce from an upper Bone Spring sand interval;
  - (b) reservoir is limited in extent, but the entire NW/4 of Section 10 should be productive from the lower Bone Spring interval;
  - (c) Cerf Federal Well No. 2 appears to have penetrated the lower Bone Spring interval in the area of greatest carbonate thickness; although offsetting wells in the NW/4 and SW/4 of Section 10 have the lower Bone Spring interval present, they are not productive in that interval; and
  - (d) Cerf Federal Well No. 2 appears not to be productive in the upper Bone Spring intervals that are productive in the other Bone Spring pools in the immediate area.
- (8) Ocean's technical and engineering evidence demonstrates that:
- (a) the original oil in place in the NW/4 of Section 10 is an estimated 187,000 barrels of oil; however, based on decline curve analysis, the estimated recovery is 28,000 barrels of oil and 300,000 MCF of gas from the Cerf Federal Well No. 2;
  - (b) the original gas/oil ratio for the Cerf Federal Well No. 2 was 1712 to 1; however, the gas/oil ratio has increased rapidly, and a 4000 to 1 gas/oil ratio is reasonable and will not result in depletion of reservoir energy;
  - (c) the Cerf Federal Well No. 2 should ultimately drain reserves from each of the four quarter-quarter sections within the NW/4 of Section 10; and
  - (d) due to projected low recoveries, it is uneconomic at this time to drill additional wells to recover lower Bone Spring oil and gas reserves within the NW/4 of Section 10.

(9) No offset operator or interest owner appeared at the hearing in opposition to Ocean's proposal.

(10) The evidence presented demonstrates that the Cerf Federal Well No. 2 has discovered a new common source of supply in the lower Bone Spring formation.

(11) A new pool for the production of oil from the lower Bone Spring formation should be created and designated the *Alacran Hills-Lower Bone Spring Pool*, with vertical limits comprising depths from the top of the Third Bone Spring Carbonate to the top of the Wolfcamp formation, corresponding to the depths from 7,510 feet to 8,746 feet subsurface in the Schlumberger Compensated Neutron-Formation Density Log dated September 27, 1976 for the Cerf Federal Well No. 2.

(12) The engineering evidence currently available demonstrates that approval of Ocean's request for 160-acre spacing and an increased limiting gas/oil ratio of 4,000 cubic feet of gas per barrel of oil for the Alacran Hills-Lower Bone Spring Pool will not result in excessive waste of reservoir energy, will not reduce the ultimate recovery of oil from the reservoir, and will not violate correlative rights.

(13) In order to prevent waste and protect correlative rights, temporary special pool rules should be established for the Alacran Hills-Lower Bone Spring Pool.

(14) These temporary special pool rules should provide that a well shall be located no closer than 660 feet to any outer boundary of a spacing and proration unit, and no closer than 330 feet to any quarter-quarter section line or subdivision inner boundary.

(15) In order for all mineral interest owners in the NW/4 of Section 10 to share in production from the Cerf Federal Well No. 2 from the date of first production from the lower Bone Spring formation, the special pool rules for the Alacran Hills-Lower Bone Spring Pool should be made effective retroactive to April 1, 2002.

(16) Pursuant to Division Rules 505.A and 506.A, the subject pool will be assigned a depth bracket allowable of 427 barrels of oil per day at a limiting gas/oil ratio of 4000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 1708 MCF per day.

(17) The special rules for the Alacran Hills-Lower Bone Spring Pool established by this order should remain in effect for a temporary period of one year in order to allow operators in the pool the opportunity to obtain additional engineering data to support the permanent adoption of these rules.

(18) This case should be re-opened at an examiner hearing in February, 2004, at which time operators in the Alacran Hills-Lower Bone Spring Pool should appear to show cause why the temporary special pool rules established by this order should not be rescinded.

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Ocean Energy, Inc., a new pool in Eddy County, New Mexico, classified as an oil pool for lower Bone Spring production is hereby created and designated the *Alacran Hills-Lower Bone Spring Pool*, with vertical limits comprising depths from the top of the Third Bone Spring Carbonate to the top of the Wolfcamp formation, corresponding to the depths from 7,510 feet to 8,746 feet subsurface in the Schlumberger Compensated Neutron-Formation Density Log dated September 27, 1976 for the Cerf Federal Well No. 2 (API No. 30-015-21884), located 1980 feet from the North and West lines (Unit F) of Section 10, Township 21 South, Range 27 East, NMPM, Eddy County, New Mexico, and horizontal limits comprising the following-described area:

**TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM**

Section 10:                      NW/4.

(2) The temporary special rules for the Alacran Hills-Lower Bone Spring Pool are hereby promulgated as follows:

**TEMPORARY SPECIAL RULES AND REGULATIONS  
FOR THE  
ALACRAN HILLS-LOWER BONE SPRING POOL**

**RULE 1:** Each well completed or recompleted in the Alacran Hills-Lower Bone Spring Pool or in the lower Bone-Spring formation within one mile thereof, and not nearer to or within the limits of another Bone Spring pool, shall be spaced, drilled, operated and produced in accordance with these special rules.

**RULE 2:** Each well shall be located on a standard unit containing 160 acres, more or less, consisting of a governmental quarter section.

**RULE 3:** The Division Director may grant an exception to the requirements of Rule 2 above without notice and hearing when an application has been duly filed under the provisions of Division Rule 104.D (2).

**RULE 4:** Each well shall be located no closer than 660 feet to the outer boundary of a spacing and proration unit nor closer than 330 feet to any interior quarter-quarter section line or subdivision inner boundary, provided however there is no more than one well per quarter-quarter section.

**RULE 5:** The Division Director may grant an exception to the requirements of Rule 4 without hearing when an application has been duly filed under the provisions of Division Rule 104.F.

**RULE 6:** The Alacran Hills-Lower Bone Spring Pool shall be produced at a limiting gas/oil ratio of 4,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 1708 MCF per day.

**IT IS FURTHER ORDERED THAT:**

(3) The location of any well presently drilling to or completed in the Alacran Hills-Lower Bone Spring Pool or in the lower Bone Spring formation within one mile thereof is hereby approved. The operator of any well having an unorthodox location shall notify the Division's Hobbs District Office in writing of the name and location of the well within 20 days from the date of this order.

(4) Existing oil wells in the Alacran Hills-Lower Bone Spring Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, existing oil wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

Failure to file new Forms C-102 with the Division dedicating 160 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable.

(5) Unless called earlier by the motion of the Division, this case shall be reopened at an examiner hearing in February, 2004, at which time the operator(s) in the subject pool should be prepared to appear and show cause why the temporary special pool rules for the Alacran Hills-Lower Bone Spring Pool should not be rescinded and the pool not be developed on statewide 40-acre spacing.

(6) The effective date of this order shall be made retroactive to April 1, 2002.

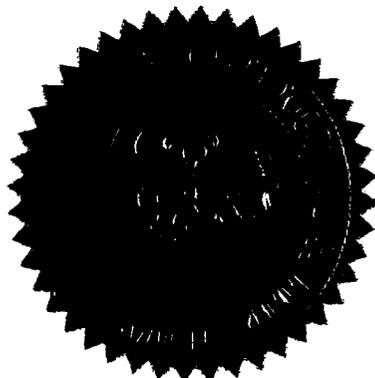
(7) Jurisdiction is hereby retained for the entry of such further orders as the

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Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



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STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

LORI WROTENBERY  
Director