

**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:**

**CASE NO. 15272  
ORDER NO. R-14056**

**APPLICATION OF DEVON ENERGY PRODUCTION COMPANY, L.P. FOR  
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 March 19, 2015, at Santa Fe, New Mexico, before Examiners Phillip R. Goetze and William V. Jones.

NOW, on this 7<sup>th</sup> day of October, 2015, the Division Director, having considered the testimony, the record and the recommendations of the Examiners,

**FINDS THAT:**

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

(2) Devon Energy Production Company, L.P. (the "Applicant" or "Devon") seeks an order to establish special rules and regulations that provide for a special depth bracket allowable of 1280 barrels of oil per day (BOPD) for wells producing in the Livingston Ridge-Bone Spring Pool (Pool code 39350). Applicant also requested that all other rules be in conformance with the statewide rules, and that the special rules for the pool be made retroactive to November 1, 2014, which is the date of first production for the Ark 36 State Well No. 1H (API No. 30-015-42082; the "subject well"), located in the SW/4 SW/4 (Unit letter M) of Section 36, Township 22 South, Range 31 East, NMPM, Eddy County New Mexico.

(3) By Division Order No. R-9418, dated January 23, 1991, and made effective February 1, 1991, the Division created and defined the Livingston Ridge-Bone Spring Pool for the production of oil from the Bone Spring formation. The pool, as currently designated,

currently designated, comprises 160 acres of the following lands in Township 22 South, Range 31 East, NMPM, Eddy County, New Mexico.

**Township 22 South, Range 31 East, NMPM**

Section 36: SW/4

(4) The Livingston Ridge-Bone Spring Pool is currently governed by statewide rule 19.15.15.9 NMAC with development on standard 40-acre spacing and proration units each having a depth-bracket allowable of 320 BOPD and a limiting gas/oil ratio of 2000 cubic feet of gas per barrel of oil.

(5) The subject well was drilled from a surface location 200 feet from the South line and 795 feet from the West line (Unit letter M) of Section 36 to a terminus 392 feet from the North line and 633 feet from the West line (Unit letter D) of Section 36. The dedicated acreage for the project area of the subject well consists of 160 acres comprising the W/2 W/2 of Section 36. The completed interval is orthodox with no portion of the producing wellbore closer than 330 feet to the outer boundary of the project area.

(6) According to Division records, the subject well was completed on September 20, 2014.

(7) Applicant appeared at hearing through counsel and presented land, geologic, and engineering testimony with exhibits as follows:

(a) The Livingston Ridge-Bone Spring Pool is approximately 3300 feet thick with multiple producing horizons including, from shallowest to deepest, the Avalon Shale, 2<sup>nd</sup> Bone Spring sand, and 3<sup>rd</sup> Bone Spring sand. There is a large vertical segregation between these producing intervals in the Bone Spring formation;

(b) In addition, the Applicant has identified a permeability barrier that effectively segregates the lower portion of the 2<sup>nd</sup> Bone Spring sand from the upper portion of the 2<sup>nd</sup> Bone Spring sand. Applicant further testified that a similar permeability barrier likely exists that segregates the lower portion of the 3<sup>rd</sup> Bone Spring sand from the upper portion of the 3<sup>rd</sup> Bone Spring sand. These permeability barriers inhibit vertical fracture lengths such that a single horizontal well cannot effectively develop the entire 2<sup>nd</sup> Bone Spring sand or the entire 3<sup>rd</sup> Bone Spring sand;

(c) The Ark 36 State Well No. 1H is currently completed in the lower portion of the 2<sup>nd</sup> Bone Spring sand. Applicant has plans to develop the upper portion of the 2<sup>nd</sup> Bone Spring sand with an additional horizontal well within this project area;

(d) Applicant provided examples of this barrier identified by downhole microseismic surveys in the 2<sup>nd</sup> Bone Spring sand in Devon's producing wells in the area: the Cotton Draw Unit Well No. 218H (API No. 30-015-41499) in the Paduca-Bone Spring Pool, the Boundary Raider 6 Federal Well No. 2H (API No. 30-025-41884) in the Sand Dune-Bone Spring Pool and the subject well;

(e) Applicant also provided an example of a similar barrier within the 3<sup>rd</sup> Bone Spring sand in Devon's Apache 25 Federal Well No. 17H (API No. 30-015-41116), a producing well in the Los Medanos-Bone Spring Pool which is west of the subject well;

(f) Production in this area from horizontal wells with single lateral completions have demonstrated initial producing rates of greater than 1000 BOPD;

(g) Applicant proposed a depth bracket allowable of 1280 BOPD in any standard 40-acre oil spacing and proration unit in the pool to accommodate efficient production from multiple laterals in the same 40-acre oil spacing and proration unit in the same formation;

(h) Applicant identified the Sand Dune-Bone Spring Pool (Pool code 53800), located to the southeast, as the closest established pool within a one-mile radius of the Livingston Ridge-Bone Spring Pool; and

(i) Applicant stated that the existing limiting gas/oil ratio of 2000 cubic feet of gas per barrel of oil is appropriate and that the increased allowable would not prematurely dissipate reservoir energy or cause waste of oil or gas.

(8) No other party appeared at the hearing or otherwise opposed this application.

(9) Notice was provided in this Case as required by Division rules.

The Division concludes as follows:

(10) The Livingston Ridge-Bone Spring Pool contains multiple producing horizons that are segregated from one another by either: i) large vertical distances or ii) permeability barriers. By virtue of these reservoir characteristics, the Bone Spring formation in this area more closely resembles separate, distinct oil and gas reservoirs and not a single common source of supply.

(11) The Applicant testified that it believes these Bone Spring producing intervals to be solution-gas drive reservoirs; however, no engineering evidence was presented to substantiate Applicant's assertion.

(12) Normally in this type of case, the Division would require evidence to demonstrate that these producing intervals are solution-gas drive reservoirs, and that producing these reservoirs at higher rates will not waste reservoir energy nor reduce the ultimate recovery of oil and gas reserves. However, Applicant's evidence indicates that the requested oil allowable is necessary in order to simultaneously produce from multiple distinct horizons within the same Bone Spring interval. As such, it appears that the requested oil allowable will be distributed to all wells that are producing from separate Bone Spring horizons within a given project area, and will not be applied to a single Bone Spring producing horizon. Consequently, the evidence is sufficient to demonstrate that approval of a requested oil allowable will not detrimentally harm Bone Spring producing intervals.

(13) Approval of this application will provide the Applicant an opportunity to produce the Livingston Ridge-Bone Spring Pool in an efficient manner that will not cause waste and protect correlative rights.

(14) Applicant did not present sufficient evidence to justify establishing the requested allowable retroactively to November 1, 2014. Consequently, this request should be denied.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Devon Energy Production Company, L.P. to establish special rules for the Livingston Ridge-Bone Spring Pool (Pool code 39350), namely a special depth-bracket allowable of 1280 barrels of oil per day per standard 40-acre spacing and proration unit, is hereby **approved**.

(2) Applicant's request to have the temporary special rules for the Livingston Ridge-Bone Spring Pool effective retroactive to the first date of production from the Ark 36 State Well No. 1H (API No. 30-015-42082) is hereby **denied**.

(3) The following Special Pool Rules are promulgated for the Livingston Ridge-Bone Spring Pool with the horizontal boundary described in Finding Paragraph (3) above.

**TEMPORARY SPECIAL POOL RULES  
FOR  
THE LIVINGSTON RIDGE-BONE SPRING POOL**

**Rule 1:** Each well completed or recompleted in the Bone Spring formation within the horizontal boundaries of the Livingston Ridge-Bone Spring Pool, or within one mile of the outer boundaries of said pool and not nearer to or within the limits of another Bone Spring pool, shall be drilled, spaced, operated, and produced in accordance with the Special Rules hereinafter set forth.

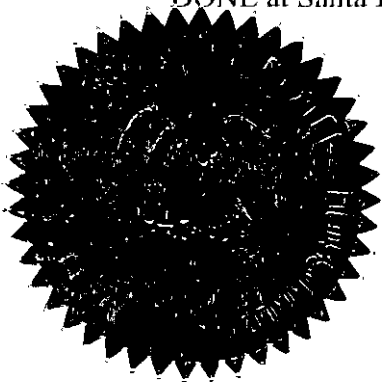
**Rule 2:** The applicable depth-bracket allowable for a standard 40-acre proration unit for Bone Spring production shall be 1280 barrels of oil per day per standard unit. In the event there is more than one well on a 40-acre unit, the operator may produce the allowable assigned to the unit from the wells as per Division rule 19.15.16.14(B)(3) NMAC.

**Rule 3:** In all other respects such wells shall remain subject to statewide rules.

**Rule 4:** These temporary special rules shall expire on September 30, 2017, unless Applicant appears before the Division Director and demonstrates that such rules should be made permanent.

(4) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

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



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*David R. Catanach*

DAVID R. CATANACH  
Director