

**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:**

**APPLICATION OF BLACK HILLS GAS RESOURCES, INC. FOR THE
CREATION OF THE JICARILLA (MANCOS FORMATION) PROJECT AREA,
AN EXCEPTION TO THE SPECIAL RULES AND REGULATIONS FOR THE
BASIN-MANCOS GAS POOL AND TO RULE 19.15.16 NMAC, RIO ARRIBA
COUNTY, NEW MEXICO.**

**CASE NO. 14642
ORDER NO. R-13449**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a. m. on June 23, 2011 at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 26th day of August, 2011, 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 of the subject matter.

(2) The applicant, Black Hills Gas Resources, Inc., ("Black Hills" or "Applicant"), seeks approval to utilize its **Jicarilla (Mancos Formation) Project Area** in order to more efficiently develop gas reserves with horizontal wells from the Mancos formation, Basin-Mancos Gas Pool. This voluntary "Project Area" covers the following lands, all within the Jicarilla Apache Nation, in Rio Arriba County, New Mexico:

Township 30 North, Range 3 West, NMPM

Sections 3 through 10:	All
Sections 13 through 24:	All
Section 26:	All
Sections 29 through 32:	All

Township 29 North, Range 3 West, NMPM

Sections 3 through 10: All

(3) Division Rule 19.15.16 NMAC governs the drilling of directional wells and defines the “producing interval” as “that portion of a directional well drilled inside a pool’s vertical limits between its penetration point and its terminus.” The “penetration point” is defined as “the point where a directional well penetrates the top of the pool from which it is intended to produce.”

(4) Division Order No. R-12984, dated September 3, 2008, created the Basin-Mancos Gas Pool and established Special Rules for that pool. Those rules require a well to be located (drilled) no closer than 660 feet to the outer boundary of the 320-acre gas spacing unit and no closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.

(5) Black Hills seeks an exception to Division Rule 19.15.16 NMAC for directional wells drilled in the Project Area to redefine the penetration point to be the casing point of the cemented, last intermediate string as the “penetration point” or, if the final production string is cemented, at the occurrence of the first perforation along the horizontal leg as measured from surface.

(6) Black Hills further seeks an exception to the Special Rules for the Basin-Mancos Gas Pool (97232) to allow wells to be drilled, completed, or recompleted at unorthodox locations within this project area but not within 660 feet of the outer boundaries of this project area.

(7) Black Hills presented testimony and exhibits showing the following:

(a) The Project Area is located within the Jicarilla Apache Indian Reservation, bounding the western edge of the reservation. This Project Area has been voluntarily formed with 100 percent agreement, but Black Hills is seeking approval by the Division of this Project Area for purposes of exceptions to existing rules.

(b) The notice provided in this case was to the affected offsetting owners located to the west of this Project Area, just outside the Jicarilla Apache Reservation.

(c) Within this Project Area, Black Hills has seven “contracts” or agreements with the Jicarilla Apache Nation. The Jicarilla Apache Nation Oil and Gas Administration submitted a letter of support for this application on behalf of the Jicarilla Apache Nation.

(d) Black Hills is the operator for oil and gas of all lands within the Project Area. Energen Resources Corporation is a working interest partner in this

Project Area for those sections located within Township 30 North, Range 3 West. Energen has signed a letter of support for this application.

(e) The Project Area is now considered to have common ownership (as per witness testimony at the hearing). There are no adversely affected persons within this Project Area resulting from the proposed new definition of "penetration point" or the relaxed locations of the planned horizontal wells.

(f) Black Hills intends to maintain the 660 foot gas well "set-backs" from the outer boundaries of the Project Area. Within the Project Area, it wants the freedom to place wells without consideration of the location requirements provided in the Special Rules for the Basin-Mancos Gas Pool and relief from the burden of obtaining individual well exceptions to the rules through the administrative process.

(g) Black Hills is asking for a redefinition of the "penetration point" similar to the relief granted for the Rosa Unit in Division Order No. R-13204 and for those same reasons.

(h) The Mancos formation in this area is considered to have a maximum horizontal stress and fracture direction, generally north to south or slightly northeast to southwest. This stress direction is a result of regional tectonic compression which occurred because of the San Juan uplift to the north and the Zuni uplift to the south.

(i) The planned well direction is from west to east or generally up-dip with the intention of intersecting natural fractures. Black Hills intends also to run production casing to the measured total depth and cement it in place, although other completion methods could be used.

(j) The upper limit of the Mancos formation is the base of the lowermost Mesaverde sand. The lower limit is the top of the Dakota formation. Generally the Mancos consists of several member formations and the target for this horizontal program is within the lowermost Niobrara formation member of the Mancos. The drilling target is approximately one thousand feet below the top of the Mancos formation.

(8) No other operator or party appeared in this case or otherwise opposed this application.

(9) Due to the large distance between the top of this Basin-Mancos Gas Pool and the target interval and the footage distance needed to deviate any well from vertical to horizontal, "standard" well locations would exclude large portions of these gas spacing units from being developed – at least if drilled exclusively in the preferred west to east direction. Under current rules, obtaining the maximum horizontal length of a horizontal

well within a 320-acre spacing unit is not possible without a non-standard location administrative "NSL" permit.

(10) Re-defining "penetration point" and relaxing the setback footage requirements within this Project Area will enable more of the resource to be developed with fewer wells and less surface disturbance. It would enable Black Hills to utilize some existing well pads and drill longer horizontal wells to drain larger portions of the reservoir.

(11) The proposal by Black Hills in this case is in the best interests of conservation and should be approved in order to prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Black Hills Gas Resources, Inc. ("Black Hills") is hereby approved.

(2) The **Jicarilla (Mancos Formation) Project Area** is recognized as a voluntary Project Area including all lands within the vertical limits of the Mancos formation, Basin-Mancos Gas Pool located within the Jicarilla Apache Nation, in Rio Arriba County, New Mexico as defined below:

Township 30 North, Range 3 West, NMPM

Sections 3 through 10:	All
Sections 13 through 24:	All
Section 26:	All
Sections 29 through 32:	All

Township 29 North, Range 3 West, NMPM

Sections 3 through 10:	All
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(3) For all horizontal wells drilled into this Project Area, the definition of "penetration point" as it is used in Division Rule 19.15.16 NMAC, shall (for this instance) be defined as either (i) the cemented casing shoe of the final intermediate casing, or (ii) in the event production casing is run and cemented, the first perforation of the cemented production casing, as measured from surface.

(4) For all horizontal wells drilled into this Project Area, an exception is granted to the Special Rules for the Basin-Mancos Gas Pool, Division Order No. R-12984, to allow wells to be drilled, completed, or recompleted at any unorthodox footage location.

(5) This well location exception does not apply to project wells drilled within 660 feet of any outer boundary of the project area unless an exception is granted by the

Division director on a well by well basis through administrative application.

(6) 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

A handwritten signature in cursive script, appearing to read "Jami Bailey".

JAMI BAILEY
Director