

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

2017-21-6

**APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION THROUGH
THE SUPERVISOR OF DISTRICT II FOR AN EMERGENCY ORDER SUSPENDING
CERTAIN APPROVED APPLICATIONS FOR PERMITS TO DRILL, AND FOR
ADOPTION OF SPECIAL RULES FOR DRILLING IN CERTAIN AREAS FOR THE
PROTECTION OF FRESH WATER, CHAVES AND EDDY COUNTIES, NEW MEXICO.**

Case No. 15487

**JOINT CLOSING STATEMENT OF RESPONDENTS EOG Y RESOURCES,
INC. AND LIME ROCK RESOURCES, II-A, L.P.**

Pursuant to the Commission's request at the May 18, 2017 hearing, Respondents Lime Rock Resources, II-A, L.P. ("Lime Rock") and EOG Y Resources, Inc. (collectively "Respondents") jointly submit their Closing Statement.

I. Proposed Reduction in the Scope of the Commission's Special Provisions

Respondents, in conjunction with the Pecos Valley Artesian Conservancy District ("PVACD"), COG Operating LLC ("COG"), OXY USA Inc. ("OXY"), Fasken Oil & Ranch, Ltd. ("Fasken"), Mack Energy Corporation ("Mack"), Devon Energy Production Company, L.P. ("Devon"), and the Independent Petroleum Association of New Mexico ("IPANM"), have requested the Commission to amend its Order No. R-14164-D by limiting the application of the Special Provisions to those areas of the Roswell Artesian Basin ("RAB") where both the shallower alluvial aquifer and deeper artesian aquifer are present. As stated in the parties' Joint Application for Rehearing, the unrebutted record establishes – and the Commission has expressly found – that the area where both aquifers are present in the RAB is "well defined" and "constitutes approximately 22% of the RAB." Joint Application for Rehearing at 2; See Order No. R-14164-

D at 5, ¶¶ 40 and 41. Despite those findings, the Commission's order applies the Special Provisions to the entire RAB plus a one-mile buffer zone.

The stated purpose of the Division's proposed special rules was the adoption of a requirement of both surface and intermediate casing strings in those areas where both aquifers occur, rather than the entire RAB. Nevertheless, the Commission unilaterally expanded the scope of its Special Provisions to include the entire RAB, despite the absence of a request by the Division and without making any associated factual findings or articulating any basis for expanding the reach of the Special Provisions.

At the May 18 hearing, the Division's counsel argued in favor of the Special Provisions being applied throughout the RAB.¹ Yet the Division provided no evidentiary support for its newly-adopted position. Moreover, the Division has failed to acknowledge the statewide rules governing the protection of aquifers, which Division witness Paul Kautz interpreted to require the setting of surface casing 50 feet below the base of an aquifer. Testimony of Paul Kautz, Transcript of 12/6/16 Hearing, at 18. The Division likewise fails to acknowledge the broad discretion the Special Provisions grant to the Division's District Supervisor to require alternative casing programs. *See* 19.15.39.11(D). Because those rules adequately protect the artesian aquifer in the 78% of the RAB where the alluvial aquifer does not appear, expansion of the scope of the Special Rules to include the entire RAB is not warranted.

II. Modification of 19.15.39.11 (C) (2)

Respondents also have requested, again in conjunction with the PVACD, COG, OXY, Fasken, Mack, Devon, and the IPANM, that the Commission modify 19.15.39.11(C)(2) of the

¹ The PVACD now supports the Division's argument, in contrast to the position the PVACD endorsed in the Joint Application for Rehearing.

Special Provisions to eliminate a perceived ambiguity in the language.² Respondents have appropriately suggested that the Special Provision be amended to make it abundantly clear that an operator may set surface casing 50 feet above the first oil show *only in those areas* where there has been historical oil production and oil shows in the confining unit that separates the two aquifers and/or in the artesian aquifer itself. Stated another way, the general rule is that operators shall set surface casing 50 feet below the base of the artesian aquifer, while the limited exception applies only in those areas where there has been oil production or shows above and/or in the artesian aquifer.

Maintaining this exception is entirely consistent with the un rebutted testimony in the record, the Commission's findings in its order, recent approvals of Lime Rock APDs by the Artesia District Office, and prudent drilling practice. During the December 2016 hearing, Lime Rock witness John Maxey testified it would not be prudent to drill through oil shows while setting surface casing. *See* Testimony of John Maxey, Transcript of 12/7/16 Hearing, at 166, 169, 172-74, and 184. Mr. Maxey reaffirmed his view during the May 18, 2017 hearing, again emphasizing that a prudent operator would not drill through hydrocarbons in the confining unit and the artesian aquifer to set surface casing.

In its order, the Commission properly recognized the efficacy of Mr. Maxey's testimony, and found that oil has been produced from the confining unit and the artesian aquifer in discrete areas of the RAB. Order No. R-14164-D at 9, ¶76. Consequently, the Commission concluded that in those areas an operator should set surface casing 50 feet above the first show of hydrocarbons on a mud log, which "is necessary to account for the probability ... of encountering hydrocarbons in the intervening strata between the two aquifers." *Id* at 8-9, ¶ 75; *id.* at 8 ¶72. Division witness

² Once again, the PVACD has disavowed the Joint Application for Rehearing and supports the Division's position regarding the language of 19.15.39.11(C)(2).

Paul Kautz endorsed that approach in testifying that an intermediate casing string, as proposed by the Division, should stop 50 feet above the first oil show. Kautz Testimony, Transcript of 12/6/16 Hearing, at 18. That approach also is reflected in the Artesia District Office's approval of Lime Rock APDs with intermediate casing strings set 50 feet above the first oil show, before the Commission issued its order, and its approval of APDs with surface casing strings set 50 feet above the first oil show, after the order was issued.

At the May 18 hearing, the Division presented no evidence to support the reversal of the Commission's findings and conclusions regarding the appropriate depth of the surface casing in areas where there has been historical oil production in the confining unit and the artesian aquifer. Instead, the Division again raised the specter of operators contaminating the artesian aquifer while setting production casing. That argument runs contrary to the unrebutted testimony of the expert engineers during the December hearing that there is no possibility of contamination of the artesian aquifer while the production casing is being set. *See, e.g.,* Testimony of Carl Bird, Transcript of 12/6/16 Hearing, at 237. The unanimous testimony of the drilling engineers established that a production string cemented to the surface has always protected and will continue to protect the artesian aquifer. Even the PVACD's hydrologist, Roger Peery, acknowledged during the May 18 hearing that production casing cemented to the surface is protective of water that may be found in the artesian aquifer.

The Division, with the endorsement of the PVACD, has offered its own modification of 19.15.39.11(C)(2) which, as the Commissioners noted during the May 18 hearing, raises more questions than provides answers. The Division's proposed modification offers no identification of the base of the artesian aquifer or what the "presumed depth of the aquifer" might be, nor does it acknowledge that the aquifer is absent in some areas. As Division witness Phillip Goetze has recognized, there are areas in the portion of the RAB at issue where the artesian aquifer is not

present. Testimony of Phillip Goetze, 12/5/16 Hearing Transcript, at 29. Moreover, the Division's proposed modification could result in the anomalous situation of surface casing being set significantly below the top of the San Andres and potentially near the total depth of the producing well.

In sum, Respondents submit that the Commission should adopt the proposed modification of 19.15.39.11(C)(2) set out in the Joint Application for Rehearing, as subsequently modified,³ because the proposed language:

- Removes any ambiguity in the Special Provision;
- Recognizes the Commission's findings and conclusions in Order No. R-14164-D;
- Is consistent with the testimony of Mr. Kautz and the APD approvals by the Artesia District Office;
- Is supported by the unrebutted testimony regarding prudent drilling practices;
- Takes into account the absence of the artesian aquifer in certain areas;
- Provides protection of the alluvial aquifer with the surface casing and protection of the artesian aquifer with the production casing cemented to the surface; and
- Provides clear regulatory guidance.

III. Conclusion

For the reasons stated above, and in Mr. Maxey's testimony and the opening statement of their counsel during the May 18 hearing, Respondents request that the Commission amend Order No. R-14164-D by (i) reducing the scope of its Special Provisions to include only those areas of the RAB where both the alluvial and artesian aquifers are present, and (ii) replacing

³ During the May 18 hearing, Respondents' counsel distributed a document setting out the proposed language with the subsequent modification in red line. A copy of the document is attached hereto as Exhibit A.

19.15.39.11(C)(2) with the proposed language in the Joint Application for Rehearing, as subsequently modified.

IV. Concurrence of Mack, Devon, and IPANM

Counsel for Mack, Devon, and IPANM has noted his concurrence in this Closing Statement.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 6th day of June, 2017, I served a true and correct copy of the foregoing ***Joint Closing Statement of Respondents EOG Y Resources, Inc. and Lime Rock Resources, II-A, L.P.*** via email to:

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Further Modification of 19.15.39.11(C)(2)

The operator shall set a surface casing string 50 feet below the base of the artesian aquifer and circulate cement to the surface, except that, in, ~~In~~ areas of known hydrocarbon shows or production from the confining unit or the artesian aquifer, the operator shall set a surface casing string not more than 50 feet above the first show of hydrocarbons on a mud log and circulate cement to the surface.

EXHIBIT

A