



RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

OIL & GAS DOCKET NO. 08-0295559

THE APPLICATION OF EOG RESOURCES, INC. TO AMEND FIELD RULES FOR THE PHANTOM (WOLFCAMP) FIELD IN CULBERSON, LOVING, REEVES, AND WARD COUNTIES, TEXAS.

OIL & GAS DOCKET NO. 08-0303885

THE APPLICATION OF ANADARKO E&P ONSHORE, LLC TO AMEND FIELD RULES FOR THE PHANTOM (WOLFCAMP) FIELD IN CULBERSON, LOVING, PECOS, REEVES, WARD AND WINKLER COUNTIES, TEXAS.

CONSOLIDATED EXAMINERS' REPORT AND RECOMMENDATION

	<u>08-0295559</u>	<u>08-0303885</u>
Heard By:	Brian Fancher – TE John Dodson – ALJ	Paul Dubois – TE Clayton J. Hoover – ALJ
Hearing Date:	June 5, 2015	May 5, 2017
Appearances:		
Applicant:	EOG Resources, Inc. Doug Dashiell Mimi Weintraub	Anadarko E&P Offshore, LLC Ana Maria Marsland-Griffith David Christian
Observers:	Chevron North America Sandra Buch Energen Resources Sandra Buch	Texas General Land Office Patrick Thompson K. Luby & C. Prior George Neale Robert Park Cimarex Energy Kelli Kenney Centennial Resources Davin McGinnis Energen Resources Sandra Buch PDC Permian, Inc. Kait Schwartz
Written By:		Paul Dubois – TE Jennifer Cook – ALJ Clayton J. Hoover – ALJ
Conference Date:		August 1, 2017

STATEMENT OF THE CASE

This is the consolidated application of EOG Resources, Inc. ("EOG") and Anadarko E&P Onshore, LLC ("Anadarko") to amend field rules for the Phantom (Wolfcamp) Field in Culberson, Loving, Reeves, Ward and Winkler Counties, Texas. In both of the original cases, the applicants are requesting amended provisions that will update the field rules to conform to contemporary norms for unconventional resource plays. In addition, each applicant is requesting at least one amendment for a technical provision for which substantiating evidence was also provided. Upon review of the evidence in each case, the Technical Examiner and Administrative Law Judges ("Examiners") assigned to the cases recommend that both applications, as revised at the respective hearings, be approved. As a matter of administrative efficiency, the Examiners recommend that the two cases be consolidated and one Final Order be issued by the Commission to amend the field rules.

Oil & Gas Docket No. 08-0295559

In Oil & Gas Docket No. 08-0295559, which was not protested, EOG requested the following:

1. Amend Field Rule No. 3b, explicitly stating that operators may choose to file plats identifying the boundaries of individual proration units;
2. Amend Field Rule No. 4a to provide for a two-factor allocation formula for gas wells consisting of 95 percent deliverability and 5 percent acreage (the existing allocation formula is 95 percent deliverability and 5 percent per well); and
3. Delete Field Rule No. 6, and replace with provisions for gas well classification based on a gas-to-liquid hydrocarbon ratio ("GLR") of 3,000 standard cubic feet ("scf") per barrel, and streamlined administrative exceptions to Statewide Rules 16(b), 28(a), 28(b) and 51(a) to support the gas well classification provision.

On May 22, 2017, the Examiners requested EOG review its application to identify whether any of the requested field rule provisions were rendered moot by the Commission's February 1, 2016 revisions to Statewide Rule 86. EOG responded by letter on June 23, 2017, stating that its request no. 1 (above) was moot due the Rule 86 revision. EOG further stated that its request no. 2 was not affected by the Rule 86 revision, but one element of its request no. 3 (not related to gas well classification) were moot.

In addition, the Examiners requested EOG reconsider certain data content and presentation aspects of its evidence with regard to gas well classification. On June 23, 2017, EOG provided the revised gas well classification data requested by the Examiners.

Oil & Gas Docket No. 08-0303885

In Oil & Gas Docket No. 08-0303885, Anadarko expressed its support for EOG's application, and further requested several field rule amendments:

1. Amend Field Rule No. 3 to add a 20-acre optional density provision;
2. Amend Field Rule No. 3 to allow longer laterals to benefit from additional acreage for allowable purposes;
3. Add Pecos County to the list of counties in which the field rules are applicable;
4. Add a provision for a field-wide exception to off-lease storage; and
5. Delete the language in the existing field rules that is now addressed by the amendments to Statewide Rule 86 on February 1, 2016.

Anadarko's application was initially protested by several mineral owners in the field, including the Texas General Land Office, Kathleen Luby, and Christopher Prior. At the beginning of the hearing, Anadarko withdrew its request to allow additional acreage for longer laterals (no. 2, above), and the Texas General Land Office subsequently withdrew its protest. Protestants Luby and Prior participated in the hearing and questioned Anadarko's expert witness with regard to the withdrawn requested additional acreage provision, but Luby and Prior asked no questions regarding Anadarko's request nos. 1, 3, 4, or 5. Luby and Prior did not offer an objection to any specific portion of the remaining amendments being sought by Anadarko.

The Consolidated Case

The Examiners recommend that the field rules for the Phantom (Wolfcamp) Field in Culberson, Loving, Pecos, Reeves, Ward and Winkler Counties, Texas, be amended in accordance with the attached proposed Final Order. With the Commission's recent revisions to Statewide Rule 86 the new field rules are considerably shorter and will also result in improved administrative efficiency for operators and the Commission. EOG's evidence shows that hydrocarbon fluids exhibit a relationship between dew point, initial producing GLR, and compositional analysis such that an initial producing GLR of 3,000 scf/bbl is indicative of a gas well classification. Anadarko's evidence demonstrates that 20-acre optional units will prevent waste and protect correlative rights.

DISCUSSION OF THE EVIDENCE

Oil & Gas Docket No. 08-0295559

The field rules for the Phantom (Wolfcamp) Field were most recently amended by the Commission in Oil & Gas Docket No. 08-0290788 on July 14, 2015. In Oil & Gas Docket No. 08-0295559, EOG requested three amendments to the existing field rules. EOG's requested provisions will be taken in turn.

EOG Request No. 1

EOG requested an amendment to Field Rule No. 3b, explicitly stating that operators may choose to file plats identifying the boundaries of individual proration units. By letter dated June 23, 2017, EOG acknowledged that this request was rendered moot by the recent revisions to Statewide Rule 86 and withdrew the request.

EOG Request No. 2

EOG requested to amend Field Rule No. 4a to provide for a two-factor allocation formula for gas wells consisting of 95 percent deliverability and 5 percent acreage. The existing allocation formula is 95 percent deliverability and 5 percent per well. All operators of wells in the field were notified of this request and no protests were filed. EOG asserts that this field rule amendment will promote the orderly development of the field.

EOG Request No. 3

In its request no. 3, EOG seeks to delete Field Rule No. 6 in its entirety, which provided for an exception to Statewide Rule 51(a). In its place, EOG seeks to add (1) a provision for gas well classification based on a GLR of 3,000 scf per barrel, and (2) administrative exceptions to Statewide Rules 16(b), 28(a), 28(b) and 51(a) that will facilitate the implementation of the requested gas well classification rule.

EOG provided tabulated data for about 50 wells in the field, and graphed the information to assert a relationship between GLR and compositional analysis (i.e., heptanes plus ["C₇₊"]).¹ EOG asserts the data indicate a relationship between GLR and C₇₊ that demonstrates a 3,000 scf/bbl GLR is determinative of gas well classification.²

By letter dated May 22, 2017, the Examiners stated that to make such a case, additional information was required beyond GLR and C₇₊ data. Specifically, the Examiners stated that visual cell pressure-volume-temperature analysis of hydrocarbon fluids (i.e., PVT data) is necessary to establish a relationship between the actual reservoir fluid type from the PVT analysis and the reservoir fluid type indicators such as

¹ EOG Ex. 12.

² EOG Ex. 17.

GLR or C₇₊. The Examiners noted that of the 50 data points, only 5 contained visual cell PVT data and one data point was derived from a simulated PVT analysis. The Examiners requested EOG revise its data presentation to include only the visual cell data. In addition, the Examiners offered EOG the opportunity to submit additional visual cell PVT data to support its position.

By letter dated June 23, 2017, EOG responded to the Examiners' letter and provided additional visual cell PVT data and backup documentation. EOG's revised Exhibit No. 12A included a total of 12 visual cell PVT data points. In addition, EOG's revised Exhibit No. 17A graphically demonstrated that a 3,000 scf/bbl GLR was indicative of a dew point in the reservoir fluid. Therefore, EOG concludes permanent gas well classification is appropriate for wells that exhibit a 3,000 scf/bbl GLR upon initial completion.

EOG's requested gas well classification provision allows an operator to test a well at a stabilized production rate, which may require up to 180 days after initial production. Therefore, EOG also requests the field rules include companion exceptions for Statewide Rules 16(b), 28(a), 28(b) and 51(a) that will facilitate the implementation of the requested gas well classification rule.

Oil & Gas Docket No. 08-0303885

In Oil & Gas Docket No. 08-0303885, Anadarko expressed its support for EOG's application, and further requested several field rule amendments. Anadarko's amendment requests will be taken in turn.

Anadarko Request No. 1

Anadarko requests that the field rules be amended to allow for a 20-acre optional density provision. Currently, the Phantom (Wolfcamp) Field provides for 40-acre optional units.³ Anadarko identified four targeted zones in the field. The average estimated ultimate recovery ("EUR") for existing wells completed in each target zone ranges from 350 to 450 thousand barrels of oil ("MBO") per horizontal well based on a 4,500-foot lateral length. Current field rules allow for 16 horizontal wells per section (16 wells x 40 acres per well = 640 acres, or one section of land.) Reducing the optional unit size will allow for 32 wells per section, with eight wells landed in each of the four target zones. Anadarko estimates the increasing density will yield two outcomes. First, a 30 percent reduction in per-well EUR is estimated when more than six wells per section are drilled in a target zone. But, the 20-acre density will more than compensate for the reduced per-well EUR and result in an increased recovery of 4.4 million barrels of oil ("MMBO") per section.⁴

³ Anadarko Ex. 2.

⁴ Anadarko Ex. 12.

The Phantom (Wolfcamp) Field was designated as an unconventional fracture treated field ("UFT Field") by the Commission's Final Order in Oil & Gas Docket No. 01-0299858. As a UFT Field, a hearing is not required to reduce the optional density to one half of the existing standard, provided substantiating geological and engineering data is provided and all operators of wells in the field have been given 21-days notice and an opportunity to object and request a hearing. No protests on this request were received by the Commission.⁵ Anadarko asserts that 20-acre optional density will prevent waste and protect correlative rights.

Anadarko Request No. 2

At the hearing Anadarko withdrew its request to amend Field Rule No. 3 to allow longer laterals to benefit from additional acreage for allowable purposes. Therefore, the request is moot.

Anadarko Request No. 3

Anadarko requests that the field rules be amended to expressly include Pecos County. The Phantom (Wolfcamp) Field development has now extended into Pecos County, and Anadarko requests this change to ensure that the field rules apply to wells in Pecos County. Anadarko asserts that this field rule amendment will promote the orderly development of the field.

Anadarko Request No. 4

Anadarko requests the field rules include a provision for a field-wide exception to off-lease storage. Anadarko identified 338 wells in the field in which off-lease surface locations have been permitted. As a result, the production of oil and gas necessarily requires that hydrocarbons be taken off-lease through the production process. Anadarko further testified that all metering requirements are met. Specifically, all produced fluids are metered at the wellhead before being piped to central storage facilities. The proposed exception ensures compliance with Statewide Rules 26 and 27. Anadarko asserts that this field rule amendment will promote the orderly development of the field.

Anadarko Request No. 5

On February 1, 2016, the Commission adopted revisions to Statewide Rules 5, 40, and 86. These revisions generally streamlined the administrative requirements of drilling horizontal wells, especially those completed in designated UFT Fields. Anadarko identified a number of existing provisions in the Phantom (Wolfcamp) Field Rules that were rendered moot by the revisions to Statewide Rules 5, 40, and 86. Anadarko asserts that this field rule amendment will promote the orderly development of the field.⁶

⁵ Anadarko Ex. 14, 15 & 18.

⁶ Anadarko Ex. 16 & 17.

The Examiners recommend the field rules be amended as requested by EOG and Anadarko.

FINDINGS OF FACT

1. Notice of these hearings was given to all parties entitled to notice at least ten days prior to the date of the hearing.
2. Anadarko's application to amend the field rules for the Phantom (Wolfcamp) Field in Oil & Gas Docket No. 08-0303885 was originally protested by several mineral owners in the field, including the Texas General Land Office, Kathleen Luby, and Christopher Prior.
 - a. At the beginning of the hearing, Anadarko withdrew its request to allow additional acreage for longer laterals, and the Texas General Land Office subsequently withdrew its protest.
 - b. Protestants Luby and Prior participated in the hearing and questioned Anadarko's expert witness with regard to the withdrawn requested additional acreage provision, but Luby and Prior asked no questions regarding Anadarko's remaining application. Luby and Prior did not offer an objection to any specific portion of the remaining amendments being sought by Anadarko.
 - c. The Examiners conclude the record of evidence demonstrates Anadarko's application, as modified by the withdrawal of its request to amend the maximum assignable acreage.
3. The current field rules for the Phantom (Wolfcamp) Field were most recently amended by the Commission in Oil & Gas Docket No. 08-0290788 on July 14, 2015.
4. On February 1, 2017, the Commission revised Statewide Rules 5, 40 and 86. Some of the revisions to Statewide Rules 5, 40 and 86 have rendered some of the provisions of the existing field rules to be moot.
5. A two-factor allocation formula for gas wells consisting of 95 percent deliverability and 5 percent acreage is appropriate for the Phantom (Wolfcamp) Field.
6. EOG provided 12 visual cell PVT data points demonstrating that a 3,000 scf/bbl GLR was indicative of a dew point in the reservoir fluid.
7. Permanent gas well classification is appropriate for wells that exhibit a 3,000 scf/bbl GLR upon initial completion.

8. Optional 20-acre units will result in increased EUR of 4.4 million barrels of oil ("MMBO") per section.
9. The Phantom (Wolfcamp) Field development has extended into Pecos County.
10. 338 wells in the field were permitted with off-lease surface locations, which necessarily requires that hydrocarbons be taken off-lease through the production process. An exception to Statewide Rules 26 and 27 will ensure operators' compliance and continue to require that all produced fluids are measured at the wellhead.
11. The proposed field rules will prevent waste, protect correlative rights and promote the orderly development of the Phantom (Wolfcamp) Field.


CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051.
2. All notice requirements have been satisfied. 16 Tex. Admin. Code §§ 1.43 and 1.45.
3. The proposed field rules will prevent waste, protect correlative rights and promote the orderly development of the Phantom (Wolfcamp) Field.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend the field rules for the Phantom (Wolfcamp) Field in Culberson, Loving, Pecos, Reeves, Ward and Winkler Counties, Texas, be amended as set out in the attached Final Order.

Respectfully submitted,



Paul Dubois
Technical Examiner



Jennifer Cook
Administrative Law Judge



Clayton J. Hoover
Administrative Law Judge