

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

OIL AND GAS DOCKET NO. 08-0306954

**APPLICATION OF APACHE CORPORATION TO AMEND FIELD RULES FOR THE
ALPINE HIGH (CONS) FIELD, REEVES, CULBERSON AND PECOS COUNTIES,
TEXAS**

FINAL ORDER

The Railroad Commission of Texas ("Commission") finds that notice in the above-numbered docket was provided to all parties entitled to notice. A hearing in the above numbered docket was heard on December 12, 2017 and October 17, 2018, along with a post-hearing conference on June 28, 2018, by a Commission Technical Examiner and Administrative Law Judge (collectively, "Examiners"). This proceeding was duly submitted to the Commission at a conference held in its offices in Austin, Texas. After considering the evidence and record in this case, the Commission adopts the following findings of fact and conclusions of law.

Finding of Facts

1. Apache (Operator No. 027200) seeks to amend the current oil and gas field rules in effect for the Alpine High (Cons) Field ("Field") in Reeves, Culberson and Pecos Counties, Texas.
2. The Field was discovered on June 7, 2016, at a depth of 12,100 feet in Reeves County, Texas. The Field (No. 01942500) and temporary field rules were formed through Final Order 08-0302080, adopted on February 14, 2017. These temporary field rules were reviewed and made permanent by Final Order 08-0312263, dated October 16, 2018.
3. The correlative interval for the Field is from 10,425 feet to 12,245 feet, a thickness of 1,820 feet, established using Mont Blanc Well No. 1H (API 42-389-35184).
4. Apache requested a hearing in a letter sent to the Commission dated September 19, 2017. Notice of the hearing ("Notice") was sent to all operators in the Field and to those entitled to notice more than 10 days before the December 12, 2017 hearing.
5. The Application was not protested.
6. A hearing was held on December 12, 2017, a post-hearing conference was held on June 28, 2018, and the record was reopened to enter additional evidence at a hearing held on October 17, 2018.

7. Apache's Application requested to add the following rule language to the existing field rules to establish permanent gas well classification:

All wells completed with a gas-oil ratio of 3,000 standard cubic feet per barrel and above in the Alpine High (Cons.) Field, Reeves and Culberson Counties, Texas, are permanently classified as gas wells without the need of further administrative review, effective the date of initial completion.

8. Apache amended their request in the October 17, 2017 hearing. Apache indicated in the hearing that the following would not be considered adverse by Apache:

All wells completed with a gas-oil ratio of 3,200 standard cubic feet per barrel and above in the Alpine High (Cons.) Field, Reeves and Culberson Counties, Texas, are permanently classified as gas wells without the need of further administrative review, effective the date of initial completion.

9. Apache indicated that 111 wells were completed in the Field, with 99 of the wells producing at the time of the October 17, 2018 hearing.

10. A cross-section oriented from northwest to southeast across several counties depicts the geology of the Field, which is about 65 miles long and 20 to 30 miles wide and is estimated to be about 2,000 square miles within a four-county area: Reeves, Culberson, Pecos and Jeff Davis Counties, Texas.

11. Apache developed a structure map of the Field, and assessed the reservoir using well log data and gamma ray signatures, induction or resistivity log signatures, API liquid gravity data, etc.

12. Current Commission guidelines for well classification is based on the August 3, 2006 Commission memorandum ("2006 Commission Memo") from Richard A. Varela, Director of Oil and Gas, to the Commissioners' Offices. Guidance indicates a well may be administratively classified as a gas well if:

- The GOR is 100,000 cubic feet per barrel "cf/bbl" or more as defined by Statewide Rule 79 (11);
- It is determined that a well satisfies certain criteria on an American Society for Testing and Materials (ASTM) Test submitted on Form G-5;
- A pressure, volume, temperature (PVT) test (a.k.a. Visual Cell PVT test) for a reservoir shows that the GOR exceeds 100,000 cf/bbl, or it is above dew point at reservoir conditions;

- The heptanes plus (C7+) mole percent of a compositional analyses is less than 11% [mole percent].
13. Production graphs for the 99 wells in this Field with a production history indicate that some wells have no liquid production and produce as wet gas wells from first production.
 14. Compositional analyses data for 12 wells was entered into the hearing record. These compositional analyses were processed by Core Lab, an independent testing company. The compositional analyses results showed consistently low heptanes plus (C7+) results, all much lower than the Commission's 11% administrative cutoff for gas well classification in the 2006 Commission Memo. The heptanes plus (C7+) values are mostly less than four mole percent and entirely less than seven mole percent, which correlate to a gas-oil ratio ("GOR_i") that is near the top-end of the gas retrograde range, approximately a GOR_i of 10,000-15,000 cf/bbl.
 15. The data presented at the hearings are not definitive in establishing the Field as a lean retrograde or wet gas reservoir, but the evidence indicates the reservoir is under high pressure and high temperature and will meet permanent gas well classification criteria throughout the Field with a GOR_i of 3,000 cf/bbl, or greater.
 16. Apache's Field-specific evidence established the GOR_i for the reservoir to be 3,000 cf/bbl.
 17. The Examiners recommend an amended field rule with a GOR_i of 3,000 cf/bbl, or greater. The amended field rule for the Alpine High (Cons) Field is proposed as follows:
 - For any well in the Alpine High (Cons) Field completed with a gas-oil ratio (GOR) of 3,000 cubic feet per barrel and above, the operator may elect to have such well permanently classified as a gas well without the need of further administrative review effective the date of initial completion, provided the GOR was determined by stabilized well test conducted within 180 days of well completion and in accordance with the GOR determination requirements of Commission procedures as indicated on Forms G-1, G-5 or W-2 as appropriate.

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 § 1.42.
3. Apache has demonstrated that, at initial conditions, the hydrocarbon fluids in the reservoir exist as a retrograde gas phase at a GOR of 3,000 cf/bbl, as requested in the hearing.
4. Substantial evidence supports amending the field rule to allow for permanent gas well classification based on a GOR of 3,000 cf/bbl.

Ordering Provision

It is **ORDERED** by the Railroad Commission of Texas that the following gas classification provision to amend the existing field rules is hereby **APPROVED**.

For any well in the Alpine High (Cons) Field completed with a gas-oil ratio (GOR) of 3,000 cf/bbl and above, the operator may elect to have such well permanently classified as a gas well without the need of further administrative review effective the date of initial completion, provided the GOR was determined by stabilized well test conducted within 180 days of well completion and in accordance with the GOR determination requirements of Commission procedures as indicated on Forms G-1, G-5 or W-2 as appropriate.

It is further **ORDERED** by the Commission that this order shall not be final and effective until 25 days after the Commission's order is signed, unless the time for filing a motion for rehearing has been extended under Tex. Gov't Code § 2001.142, by agreement under Tex. Gov't Code § 2001.147, or by written Commission Order issued pursuant to Tex. Gov't Code § 2001.146(e). If a timely motion for rehearing of an application is filed by any party at interest, this order shall not become final and effective until such motion is overruled, or if such motion is granted, this order shall be subject to further action by the Commission. Pursuant to Tex. Gov't Code § 2001.146(e), the time allotted for Commission action on a motion for rehearing in this case prior to its being overruled by operation of law is hereby extended until 100 days from the date Commission Order is signed.

Each exception to the Examiners' proposal for decision not expressly granted herein is overruled. All requested findings of fact and conclusions of law which are not expressly listed herein are denied. All pending motions and requests for relief not previously granted or granted herein are denied.

Signed on June 4, 2019.

RAILROAD COMMISSION OF TEXAS



CHAIRMAN CHRISTI CRADDICK



COMMISSIONER RYAN SITTON



COMMISSIONER WAYNE CHRISTIAN

ATTEST:


SECRETARY