RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 06-0273279

THE APPLICATION OF EXXON MOBIL CORPORATION TO RESCIND AND ADOPT FIELD RULES FOR THE HAWKINS AND HAWKINS (WOODBINE) FIELDS, WOOD COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Marshall F. Enquist - Legal Examiner

DATE OF HEARING: November 18, 2011

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Tim George	Exxon Mobil Corporation
Jeffery A. Davis	
George Wang	
William T. Duncan, Jr.	
Don Dollar	
Joseph Mello	
Chris Busceni	

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field Rules for the Hawkins and Hawkins (Woodbine) Fields were adopted in Final Order No. 6-2215, effective January 22, 1941, as amended. The current Field Rules are summarized as follows:[1]

1. 466'-933' well spacing;

2. Surface and Production Casing Requirement;

---

[1] Field Rule Nos. 3, 4, 5, 10, 12, and 13 have been rescinded by previous Final Orders.

6. Oil and Gas Separator Requirement;

7. Pit Requirement;

8. Boiler, Flare or Electric Generator Requirement;

9. Swabbing and Bailing Requirement;

11. Rubbish or Debris Requirement;

14. Net Gas Oil Ratio of 700 cubic feet per barrel;

15. 20 acre density;

16. Well Test Monitoring Requirement.

Exxon Mobil Corporation ("Exxon Mobil") requests that the Field Rules be rescinded and new Field Rules be adopted to provide for a correlative interval, 200'-0' well spacing, 10 acre density and a field salvage classification with no restriction on oil, casinghead gas, gas well gas or condensate production. Exxon Mobil also requests that the Entity for Density for the Hawkins Field Unit in the Hawkins Field and the Special Gas Well Gas Allowable Production Rate for the Hawkins Field Unit in the Hawkins (Woodbine) Field be rescinded.

This application was unprotested and the examiners recommend that the Field Rules, Entity for Density and Special Gas Well Gas Allowable Production Rate be rescinded and new Field Rules be adopted for the Hawkins and Hawkins (Woodbine) Fields, as proposed by Exxon Mobil.

DISCUSSION OF EVIDENCE

The Hawkins and Hawkins (Woodbine) Fields were discovered in December 1940 at an average depth of 4,500 feet. There are currently 227 producing oil wells and 4 producing gas wells carried on the proration schedules. The oil wells are carried in the Hawkins Field and the gas wells are carried in the Hawkins (Woodbine) Field. Exxon Mobil is the only operator in the field. The field operates under Field Rules that provide for 466'-933' well spacing, 20 acre density and a field wide MER Top Allowable of 40,000 barrels of oil per day. Cumulative production through December 2010 from the field is approximately 852.8 MMBO and 1.2 TCFG.

There is currently no defined correlative interval for the fields. Exxon Mobil requests that the fields be defined as the correlative interval from 3,914 feet to 4,556 feet as shown on the log of the Exxon Mobil Corporation - Hawkins Field Unit, Well No. 4031 (API No. 42-499-01932), formally known as the Humble Oil & Refining Co. - Republic Insurance Co. "B"

Lease, Well No. 1, Section 31, H. E. Watson Survey, A-645, Wood County, Texas, be designated as a single reservoir for proration purposes and be designated as the Hawkins and Hawkins (Woodbine) Fields. This interval includes the entire Woodbine formation which occurs between the base of the Sub-Clarksville and the top of the Washita formations.

The Woodbine formation is a sand and shale sequence which contains two main sand members. The lower Dexter sand member was deposited in a braided stream environment and the upper Lewisville sand member was deposited in a meandering stream environment. The Dexter sand member is 200 to 400 feet thick, has a 70% net pay to gross pay ratio, an average porosity of 28% and average permeability of 3.4 darcies. The Lewisville sand member is 150 to 300 feet thick, has a 30% net pay to gross pay ratio, an average porosity of 26% and average permeability of 1.1 darcies.

The Hawkins Field is in the later stages of depletion and Exxon Mobil has implemented a Double Displacement Process ("DDP") to further deplete the field. The DDP injects casinghead, inert and nitrogen gas into the gas cap and produces saltwater from the saltwater invaded zone. The process allows gas to displace any bypassed oil down dip into the saltwater invaded zone and aids the gravity drainage of the bypassed oil. Through December 2010, there has been 835.6 BCF of casinghead, inert and nitrogen gas injected into the field.

The original gas cap volume was approximately 400 BCF of 1,400 BTU gas. The current gas cap volume is approximately 800 BCF of 400 BTU gas. Exxon Mobil is expanding its Air Separation Unit to increase the nitrogen injection from 55 MMCFPD to 85 MMCFPD. In addition, the installation of a Nitrogen Rejection Unit will allow gas sales, while maintaining reservoir pressure and supporting the displacement process.

Exxon Mobil requests 200'-0' well spacing and 10 acre units to allow future infill development to aid in capturing the oil bank that is moving down dip. In addition, Exxon Mobil is requesting a salvage classification for the field with no restriction on oil, casinghead gas, gas well gas or condensate production. This classification will help prevent the oil bank from bypassing the producing wells due to allowable restrictions.

Exxon Mobil also requests that the Entity for Density for the Hawkins Field Unit in the Hawkins Field and the Special Gas Well Gas Allowable Production Rate for the Hawkins Field Unit in the Hawkins (Woodbine) Field be rescinded. Since there will be no between well limitation and the field will have a salvage classification, Exxon Mobil opines that there is no need for these Commission approved Final Orders.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.

2. The Hawkins and Hawkins (Woodbine) Fields were discovered in December 1940 at an average depth of 4,500 feet.

   a. There are currently 227 producing oil wells and 4 producing gas wells carried on the proration schedules.

   b. The oil wells are carried in the Hawkins Field and the gas wells are carried in the Hawkins (Woodbine) Field.

   c. Exxon Mobil is the only operator in the field.

   d. The field operates under Field Rules that provide for 466'-933' well spacing, 20 acre density and a field wide MER Top Allowable of 40,000 barrels of oil per day.

3. The Hawkins and Hawkins (Woodbine) Fields should be defined as the correlative interval from 3,914 feet to 4,556 feet as shown on the log of the Exxon Mobil Corporation - Hawkins Field Unit, Well No. 4031 (API No. 42-499-01932), formally known as the Humble Oil & Refining Co. - Republic Insurance Co. "B" Lease, Well No. 1, Section 31, H. E. Watson Survey, A-645, Wood County, Texas. This interval includes the entire Woodbine formation which occurs between the base of the Sub-Clarksville and the top of the Washita formations.

4. Field Rules that provide for a correlative interval, 200'-0' well spacing, 10 acre density and a field salvage classification with no restriction on oil, casinghead gas, gas well gas or condensate production are appropriate for the field.

   a. The Hawkins Field is in the later stages of depletion and Exxon Mobil has implemented a Double Displacement Process to further deplete the field.

   b. The DDP injects casinghead, inert and nitrogen gas into the gas cap and produces saltwater from the saltwater invaded zone.

   c. The process allows gas to displace any bypassed oil down dip into the saltwater invaded zone and aids the gravity drainage of the bypassed oil.

   d. The spacing and density rules will allow future infill development to aid in capturing the oil bank that is moving down dip.

e. The salvage classification will help prevent the oil bank from bypassing the producing wells due to allowable restrictions.

5. Rescinding the Entity for Density for the Hawkins Field Unit in the Hawkins Field and the Special Gas Well Gas Allowable Production Rate for the Hawkins Field Unit in the Hawkins (Woodbine) Field are appropriate for the fields, as there will be no between well limitation and the fields will have a salvage classification.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was issued.

2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.

3. Rescinding and adopting Field Rules for the Hawkins and Hawkins (Woodbine) Fields is necessary to prevent waste, protect correlative rights and promote development of the field.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Field Rules, Entity for Density and Special Gas Well Gas Allowable Production Rate be rescinded and new Field Rules be adopted for the Hawkins and Hawkins (Woodbine) Fields, as proposed by Exxon Mobil Corporation.

Respectfully submitted,

Marshall F. Enquist
Legal Examiner

Richard D. Atkins, P.E.
Technical Examiner