

**APPLICATION OF OK ARENA OPERATING COMPANY TO AMEND THE FIELD RULES FOR THE FUHRMAN-MASCHO FIELD, ANDREWS, ECTOR AND MIDLAND COUNTIES, TEXAS**

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**Heard By:** Richard D. Atkins, P.E. - Technical Examiner

**Date of Hearing:** May 30, 2008

**Appearances:**

Dale E. Miller

**Representing:**

OK Arena Operating Company

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

OK Arena Operating Company requests to amend the field rules as adopted in Order No. 8-7637, effective September 25, 1944, as amended, for the Fuhrman-Mascho Field that currently provide for the following:

1. Designated interval: Grayburg Reservoir interval from 3,990 feet to 4,302 feet and the San Andres Reservoir interval from 4,302 feet to 5,456 feet as shown on the Laterlog of the Magnolia Petroleum Company's Leta Jones Lease, Well No. 3, Andrews County, Texas:
2. Minimum well spacing of 330'/0' (lease line/between well);
3. 40 acre proration units with 10 acre tolerance and optional 10 acre density;
4. An allocation formula based on 100% per well;
5. Net GOR of 3,500 cubic feet of gas per barrel of oil.

OK Arena Operating Company requests that Field Rule 4 be amended to provide for a salvage classification and that Field Rule 5 be deleted. OK Arena also requests that all overproduction in the Fuhrman-Mascho Field be canceled.

This application was unopposed and the examiner recommends approval of OK Arena's request to amend Field Rule 4 to provide for a salvage classification, delete Field Rule 5 and cancel overproduction in the Fuhrman-Mascho Field.

**DISCUSSION OF THE EVIDENCE**

The Fuhrman-Mascho Field was discovered in 1930 at a depth of 4,700' subsurface depth. The field is governed by special field rules as adopted by Order No. 8-7637, effective September 25, 1944, as amended. This is a very large multi-operator multi-well field ( $\pm$  950). The field is mature with many of the wells operating at their economic limit of 3 BOPD. In the past, there have been numerous unitizations and on-going waterfloods that had limited success due to the lenticular nature of the reservoir. The field has produced over 128 MMBO in 78 years.

OK Arena operates approximately 134 leases totaling over 17,000 acres. OK Arena acquired the leases beginning in 2005 and commenced a redevelopment of the leases soon after. OK Arena will recover additional reserves by infill drilling to hit untapped reserves and reperforate and fracture stimulate existing wells. The untapped reserves exist in small, thin zones that were originally overlooked and/or ignored. OK Arena is perforating the entire interval and fracture stimulating the wells afterwards. The thin zones are small in areal extent and therefore the same zone does not exist from well to well.

To date, OK Arena has drilled and completed 86 new wells and has permitted an additional 178 wells. The new wells will be produced until the primary production is depleted and then they will be converted to injection wells for a future waterflood and CO2 project. Estimated recoveries for new wells range from 80,000 BO to 100,000 BO per well. The calculated drainage area for new and existing wells range from 0.2 acres to 69 acres per well.

OK Arena is requesting that Field Rule 4 be amended to provide for a salvage classification and that Field Rule 5 be deleted. Typical new wells have high initial potentials up to 240 BOPD that decline hyperbolically for six months. After six months, the wells are producing less than 50 BOPD and begin to decline exponentially. Only three of the 86 new wells are capable of producing above the 93 BOPD allowable. Because the new wells produce from numerous thin sands of limited size, the "new" reserves being produced are isolated to that wellbore and should not affect nearby wells.

A salvage classification will eliminate MER hearings and the necessity of continually requesting the cancellation of overproduction. In addition, given the depleted status of the reservoir, there is no reason to limit production from this field.

OK Arena also requests that all overproduction in the Fuhrman-Mascho Field be canceled.

#### **FINDINGS OF FACT**

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
2. There was no protest at the call of the hearing.

3. The Fuhrman-Mascho Field was discovered in 1930 at a depth of 4,700' subsurface depth.
  - a. The field is governed by special field rules as adopted by Order No. 8-7637, effective September 25, 1944, as amended, which provide for a designated interval, minimum well spacing of 330'0" (lease line/between well); 40 acre proration units with 10 acre tolerance and optional 10 acre density; an allocation formula based on 100% per well; and a Net GOR of 3,500 cubic feet of gas per barrel of oil.
  - b. This is a very large multi-operator multi-well field ( $\pm$  950).
4. The field is substantially depleted.
  - a. The field has been producing for over 78 years.
  - b. The majority of existing wells produce near their economic limit of 3 BOPD.
5. OK Arena is completing and/or recompleting wells to produce from multiple thin sands at the same time.
  - a. Typical new wells have high initial potentials up to 240 BOPD that decline hyperbolically for six months.
  - b. After six months, the wells are producing less than 50 BOPD and begin to decline exponentially.
  - c. Only three of the 86 new wells are capable of producing above the 93 BOPD allowable.
  - d. Because the new wells produce from numerous thin sands of limited size, the "new" reserves being produced are isolated to that wellbore and should not affect nearby wells.
6. Given the depleted status of the reservoir, there is no reason to limit production from this field.

#### **CONCLUSIONS OF LAW**

1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.

2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Consideration for field rules, a determination of their effectiveness and appropriate actions are a matter within the Commission jurisdiction.
4. Adoption of the proposed amended Field Rule 4 to provide for a salvage classification and deleting Field Rule 5 will prevent waste, foster conservation and protect correlative rights.
5. Cancellation of overproduction in the field will not harm correlative rights.

**EXAMINER'S RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiner recommends to amend Field Rule 4 to provide for a salvage classification, delete Field Rule 5 and cancel overproduction in the Fuhrman-Mascho Field.

Respectfully submitted,

Richard D. Atkins, P.E.  
Technical Examiner