

**THE APPLICATION OF MERIT ENERGY COMPANY TO CONSIDER UNITIZATION,
AND SECONDARY RECOVERY AUTHORITY FOR THE SIDES UNIT, LEE HARRISON
FIELD, LUBBOCK COUNTY, TEXAS**

Heard by: Margaret Allen, Technical Examiner
Mark Helmueller, Legal Examiner

Procedural History

Application filed: April 25, 2006
Hearing held: June 14, 2006

Appearances

	Representing
Clark Jobe	Merit Energy Company
Joseph P. Smith II	
Daniel Tomley	
Stephen M. Buckley	
Jamie Nielson	Kastman Oil Company

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Merit Energy Company ("Merit") is seeking Commission approval of its unitization agreement and of its plan for secondary recovery in the Sides Unit, Lee Harrison Field, Lubbock County, Texas. A representative of Kastman Oil Company appeared at the hearing as an interested party.

DISCUSSION OF THE EVIDENCE

The Lee Harrison Field was discovered in 1941 and has a number of different operators. The proposed unit comprises 2625 acres. There are a few abandoned wells outside the northeast and south limits of the proposed unit that produced small amounts of oil from the Lee Harrison Field. Merit does not believe these areas can be waterflooded successfully. There are several wells on the north side of the field whose operators, Kastman Oil Company and Texland Petroleum Properties, chose not to join the unit. There are also producing wells to the west of the proposed unit, operated by Peden Energy Properties and Kenworthy Operating Company, that did not join the unit.

The reservoir produces from a dolomite deposited along the northwest-southeast trending Clear Fork shelf edge. Most of the wells are along the axis of a structural high with the best producers at the highest structural elevations. The unitized interval extends from 4641' to 4954' in the Merit Energy Company Cabot-Walter Lease Well No. 3, and contains about 40 net feet of pay with 11-13% porosity.

There have been five other waterfloods conducted along the same Clear Fork trend. Merit used the closest of these waterfloods, the Lee Harrison Unit to the northwest and SE Stinnett Unit to the southeast, as models for the Sides Unit.

The average secondary to primary ratio of these waterfloods has been 0.72. Based on this ratio, Merit expects this waterflood will recover an additional 2,900,000 barrels of oil. Cumulative production from wells in the Sides Unit has been about four million barrels. There are 24 tracts within the proposed unit and 51 current wells, including three saltwater disposal wells. After the waterflood begins, there will be 28 producing wells and 23 injection wells in a 5-spot pattern. The net present value, discounted at 10%, is \$13,723,000 and the return on investment will be 25.5%. The expected capital cost of the project is \$6,500,000.

Tract participation is based 35% on estimated ultimate primary production, 35% on current production, 15% on usable wellbores and 15% on a pattern development factor. The pattern development factor is the number of unit offset wells of opposite status (e.g. injector or producer), for each well located on a tract divided by the total number of unit offset wells. As of the hearing date, 91% of the royalty interest had signed the unit agreement, as had 100% of the working interest. Merit will continue to seek sign up of interest owners. The last well on any tract with unsigned interest owners will not be converted to an injection well and the wells on each such tract be tested monthly to account for production from these leases on an individual basis.

The interests of all owners in the field, whether or not they sign the unit agreement, will be protected. The State of Texas owns no royalty interest in any of the tracts. It is necessary to unitize the acreage in order to conduct an effective waterflood. The persons entering into the unit own interests in the unit and the unit agreement is voluntarily entered into to establish pooled units for a secondary recovery operation. The unit agreement does not bind any interest owner who does not execute it. No one was compelled to enter into the unit agreement.

The unit agreement is subject to all valid rules, orders and regulations of the Railroad Commission. The agreement does not provide for the location of wells nor does the agreement relieve Merit from its obligation to develop reasonably the leases in the unit. The unit agreement does not limit the amount of production from the unit properties. The unit agreement does not provide for cooperative refining or marketing of crude petroleum or its by-products. The agreement does not restrict any of the rights which persons now have to pool or unitize, nor does it attempt to set field rules.

FINDINGS OF FACT

1. Notice of the unitization hearing was issued to all interest owners in the proposed Sides Unit, both signed and unsigned, and to all offset operators on May 11, 2006.
2. Notice of the unitization hearing was published in the *Lubbock Avalanche-Journal*, a newspaper of general circulation in Lubbock County, on May 16, 23, 30 and June 6, 2006.
3. The proposed unit includes 24 tracts and covers 2625 acres.

4. The reservoir rock is a dolomite with net pay of 40' and 11-13% porosity.
5. Most of the wells in the Lee Harrison Field are along the axis of a structural high with the best producers at the highest structural elevations.
6. Only acreage that can reasonably be considered productive is included within the unit.
7. After injection begins, there will be 28 producing wells and 23 injection wells in a 5-spot pattern.
8. The unit is sufficiently large to operate an efficient secondary recovery project.
9. The unit area contains only that acreage reasonably productive and necessary for a waterflood project.
10. The oil reservoir in the Lee Harrison Field has a solution gas drive, making this Clear Fork reservoir a good candidate for secondary recovery.
11. Primary production from the tracts in the proposed unit has been 4,000,000 BO.
12. The anticipated secondary recovery is 2,900,000 BO.
13. The State of Texas owns no royalty interest in any of the tracts.
14. The waterflood project will not be successful unless the area is unitized; waterflood operations will sweep hydrocarbons across lease lines.
15. The proposed injection project is expected to produce a reasonable profit: the value of the anticipated additional recovery from the reservoir by means of the secondary recovery program will more than offset the cost of the proposed secondary recovery operation.
16. The rights of the owners of all interests in the field whether or not they join the unit will be protected under the operation of this unit.
17. The owners of interest in the oil and gas under each tract of land within the area reasonably defined by development and capable of inclusion in a contiguous unit have been given an opportunity to enter the unit on the same yardstick basis as the owners of interest in the oil and gas under the other tracts in the unit.
18. To date 100% of the working interest ownership and 91% of the royalty interest ownership have signed or ratified the unit agreement.
19. Such agreement does not bind any interest owner who does not execute the agreement.
20. No one was compelled to enter into the unit agreement; the owners of interests not desiring to enter the unit on the yardstick basis may continue to participate in production from the field on an independent basis governed by Commission rules and by the provision of the individual lease

contract.

21. The persons entering into the unit own or control production, leases, royalty or other interest in the Lee Harrison Field.
22. The unit agreement is subject to all valid rules, orders and regulations of the Railroad Commission.
23. The unit agreement does not attempt to contain the field rules for the area or field.
24. The unit agreement does not limit the amount of production.
25. The unit agreement does not provide for cooperative refining or marketing of crude petroleum or its by-products.
26. The agreement was voluntarily entered into to establish pooled units to conduct secondary recovery operations.
27. The unit agreement does not restrict the rights which persons now have to make and enter into unitization and pooling agreements.
28. Such agreement does not provide for the location of wells.
29. The unit agreement does not relieve Merit Energy Company from its obligation to develop reasonably its leases committed to the unit.
30. There are no other existing alternate methods or facilities available that are adequate for the purpose of secondary recovery; the unitization agreement is necessary to accomplish the purposes set forth in Section 101.011 of the Texas Natural Resources Code, specifically the establishment of pooled units necessary to effect secondary recovery operations for oil or gas.
31. The unit agreement is in the interest of public welfare as reasonably necessary to prevent waste and promote conservation.
32. Production from wells on any tract with unsigned interest will be tested monthly and reported separately.

CONCLUSIONS OF LAW

1. Proper notice of this application and hearing was provided in accordance with all applicable regulatory statutes and rules.
2. All things have occurred or have been accomplished to afford the Commission the opportunity to consider and decide this matter.
3. Consideration of a secondary recovery program that will prevent the waste of otherwise recoverable hydrocarbon resources is a matter properly within the statutory jurisdiction of the

Commission.

4. Approval of the proposed secondary waterflood injection program will foster conservation and prevent waste by providing for the recovery of hydrocarbons that would not otherwise be recovered.
5. The application complies with Chapter 101 of the Texas Natural Resources Code.
6. Because waterflood operations will sweep hydrocarbons across lease lines, a unit agreement is necessary to protect the correlative rights of working interest owners and royalty interest owners.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend the approval of the requested unitization and proposed secondary recovery project in the Sides Unit, Lee Harrison Field.

Respectfully submitted,

Mark Helmueller
Legal Examiner

Margaret Allen
Technical Hearings Examiner