



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 8A-0314544

THE APPLICATION OF MEDDERS OIL COMPANY (558355) FOR UNITIZATION AND SECONDARY RECOVERY FOR THE FORKS SOUTH BALT UNIT, BALT (TANNEHILL) FIELD, KING COUNTY, TEXAS

HEARD BY: Petar Buva – Technical Examiner
Kristi M. Reeve – Administrative Law Judge

HEARING DATE: October 16, 2018

CONFERENCE DATE: April 9, 2018

APPEARANCES:

REPRESENTING:

APPLICANT:

Glenn E. Johnson, Attorney
David C. Triana, Engineer
Lewis Cadman, Vice President
Bryant Medders, Vice President

Medders Oil Company, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Medders Oil Company, Inc. ("Medders") requests Commission unitization and approval of secondary recovery operations on the proposed Forks South Balt Unit in the Balt (Tannehill) Field, King County, Texas. Notice of the application was published in The Caprock Currier, a newspaper of general circulation published in King County on September 20, 2018. Notice of the application and notice of the hearing were served on the working interest owners, royalty interest owners, surface owner, offset operators, and overriding royalty interest owners. A Unit Agreement has been ratified by 100% of the working interest owners and is ratified by 100% of the royalty interest owners. The application is unopposed and the Technical Examiner and Administrative Law Judge (collectively "Examiners") recommend approval of the application.

DISCUSSION OF THE EVIDENCE

The proposed Forks South Balt Unit ("Unit") is located in the Balt (Tannehill) Field, King County, Texas. The Balt (Tannehill) Field was discovered in February 1996 at an average depth of 3,800 feet. The proposed Forks South Balt Unit consists of 6 tracts which contain 4,281.5 acres. There are currently 92 wells carried on the proration schedule on 13 leases held by 3 operators.

The proposed unitized formation is known as the Tannehill Sand formation and it goes from 3762 feet to 3787 feet. The Tannehill Sand formation is located between the base of the Stockwether Lime and the top of the Tannehill Lime formations. The productive interval is sand, a part of the productive portions of the Tannehill Sand, which is a stratigraphic trap and a solution gas drive is the primary drive mechanism. The sand has an average porosity of 21.5%, an average water saturation of 39% and an average net pay thickness of 25 feet.

Field rules provide for 467'-933' well spacing, 80 acre density with 40 acre optional units and allocation based on 100% acres. The top allowable is 144 barrels of oil per day (BOPD) with an allowable gas-oil ratio of 2,000 cubic feet per barrel and a casinghead gas limit of 288 thousand cubic feet of gas per day (MCFGPD). Cumulative production from the field through December 2018 is 8.09 million barrels of oil MBO and 111.8 million MCF.

Notice of the application was published in *The Caprock Courier*, a newspaper of general circulation published in King County on September 20, 2018. Notice of the application and notice of the hearing were served on the working interest owners, royalty interest owners, surface owner, offset operators, and overriding royalty interest owners. The application is unopposed.

Medders proposes to initially implement a peripheral waterflood by converting 15 producing wells to injection, which will leave 35 producing wells on the unit. Medders plans to inject 2,600 BPD of produced saltwater and additional makeup saltwater from a water source well to be drilled at a later date.

Medders estimates that secondary recovery will be equal to 97% of primary recovery or approximately 4.07 MMBO. The total cost to implement and operate the secondary recovery project is expected to be 3.45 million and 21.15 million, respectively. The projected net undiscounted working interest income is 189.9 million, resulting in a return on investment of 7.7. This calculation is based on an oil price of \$67 per barrel.

The participation formula for each tract is based on five percent (5%) number of wells, seventy percent (70%) floodable reservoir volume, twenty-five percent (25%) ultimate primary oil recovery. At the time of the hearing, 100% of the working interest

ownership and 100% of the royalty interest ownership had signed the unit agreement. There are no state owned lands in the proposed unit.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators, surface owners and royalty interest owners within the proposed unit and to offset operators and mineral owners of unleased tracts.
2. Notice of the application was published in *The Caprock Currier*, a newspaper of general circulation published in King County on September 20, 2018.
3. The proposed Unit is composed of 6 tracts of land covering approximately 4,281.5 acres.
4. At the time of the hearing, the Unit Agreement has been ratified by 100% of the working interest owners and 100% of the royalty interest owners.
5. The Agreement was voluntarily executed by all parties affixing their signatures thereto and no person has been compelled or required to enter into the Agreement. The Unit Agreement binds only those persons who have executed it, their heirs, successors, assigns and legal representatives. The rights of all owners of interests in the field will be protected under the operation of unit, regardless of whether an owner signed the Unit Agreement.
6. The owners of interest in oil and gas under each tract within the area reasonably defined by development have been given an opportunity to enter into the unit on the same yardstick basis as owners of interest in the oil and gas under the other tracts in the unit.
7. The Unit Agreement contains no provisions regarding field rules, nor does it limit the amount of production of oil or gas from the unitized area. The Unit Agreement does not release the operator from his obligation to reasonably develop lands or leases as a whole.
8. The Unit Agreement is a voluntary agreement entered into for the purpose of conducting secondary recovery operations.
9. The Unit Agreement does not provide for the location of the wells.
10. The Unit Agreement is subject to all valid orders, rules and regulations of the Railroad Commission.

11. The unitization agreement is necessary to accomplish the purposes of establishing a unit to effect secondary recovery operations for water injection and to operate cooperative facilities necessary thereto. Other available existing methods or facilities for secondary recovery operations are inadequate for the purposes of the secondary recovery.
12. The proposed injection program will move hydrocarbons across lease lines, and unitization is necessary in order to protect the correlative rights of the various interest owners.
13. The secondary recovery project will not be successful unless the area is unitized.
14. The unit agreement does not provide, either directly or indirectly, for the cooperative refining or marketing of crude petroleum, distillate, condensate, or gas or any by-product thereof.
15. There are no state lands in the proposed unit.
16. The secondary recovery operations will result in the recovery of an estimated 4,064,203 barrels of oil which would otherwise go uncovered.
17. The secondary recovery program will use salt water from supply wells and produced water for injection.
18. The cost to implement the project does not exceed the value of additional reserves to be recovers.
19. The area covered by the proposed unit agreement contain only the acreage reasonably necessary to accomplish the proposed secondary recovery program.
20. The participation formula is based on 5% of usable wells, 70% on floodable reservoir volume, and 25% of ultimate primary oil recovery.
21. Medders agreed, that, pursuant to the provisions of Texas Government Code §2001.144(a)(4)(A), this Final Order shall be effective on the date a Master Order relating to this Final Order is signed.

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 § 1.45.
3. Applicant's proposed secondary recovery project satisfies all of the requirements set out in Tex. Nat. Res. Code Ann. §§101.001-052.
4. Approval of the proposed unit agreement for secondary recovery operations is in the public interest and is necessary to prevent waste and to promote the conservation of oil or gas or both.
5. Pursuant to §2001.144(a)(4)(A), of the Texas Government Code, and the agreement of the applicant, this Final Order is effective when a Master Order relating to this Final Order is signed on March 26, 2019.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend approval of the proposed Forks South Balt Unit and approval of secondary recovery operations on the Unit in the Balt (Tannehill) Field, King County, Texas, as requested by Medders Oil Company, Inc.

Respectfully submitted,



Petar Buva
Technical Examiner



Kristi M. Reeve
Administrative Law Judge