

OIL & GAS DOCKET NO. 7B-0263729

THE APPLICATION OF CLEAR FORK, INC. TO CONSIDER UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE EVB (CANYON SAND) UNIT, EVB (4800 CANYON SAND) FIELD, NOLAN COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner

DATE OF HEARING: February 26 and March 15, 2010

APPEARANCES:

REPRESENTING:

APPLICANT:

Lloyd Muennink
Robert Eagle
Steven D. Smith

Clear Fork, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Clear Fork, Inc. ("Clear Fork") requests Commission authority for unitization of the EVB (Canyon Sand) Unit and approval of secondary recovery operations on the Unit.

This application was unopposed and the examiner recommends approval.

DISCUSSION OF THE EVIDENCE

The EVB (4800 Canyon Sand) Field was discovered in April 2000 at an average depth of 4,800 feet. There are 13 producing wells carried on the proration schedule for the proposed unit. The field operates under Statewide Rules and the top allowable is 93 BOPD with a casinghead gas limit of 186 MCFGPD. Cumulative production from the proposed unit through September 2009 is 494.8 MBO and 769.5 MMCFG.

The unitized formation is the subsurface portion of the Unit Area commonly known as the Canyon Sand Formation between the subsurface depths of 4,890 feet and 4,960 feet as shown on the log of the Clear Fork, Inc. - C. E. Boyd 41 Lease, Well No. 1, located 467 feet from the south line and 2,150 feet from the east line of Section 41, Block X, T&P RR Co. Survey, Nolan County, Texas.

The proposed EVB (Canyon Sand) Unit consists of five tracts which contain 630 acres. The productive interval is a Canyon Sand that trends east to west. The field has

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a solution gas drive as the primary drive mechanism. The proposed unit contains all of the productive portions of the Canyon Sand, as demonstrated by a net pay isopach map provided by Clear Fork. The productive interval has an average porosity of 15.7%, an average water saturation of 20% and an average net pay thickness of 20 feet.

Clear Fork proposes to implement a waterflood initially by converting four producing wells to injection. Clear Fork will inject 1,000 barrels per day of produced salt water from the proposed unit and other nearby properties which it operates.

Clear Fork calculated the original oil in place to be 4.3 MMBO. Primary recovery from the field is projected to be 637.8 MBO or 15% of the original oil in place. Clear Fork estimates that secondary recovery will be approximately 368.8 MBO or 60% of primary recovery. The project will result in an ultimate recovery for the field of 24% of the original oil in place. The total cost to implement and operate the secondary recovery project is expected to be \$2.0 million and \$7.3 million, respectively. The estimated net income over the life of the secondary recovery project after all costs are recovered is expected to be \$17.6 million. This estimate is based on an oil price of \$70 per barrel.

The participation formula for each tract in the Unit during Phase I is based on 10% of the number of producing wells, 40% of current production, 20% of cumulative oil production and 30% of ultimate primary reserves. Phase I will be in effect until the remaining primary reserves of 143.5 MBO are produced, at which time, Phase II will begin. The participation formula for each tract in the Unit during Phase II is based on 10% of the number of producing wells, 50% of ultimate primary reserves and 40% of secondary acre-feet.

At the time of the hearing, 100% of the working interest ownership and 97.5% of the royalty interest ownership had signed the unit agreement. Clear Fork anticipates 100% sign up of the royalty interest ownership by the time the project is initiated, but will conduct monthly well tests to allocate production to wells on tracts for which 100% sign-up was not achieved. There are no state lands contained within the proposed unit.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators and royalty interest owners within the proposed unit. Notice was published in the *Sweetwater Reporter*, a newspaper of general circulation in Nolan County, for four consecutive weeks beginning February 9, 2010.
2. The proposed EVB (Canyon Sand) Unit consists of five tracts which contain 630 acres.
3. The unitized formation is the subsurface portion of the Unit Area commonly known as the Canyon Sand Formation between the subsurface depths of 4,890 feet and 4,960 feet as shown on the log of the Clear Fork, Inc. - C. E.

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Boyd 41 Lease, Well No. 1, located 467 feet from the south line and 2,150 feet from the east line of Section 41, Block X, T&P RR Co. Survey, Nolan County, Texas.

4. The productive interval is a Canyon Sand that trends east to west. The field has a solution gas drive as the primary drive mechanism.
5. At the time of the hearing, 100% of the working interest ownership and 97.5% of the royalty interest ownership had signed the unit agreement. Clear Fork anticipates 100% sign up of the royalty interest ownership by the time the project is initiated.
6. Secondary recovery operations will result in the recovery of an estimated 368.8 MBO which would otherwise go unrecovered.
7. The total cost to implement and operate the secondary recovery project is expected to be \$2.0 million and \$7.3 million, respectively. The estimated net income over the life of the secondary recovery project after all costs are recovered is expected to be \$17.6 million. The cost does not exceed the value of additional reserves to be recovered.
8. The participation formula for each tract in the Unit during Phase I is based on 10% of the number of producing wells, 40% of current production, 20% of cumulative oil production and 30% of ultimate primary reserves. Phase I will be in effect until the remaining primary reserves of 143.5 MBO are produced, at which time, Phase II will begin. The participation formula for each tract in the Unit during Phase II is based on 10% of the number of producing wells, 50% of ultimate primary reserves and 40% of secondary acre-feet.
9. The secondary recovery project will not be successful unless the area is unitized.
10. The secondary recovery project will be a waterflood initially by converting four producing wells to injection. Clear Fork will inject produced salt water from the proposed unit and other nearby properties which it operates.
11. 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 the unit, regardless of whether an owner signed the unit agreement.
12. The owners of interest in the oil and gas under each tract of land within the

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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.

13. 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.
14. 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 or existing methods or facilities for secondary recovery operations are inadequate for the purpose of secondary recovery.
15. 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.
16. The unit agreement is subject to all valid orders, rules and regulations of the Railroad Commission.
17. The unit agreement contains no provision 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.
18. The unit agreement is a voluntary agreement entered into for the purpose of conducting secondary recovery operations.
19. The unit agreement does not provide for the location of wells.
20. There are no state lands contained within the proposed unit.
21. The unit agreement is in the interest of public welfare as being reasonably necessary to prevent waste and to promote conservation.
22. The reservoir described in the unit agreement is identified as a single reservoir for Commission purposes and is a suitable reservoir for a water injection secondary recovery operation.
23. The unit agreement contains only the acreage reasonably necessary to accomplish the proposed secondary recovery project.

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24. Monthly well tests will be conducted to allocate production to wells on tracts for which 100% sign-up was not achieved.

CONCLUSIONS OF LAW

1. Proper notice was given to all persons legally entitled to notice.
2. All things have occurred or have been accomplished that are necessary to give the Commission jurisdiction in this matter.
3. Applicant's proposed secondary recovery project satisfies all of the requirements set out in TEX. NAT. RES. CODE ANN. §§101.001 et seq.
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.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends approval of the proposed EVB (Canyon Sand) Unit and the secondary recovery operations project as set out in the attached order.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner