

THE APPLICATION OF CREED OPERATING CO., LLC TO CONSIDER UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE LEWIS-STUART CADDO UNIT, LEWIS-STUART (CADDO) FIELD, MONTAGUE COUNTY, TEXAS

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

DATE OF HEARING: March 17, 2009

APPEARANCES:

George Neale
Rick Johnston
Steve Muehlberger
Matt Muehlberger
Dwight Ross

REPRESENTING:

Creed Operating Co., LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Creed Operating Co., LLC ("Creed") requests Commission authority for unitization of the Lewis-Stuart Caddo Unit and approval of secondary recovery operations on the Unit.

This application was unopposed and the examiners recommend approval.

DISCUSSION OF THE EVIDENCE

The Lewis-Stuart (Caddo) Field was discovered in March 1947 at a depth of approximately 6,200 feet. Cumulative production from the field is 3.1 MMBO. There has been no production from the field since 1987.

The unitized formation is the subsurface productive portion of the Unit Area commonly known as the Caddo Lime Formation as found between the subsurface depths of 6,200 feet and 6,300 feet on the log of the W. B. Omohundro - Barnett Lease, Well No. 1, located 860 feet from the north line and 330 feet from the east line of the W. Lamascus Survey, Abstract 453, Montague County, Texas.

The Lewis-Stuart (Caddo) Field was originally unitized in Final Order No. 09-0203779, effective January 31, 1994. The unit consisted of 35 tracts which contained 2,517 acres. However, no operations were ever conducted on the unit and no production

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was ever re-established. As a result, the underlying leases and unit agreement expired on their own accord.

The proposed Lewis-Stuart Caddo Unit consists of only 33 tracts which contain 2,362 acres. The original unit Tracts 17 and 18 are held by production from a different field and have not been included in the new unit. The proposed unit contains the remaining portions of the Lewis-Stuart (Caddo) Field, as demonstrated by the Caddo Lime isopach map provided by Creed.

Creed proposes to implement a waterflood initially by drilling one new producing well and re-entering four plugged wells and converting them to injection wells. Creed will re-enter one plugged well for a water supply well, as a source for salt water to be injected. The water supply well will be completed in the Brazos formation between 3,900 feet and 4,130 feet. At full unit development, Creed plans to have 28 producing, 32 injection and 3 water source wells.

Primary recovery from the field was 3.1 MMBO and Creed estimates that secondary recovery will equal primary recovery. The total cost to implement and operate the secondary recovery project is approximately \$33.8 million. Estimated revenue as a result of the secondary recovery project is approximately \$155 million over the life of the project. These estimates are based on an oil price of \$50 per barrel.

The participation formula for the Unit is based entirely on productive net acre-feet in the reservoir. At the time of the hearing, 85% of the working interest ownership and approximately 83% of the royalty interest ownership had signed the unit agreement. There are no state lands in the Unit and Creed will conduct monthly well tests to allocate production to wells on tracts for which 100% sign-up was not achieved.

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 Saint Jo Tribune*, a newspaper of general circulation in Montague County, for four consecutive weeks beginning February 13, 2009.
2. The proposed Lewis-Stuart Caddo Unit consists of 33 tracts which contain 2,362 acres.
3. The unitized formation is the subsurface productive portion of the Unit Area commonly known as the Caddo Lime Formation as found between the subsurface depths of 6,200 feet and 6,300 feet on the log of the W. B. Omohundro - Barnett Lease, Well No. 1, located 860 feet from the north line and 330 feet from the east line of the W. Lamascus Survey, Abstract 453, Montague County, Texas.

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4. At the time of the hearing, 85% of the working interest ownership and approximately 83% of the royalty interest ownership had signed the unit agreement.
5. Secondary recovery operations will result in the recovery of an estimated 3.1 MMBO which would otherwise go unrecovered.
6. The total cost to implement and operate the secondary recovery project is approximately \$33.8 million. Estimated revenue as a result of the secondary recovery project is approximately \$155 million over the life of the project. The cost does not exceed the value of additional reserves to be recovered.
7. The participation formula for the Unit is based on 100% productive acre feet.
8. The secondary recovery project will not be successful unless the area is unitized.
9. The secondary recovery project will be a waterflood initially utilizing one producing well and four injection wells. Injected water will be salt water produced from the Brazos formation between 3,900 feet and 4,130 feet.
10. 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.
11. The owners of interest in the oil and gas under each tract of land 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.
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 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.
14. The unit agreement does not provide, either directly or indirectly, for the

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cooperative refining or marketing of crude petroleum, distillate, condensate, or gas, or any by-product thereof.

15. The unit agreement is subject to all valid orders, rules and regulations of the Railroad Commission.
16. 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.
17. The unit agreement is a voluntary agreement entered into for the purpose of conducting secondary recovery operations.
18. The unit agreement does not provide for the location of wells.
19. There are no state lands in the unit.
20. The unit agreement is in the interest of public welfare as being reasonably necessary to prevent waste and to promote conservation.
21. 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.
22. The unit agreement contains only the acreage reasonably necessary to accomplish the proposed secondary recovery project.
23. 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.

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EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend approval of the proposed Lewis-Stuart Caddo Unit and secondary recovery operations project as set out in the attached order.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner

Marshall F. Enquist
Legal Examiner