

THE APPLICATION OF ROFF OPERATING COMPANY, LLC TO CONSIDER UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE EAST MILAGRO UNIT IN THE BREEDLOVE (SPRABERRY) FIELD, DAWSON AND MARTIN COUNTIES, TEXAS

HEARD BY: Andres J. Trevino P.E., Technical Examiner
Gene Montes, Hearings Examiner

DATE OF HEARING: December 3, 2010

APPEARANCES:

Clark Jobe
Frank McColloch, CPL
Donald L. Bailey, P.G.
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Michael S. Fenton

Michael S. Turner

REPRESENTING:

Roff Operating Company, LLC

Michael S. Turner, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Roff Operating Company, LLC requests Commission authority for unitization of the East Milagro Unit and approval of secondary recovery operations on the Unit in the Breedlove (Spraberry) Field. At the hearing Roff Operating had requested authority to convert the last producing well to an injection well on a tract without 100% royalty interest having signed up to join the unit. This authority was later determined to be unnecessary as later Roff was able to acquire 100% royalty signed up on the tract in question. Additionally, Roff requests a [Waterflood Capacity Lease Allowable](#) for production from the unit as oil production may temporarily exceed oil proration allowables as the waterflood is started.

This application was unopposed and the examiners recommend approval.

DISCUSSION OF THE EVIDENCE

The Breedlove (Spraberry) Field was discovered in 1962 at an approximate depth of 8,350 feet. Production in the unit area peaked in 2007 with a monthly production rate

of 8,000 BO per month. Current production is approximately 3,600 BO per month from 9 active wells in the Unit area.

The area proposed for the subject unitization covers acreage that includes the majority of the productive reservoir. The reservoir limits are well defined and are believed to include both drained and undrained areas. Leaseholders of productive areas not in the unit were offered to participate in the unit. The area is in the late stage of primary production. The estimated ultimate primary production from the 9 wells is 700,000 BO.

The unitized formation is the Upper Spraberry formation which contains one distinct, continuous porosity zone in the field, the C3 Sandstone. The C3 sand exists in all wellbores but varies in thickness and porosity development is of limited lateral extent within the unit. The formation is described as the Upper Spraberry formation encountered in the interval from 7,969 feet to 8,350 feet on the log of the Roff Operating Company's Beam No. 1, (API No. 42-115-33108) located in the Labor 24, League 262, Borden County School Lands, Dawson County, Texas.

Average porosity is 14% and average net pay of 18 feet. The initial reservoir pressure was 3,696 psi and current pressure beneath the unit area is approximately 200 psi. Roff Operating modeled their waterflood studies after a similar waterflood project in the area the Echols (Spraberry) Unit in the Echols (Spraberry) Field to predict the waterflood's performance. The waterflood program will consist of 6 producing wells and 3 injection wells. Initially make up water will be supplied from one or two water supply wells producing saltwater from the Santa Rosa aquifer. The three injection wells will be converted from existing producing wells. Roff Operating requests a waterflood capacity lease allowable for production from the unit. Roff Operating believes production from the unit may temporarily increase above the unit's allowable once the waterflood is initiated.

The proposed East Milagro Unit consists of 12 tracts which contain a total of 916 acres. The participation formula is based on two Phases. Phase 1 will be in effect until the primary estimated ultimate recovery is produced, Phase 2 formula will be used thereafter. Phase 1 is based on 75% of the current lease production, 20% of the remaining primary recovery and 5% reservoir volume. Phase 2 is based on 25% of expected ultimate recovery and 75% reservoir volume. The Unit Agreement has been ratified by over 98.5% of the royalty interest ownership and 100% of the working interest ownership. There are no state lands in the Unit Area.

It is estimated that the total cost to implement the project will be \$1,200,000. Secondary reserves are estimated to be 350,000 BO. Estimated gross revenue from the secondary recovery project is \$26.3 million at \$75/bbl.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators and royalty interest owners within the proposed unit and to offset operators and mineral owners of

unleased tracts. Notice was also published in *The Lamesa Press Reporter*, a newspaper of general circulation in Dawson County, for four consecutive weeks beginning October 20, 2010. There were no protests to the application.

2. The proposed unit consists of 12 tracts which contain a total of 916 acres.
3. The unitized formation is the subsurface portion of the Unit Area commonly known as the Upper Spraberry reservoir. The formation is described as the interval from 7,969 feet to 8,350 feet on the log of the Roff Operating Company's Beam No. 1, (API No. 42-115-33108) located in the Labor 24, League 262, Borden County School Lands, Dawson County, Texas.
4. Secondary recovery operations will result in the recovery of an estimated 350,000 BO which would otherwise go unrecovered.
5. The cost to implement the project does not exceed the value of additional reserves to be recovered.
6. The participation formula is based on two Phases. Phase 1 will be in effect until the primary estimated ultimate recovery is produced, Phase 2 formula will be used thereafter. Phase 1 is based on 75% of the current lease production, 20% of the remaining primary recovery and 5% reservoir volume. Phase 2 is based on 25% of expected ultimate recovery and 75% reservoir volume.
7. The secondary recovery project will not be successful unless the area is unitized.
8. The secondary recovery program will use saltwater from the Santa Rosa Aquifer initially.
9. 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.
10. 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.

11. 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.
12. The unitization agreement is necessary to accomplish the purposes of establishing a unit to effect secondary recovery operations and to operate the necessary cooperative facilities. Other available or existing methods or facilities for secondary recovery operations are inadequate for the purpose of secondary recovery.
13. 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.
14. The unit agreement is subject to all valid orders, rules and regulations of the Railroad Commission.
15. 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.
16. The unit agreement is a voluntary agreement entered into for the purpose of conducting secondary recovery operations.
17. The unit agreement does not provide for the location of wells.
18. There are no State lands in the unit.
19. The reservoir described in the unit agreement is a suitable reservoir for the proposed secondary recovery operation.
20. The unit agreement contains only the acreage reasonably necessary to accomplish the proposed secondary recovery project.
21. The unit agreement has been ratified by 100% of the working interest ownership and over 98.5% of the royalty interest ownership.
22. On tracts where 100% sign-up is not attained, the applicant will continue to use existing lease production facilities to account for production from that tract.
23. A Waterflood Capacity Lease Allowable is appropriate as production may increase temporarily above the allowable as the waterflood is implemented.

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. (Vernon 1993).
4. Approval of the proposed unit agreement and 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 examiners recommend approval of the proposed East Milagro Unit and secondary recovery operations project as set out in the attached order.

Respectfully submitted,

Andres J. Trevino
Technical Examiner

Gene Montes
Hearings Examiner