

OIL & GAS DOCKET NO. 8A-0239554

THE APPLICATION OF MERIT ENERGY COMPANY TO CONSIDER UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR MULDROW SAN ANDRES UNIT IN THE PRENTICE, NW (SAN ANDRES) FIELD, TERRY COUNTY, TEXAS

HEARD BY: Donna K. Chandler, Technical Examiner
Mark J. Helmueller, Hearings Examiner

DATE OF HEARING: October 12, 2004

APPEARANCES:

Mike McElroy
Stephen Buckley
Jason Putnam
Adam Hatton
Dale Miller

REPRESENTING:

Merit Energy Company

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Merit Energy Company requests Commission authority for unitization of the Muldrow San Andres Unit and approval of secondary recovery operations on the Unit in the Prentice, NW (San Andres) Field.

A written protest was filed by Jewel Roberts, but Ms. Roberts did not appear at the hearing. The examiners recommend approval of the application.

DISCUSSION OF THE EVIDENCE

The proposed Muldrow Unit consists of 11 tracts which contain approximately 950 acres. There are currently 20 producing wells within the proposed unit area, all of which are operated by Merit. There are several other wells carried on the Commission's proration schedule for this field. The Covington lease operated by Perimeter Resource Company

directly offsets the Muldrow Unit to the north. Perimeter declined Merit's offer to join the Muldrow Unit. The Covington "B" lease operated by Boyd & McWilliams Energy Group directly offsets the Covington lease to the north, and is therefore not adjacent to the Muldrow Unit. Additionally, there are several wells carried in the field which are located about five miles to the northwest of the Muldrow Unit.

The unitized formation is the subsurface portion of the Unit Area commonly known as the San Andres Formation, being more particularly described as that certain sand section shown on the electric log Dated May 18, 1981 between the log depths of 4,574 feet and 5,938 feet measured depth in the Merit Energy Company, Muldrow "B" lease, Well No. 1, located approximately 4,671 feet from the north line and 2,200 feet from the east line of Section 26, Block D-14, C&M RR Co. Survey, Terry County, Texas. Average porosity of the San Andres varies to a maximum of 10%. Permeability is 1-2 md.

The reservoir is a stratigraphic trap defined by an oil-water contact to the south and east. The limits of the reservoir are defined by dry holes in other directions. Just west of the western Muldrow Unit boundary, the Clare No. 2 well produced about 2,000 BO from the San Andres in 1980 and is now part of the Jackson (Clearfork) Unit operated by Merit. Just east of the eastern boundary of the Muldrow Unit, the Joyce No. 1 produced 861 BO from the San Andres in 1984 and was plugged in 1985. All of the acreage included in the unit is reasonably considered productive.

Cumulative production from the leases to be included in the unit is 863,000 barrels of oil, since 1980. Current production from the wells on the unit is approximately 48 BOPD, 74 MCFD and 134 BWPD. Estimated ultimate primary recovery from the leases on the unit is 1.1 million BO. Merit estimates that secondary recovery from the unit will be approximately 1.2 million BO. This estimate is based on the performance of an ongoing waterflood in the Sunflower (San Andres) Field about three miles to the northeast.

For the waterflood project, there will be 11 injection wells and 12 producing wells. The source water for the waterflood will be produced water from the San Andres, with additional water as needed from the Ogallala. The total cost to implement the secondary recovery project is \$1.48 million. Estimated revenue as a result of the secondary recovery project is \$9.6 million. This estimate assumes a price of \$22 per barrel of oil and \$3 per MCF of gas.

The participation formula for the Unit is based on 5 factors: 25% estimated ultimate primary production from the tract, 25% current production from the tract, 20% useable wellbores on the tract, 20% pattern development factor, and 10% casing size factor. As of the date of the hearing, over 77% of the royalty interest ownership and 100% of the working interest ownership had signed the unit agreement. On tracts which do not have 100% sign-up, Merit will conduct monthly well tests to separately account for production from those tracts.

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 offset unleased tracts. Notice was also published in *The Brownfield News*, a newspaper of general circulation in Terry County, for four consecutive weeks beginning August 11, 2004. No protestant appeared at the hearing.
2. The proposed unit consists of 11 tracts which contain a total of approximately 950 acres.
3. The unitized formation is the subsurface portion of the Unit Area commonly known as the San Andres Formation, being more particularly described as that certain sand section shown on the electric log Dated May 18, 1981 between the log depths of 4,574 feet and 5,938 feet measured depth in the Merit Energy Company, Muldrow "B" lease, Well No. 1, located approximately 4,671 feet from the north line and 2,200 feet from the east line of Section 26, Block D-14, C&M RR Co. Survey, Terry County, Texas.
4. Secondary recovery operations will result in the recovery of an estimated 1.2 million 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 5 factors which include ultimate primary production, current production, useable wellbores, pattern development factor, and casing size factor.
7. The secondary recovery project will not be successful unless the area is unitized.
8. The secondary recovery program will use produced salt water from the San Andres and make-up water from the Ogallala.
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 77% of the royalty interest ownership.
22. On tracts where 100% sign-up is not attained, applicant will conduct monthly well tests to account for production from that tract.

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 Muldrow San Andres Unit and secondary recovery operations project as set out in the attached order.

Respectfully submitted,

Donna K. Chandler
Technical Examiner

Mark J. Helmueller
Hearings Examiner