

**THE APPLICATION OF GOODRICH PETROLEUM COMPANY TO CONSIDER
UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE PALUXY “B”
SAND UNIT, MARY BLEVINS (PALUXY B) FIELD, SMITH COUNTY, TEXAS**

HEARD BY: Donna K. Chandler, Technical Examiner
Mark H. Tittel, Hearings Examiner

DATE OF HEARING: April 6, 2001

APPEARANCES:

Philip Patman
Robert Wade
N. C. McGowen III
Robert McGowen
Craig Barclay
James Marston

John Soule

Kenneth King

REPRESENTING:

Goodrich Petroleum Company

George Droke

Neva J. King, Trustee for
Tokeke Trust

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Goodrich Petroleum Company requests Commission authority for unitization of the Paluxy “B” Sand Unit and approval of secondary recovery operations on the Unit in the Mary Blevins (Paluxy B) Field, Smith County.

This application was unopposed and the examiners recommend approval. The application had been protested by Neva J. King, Trustee for the Tokeke Trust. Mr. King appeared at the hearing and withdrew the protest.

DISCUSSION OF THE EVIDENCE

The Mary Blevins (Paluxy B) Field was discovered in 1994 at approximately 7,450 feet. Cumulative production from the field is approximately 516,000 BO. There are currently 4 producing

wells in the field which produce a total of 118 BOPD. Goodrich Petroleum Company operates all four wells in the field.

The unitized formation is the interval underlying the Unit Area between the depths of 7,482 feet and 7,535 feet as seen on the Schlumberger Array Induction/BNC/Sonic/Gamma Ray Log in the Goodrich Petroleum Company Bradberry No. 1, which was run on January 8, 1998, such well being located 1,780 feet from the South Line and 480 feet from the West Line of the R. G. Saunders Survey, A-871, Smith County, Texas.

The subject reservoir is bounded to the north, east and west by faults and the downdip limit is found at a subsea depth of 7,003 feet where the oil portion of the reservoir exists as asphalt. The reservoir is an undersaturated oil reservoir and all four wells are on pump. Average porosity is 19.2% and average water saturation is 20.3%. The permeability of the reservoir averages 50 md. as determined from cores. The initial reservoir pressure was 2,274 psi and the current reservoir pressure is less than 500 psi.

The proposed Paluxy "B" Sand Unit consists of 8 tracts which contain 261.9 acres. All of the productive acreage of the reservoir lies within the confines of the unit boundary. The reservoir contains 2,981 acre-feet and original oil in place in the reservoir is 3,154 million barrels of oil.

Goodrich plans to implement a line drive waterflood by converting the northernmost well, the Holder No. 1, to an injection well. The injected water will be salt water produced from the Woodbine. Goodrich will drill a source well for the Woodbine water.

Ultimate primary recovery is estimated to be 688,000 BO, which is 21.8% of original oil in place. Estimated secondary recovery is 477,000 BO. Estimated cost to implement the project is \$450,000. Goodrich expects to recover \$16 per dollar invested in the project.

The participation formula is based on 70% acre-feet and 30% remaining primary reserves. The Unit agreement has been signed by 100% of the working interest ownership and over 91% of the royalty interest ownership. On tracts where 100% sign-up is not attained, applicant will maintain separate metering to account for production. Not all of the royalty interest ownership in the Droke 1A Oil Unit and the Bob Bradberry, et al Oil Unit have approved the Unitization and Secondary Recovery Authority for the Paluxy "B" Sand Unit. Insofar as such non-approving royalty interest ownership is affected, the Droke 1A Oil Unit and the Bob Bradberry, et al Oil Unit will remain in existence. These non-signed interests are in Tracts 4, 5 and 6 of the Paluxy "B" Sand Unit.

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.
2. The Notice of Hearing was published in the *Tyler Morning Telegraph*, a newspaper of general circulation in Smith County, Texas, on December 20 and December 27,

2000 and January 3 and January 10, 2001.

3. The proposed unit consists of 8 tracts which contain 261.935 acres.
4. The unitized formation is the interval underlying the Unit Area between the depths of 7,482 feet and 7,535 feet as seen on the Schlumberger Array Induction/BNC/Sonic/Gamma Ray Log in the Goodrich Petroleum Company Bradberry No. 1, which was run on January 8, 1998, such well being located 1,780 feet from the South Line and 480 feet from the West Line of the R. G. Saunders Survey, A-871, Smith County, Texas.
5. Cumulative recovery from the leases proposed for unitization is 516,400 BO through 2000. Remaining primary recovery is estimated to be 171,700 BO. Secondary recovery operations will result in the recovery of an estimated 477,000 BO which would otherwise go unrecovered.
6. The cost to implement the project does not exceed the value of additional reserves to be recovered.
7. The participation formula is based on 70% acre feet and 30% remaining primary reserves.
8. The secondary recovery project will not be successful unless the area is unitized.
9. The secondary recovery program will use salt water from the Woodbine as the injection fluid.
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 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 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 the proposed secondary recovery operation.
22. The unit agreement contains only the acreage reasonably necessary to accomplish the proposed secondary recovery project.
23. The unit agreement has been ratified by 100% of the working interest ownership and over 90% of the royalty interest ownership.
24. On tracts where 100% sign-up is not attained, applicant will maintain separate meters to account for production from that tract.
25. Not all of the royalty interest ownership in the Droke 1A Oil Unit and the Bob Bradberry, et al Oil Unit have approved the Unitization and Secondary Recovery Authority for the Paluxy "B" Sand Unit, Mary Blevins (Paluxy B) Field, Smith County.
26. Insofar as the non-approving royalty interest ownership is affected, the Droke 1A Oil Unit and the Bob Bradberry, et al Oil Unit will remain in existence.

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 Paluxy "B" Sand Unit and secondary recovery operations project as set out in the attached order.

Respectfully submitted,

Donna K. Chandler
Technical Examiner

Mark H. Tittel
Hearings Examiner