

OIL & GAS DOCKET NO. 7B-0268202

**THE APPLICATION OF E. N. PATTON OIL COMPANY, INC. TO CONSIDER
UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE CRICKET
(STRAWN) UNIT, CRICKET (STRAWN) FIELD, HASKELL COUNTY, TEXAS**

HEARD BY: Donna K. Chandler, Technical Examiner
Christopher S. Hotchkiss, Hearings Examiner

DATE OF HEARING: January 6, 2011

APPEARANCES:

David Gross
Edward N. Patton, Jr.
Bruce Robertson

REPRESENTING:

E. N. Patton Oil Company, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

E. N. Patton Oil Company, Inc. requests Commission authority for unitization of the Cricket (Strawn) Unit and approval of secondary recovery operations on the Unit.

This application was unopposed and the examiners recommend approval.

DISCUSSION OF THE EVIDENCE

The Cricket (Strawn) Field was discovered in 1985. A total of 11 wells have been completed in the field, all operated by E. N. Patton Oil Company, Inc. Cumulative production from the field is approximately 335,000 BO.

The unitized formation is the subsurface portion of the Unit Area described as that portion of the Pennsylvanian Strawn sand formation, constituting the correlative and continuous stratigraphic interval containing the productive interval recognized as the Cricket (Strawn) Field, denoted at a subsurface depth from 4,955 feet to 5,044 feet as shown on the log of the Joe Frances Clark No. 2 located 4,961 feet from the east line and 10,488 feet from the south line of the G. W. Lang Survey No. 37, Haskell County.

The proposed Cricket (Strawn) Unit consists of 5 leases which contain 407 acres. The proposed unit is bounded to the west by the Northwest Sagerton Unit operated by Lariat Land & Exploration, Inc. The Northwest Sagerton Unit is in the Amy B. (Jud Sand) Field. The Cricket (Strawn) Field is in a common reservoir as the Amy B. (Jud Sand) Field

and the same sand will be waterflooded in the proposed Unit. The proposed Unit is directly adjacent to the Northwest Sagerton Unit and contains the entire floodable portion of the Cricket (Strawn) Field.

Patton plans to convert three producing wells to injection wells and produce the remaining eight wells. The injected fluid will be brackish water produced from a water supply well completed in the Double Mountain Fork sand at approximately 70 feet. This is the same water source used by the Amy B. (Jud Sand) Field Unit.

Estimated secondary recovery from the project is 279,000 BO or approximately 75% of primary recovery. The total cost to implement and operate the secondary recovery project is approximately \$4.2 million. Estimated net income as a result of the secondary recovery project is approximately \$10.5 million over the life of the project. These estimates are based on an oil price of \$68 per barrel.

Phase I of the project begins upon inception of the waterflood and concludes when 41,266 BO have been produced from the Unit from December 31, 2008. This represents estimated remaining primary reserves. During Phase I, 100% of each tract's participation will be based on the six months of oil production from July 1, 2008 through December 31, 2008. Phase II of the project begins at the end of Phase I and continues through the life of the Unit. Phase II participation is based on 25% number of usable wells, 25% cumulative primary oil recovered as of January 1, 2009, 25% estimated future oil reserves as of January 1, 2009, and 25% floodable reservoir volume. At the time of the hearing, 100% of the working interest ownership and 100% of the royalty interest ownership had signed the unit agreement. There are state lands in the Unit and the General Land Office has ratified the Unit Agreement.

Notice of this hearing was sent to all operators and royalty interest owners within the proposed unit and to all offsetting operators/mineral owners. Notice was published in the *Haskell Star*, a newspaper of general circulation in Haskell County, for four consecutive weeks beginning December 3, 2010. Notice was also published in the *Haskell Free Press*, a newspaper of general circulation in Haskell County, for four consecutive weeks beginning December 2, 2010.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators and royalty interest owners within the proposed unit and to all offsetting operators/mineral owners. Notice was published in the *Haskell Star*, a newspaper of general circulation in Haskell County, for four consecutive weeks beginning December 3, 2010. Notice was also published in the *Haskell Free Press*, a newspaper of general circulation in Haskell County, for four consecutive weeks beginning December 2, 2010.

2. The proposed unit consists of 5 leases which contain 407 acres.
3. The unitized formation is the subsurface portion of the Unit Area described as that portion of the Pennsylvanian Strawn sand formation, constituting the correlative and continuous stratigraphic interval containing the productive interval recognized as the Cricket (Strawn) Field, denoted at a subsurface depth from 4,955 feet to 5,044 feet as shown on the log of the Joe Frances Clark No. 2 located 4,961 feet from the east line and 10,488 feet from the south line of the G. W. Lang Survey No. 37, Haskell County.
4. At the time of the hearing, 100% of the working interest ownership and 100% of the royalty interest ownership had signed the unit agreement.
5. Cumulative recovery from the leases proposed for unitization is approximately 335,000 BO. Secondary recovery operations will result in the recovery of an estimated 279,000 BO which would otherwise go unrecovered.
6. Estimated cost to implement and operate the secondary recovery project is approximately \$4.2 million. The cost does not exceed the value of additional reserves to be recovered.
7. Phase I of the project begins upon inception of the waterflood and concludes when 41,266 BO have been produced from the Unit from December 31, 2008. This represents estimated remaining primary reserves. During Phase I, 100% of each tract's participation will be based on the six months of oil production from July 1, 2008 through December 31, 2008. Phase II of the project begins at the end of Phase I and continues through the life of the Unit. Phase II participation is based on 25% number of usable wells, 25% cumulative primary oil recovered as of January 1, 2009, 25% estimated future oil reserves as of January 1, 2009, and 25% floodable reservoir volume.
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 eight producing wells and three injection wells.
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 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 state lands in the unit and the General Land Office has signed the unit agreement.
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.

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 examiners recommend approval of the proposed Cricket (Strawn) Unit and secondary recovery operations project as set out in the attached order.

Respectfully submitted,

Donna K. Chandler
Technical Examiner

Christopher S. Hotchkiss
Hearings Examiner