

**THE APPLICATION OF ELAND ENERGY, INC. TO CONSIDER UNITIZATION AND SECONDARY RECOVERY AUTHORITY FOR THE YOUNGBLOOD WATERFLOOD UNIT, YOUNGBLOOD (MISS.) FIELD, DAWSON COUNTY, TEXAS**

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**HEARD BY:** Richard D. Atkins, P.E. - Technical Examiner  
Christopher S. Hotchkiss - Legal Examiner

**DATE OF HEARING:** September 27, 2011

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

George Neale  
Rick Johnston  
Cameron Rice  
Mark Evans

Eland Energy, Inc.

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Eland Energy, Inc. ("Eland") requests Commission authority for unitization of the Youngblood Waterflood Unit and approval of secondary recovery operations on the Unit. Since there were several returned hearing notices, Eland published notice of the subject application in the *Lamesa Press-Reporter*, a newspaper of general circulation in Dawson County, for four consecutive weeks beginning on August 21, 2011.

The application was unopposed and the examiners recommend approval of unitization authority and secondary recovery operations.

**DISCUSSION OF THE EVIDENCE**

The Youngblood (Miss.) Field was discovered in July 1985 at an average depth of 10,100 feet. There are 3 producing oil wells and two operators carried on the proration schedule. Field Rules provide for 660'-1,320' well spacing, 160 acre oil units with optional 80 acre density. The top allowable is the 1965 Yardstick Allowable of 515 BOPD with an allowable gas-oil ratio of 2,000 cubic feet per barrel and a casinghead gas limit of 1,030 MCFGPD. Cumulative production from the field through June 2011 is 481.6 MBO and 1.3 BCFG.

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The unitized formation is the subsurface portion of the Unit Area commonly known as the Mississippian Stray Sand formation between the subsurface depths of 10,106 feet and 10,115 feet as shown on the log of the Gruss Petroleum Management, Inc. - Youngblood Lease, Well No. 1 (API No. 42-115-32285), Section 20, Block 33, T-5-N, T&P RR Co. Survey, A-585, Dawson County, Texas.

The proposed Youngblood Waterflood Unit consists of four tracts which contain 520 acres. The productive interval has a solution gas drive as the primary drive mechanism. The proposed unit contains all of the productive portions of the Mississippian Stray Sand formation, as demonstrated by a cross section, structure map and net pay isopach map that were submitted by Eland.

Eland proposes to initially implement a waterflood by converting one producing well to injection and beginning to inject 100 BPD of produced saltwater. Eland estimates that secondary recovery will be equal to 50% of primary recovery or approximately 230 MBO. The total cost to implement the secondary recovery project is expected to be \$775,000. The projected gross value of the additional production is \$20.7 million, resulting in a gross return on investment of 26.7 to 1. This calculation is based on an oil price of \$90 per barrel.

The participation formula for each tract is based on 100% surface acres. At the time of the hearing, 100% of the working interest ownership and 100% of the mineral interest ownership had signed the unit agreement. There are no state owned lands in the proposed unit.

### **FINDINGS OF FACT**

1. Notice of this hearing was sent to all operators and unleased mineral interest owners within and adjacent to the proposed unit. The subject application was published in the *Lamesa Press-Reporter*, a newspaper of general circulation in Dawson County, for four consecutive weeks beginning on August 21, 2011.
2. The proposed Youngblood Waterflood Unit consists of four tracts which contain 520 acres.
3. The unitized formation is the subsurface portion of the Unit Area commonly known as the Mississippian Stray Sand formation between the subsurface depths of 10,106 feet and 10,115 feet as shown on the log of the Gruss Petroleum Management, Inc. - Youngblood Lease, Well No. 1.
4. The productive interval has a solution gas drive as the primary drive mechanism.
5. At the time of the hearing, 100% of the working interest ownership and 100%

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of the mineral interest ownership had signed the unit agreement.

6. Secondary recovery operations are expected to result in the recovery of an estimated 230 MBO which would otherwise go unrecovered.
7. The total cost to implement the secondary recovery project is expected to be \$775,000. The projected gross value of the additional production is \$20.7 million, resulting in a gross return on investment of 26.7 to 1. The cost does not exceed the value of additional reserves to be recovered.
8. The participation formula for each tract is based on 100% surface acres.
9. The secondary recovery project will not be successful unless the area is unitized.
10. Eland proposes to initially implement a waterflood by converting one producing well to injection and beginning to inject 100 BPD of produced saltwater.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.

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

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**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend approval of the proposed Youngblood Waterflood Unit and secondary recovery operations, as set out in the attached order.

Respectfully submitted,

Christopher S. Hotckiss  
Legal Examiner

Richard D. Atkins, P.E.  
Technical Examiner