

**THE APPLICATION OF DELTA EXPLORATION COMPANY, INC. FOR AN MER FOR ITS PEELER LEASE WELL NO. 1, WRIGHT HOOK (WRIGHT SAND) FIELD, ATASCOSA COUNTY, TEXAS**

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**Heard by:** Margaret Allen, Technical Hearings Examiner

**Procedural history**

Application received: March 23, 2006

Hearing held: May 2, 2006

**Appearances**

Don Rhodes  
Michael White

Representing  
Delta Exploration Company, Inc.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Delta Exploration Company, Inc. ("Delta") wants to produce its Peeler Lease Well No. 1, Wright Hook (Wright Sand) Field, Atascosa County, Texas, at daily rates up to 900 BO. The notice of hearing incorrectly placed the Wright Hook (Wright Sand) Field in McMullen County. The field is in Atascosa County.

**DISCUSSION OF THE EVIDENCE**

The Peeler Lease Well No. 1, originally drilled by Manti Operating Company, is the discovery well of the Wright Hook (Wright Sand) Field. It was completed in March of 2003 and is the only well in the field. The well was perforated between 5234' and 5242', and assigned a discovery allowable of 160 BOPD. The yardstick allowable for wells at this depth is 102 BOPD. On March 1, 2006, in Final Order No. 01-0245395, the well was granted an MER of 575 BOPD. It has become overproduced again, and Delta is requesting an increase in the MER to 900 BOPD.

This reservoir is estimated to be only 50 acres, and the sandstone has unusually high permeability of 160 md. The fault-block reservoir has an active water drive and Delta believes that producing at higher rates allows it to outrun water influx. Cumulative production through December, 2005 is 151,000 BO.

Delta's evidence included test rates measured every 2 hours since February 23, 2006. Representative producing rates, before and during the tests, are shown below:

Date	Choke size (inches)	Average oil rate (barrels per day)	Water/oil ratio	Average flowing tubing pressure (psi)
1/28/06	9.5/64	158	.27	493
1/15/06	16/64	564	.10	560
4/10/06	24/64	812	.22	450
4/9/06	24/64	972	.20	450
4/24/06	24/64	875	.23	445

The test rate for January 15 on the above chart, indicates somewhat lower water cut at a producing rate near the current allowable of 575 BOPD. However a graphical presentation shows that producing at still higher oil rates will allow greater ultimate recovery. A semi-log plot of production versus water cut shows a change in slope at daily oil rates above 150 BO and another at daily oil rates above 500 BO. The increase in water cut slows at both inflection points. Water cut will still increase if the well is produced at rates of 900 BOPD, but not as rapidly as if the well continues to be produced at rates below 575 BOPD.

If this application is approved, the applicant believes the maximum ultimate recovery of 575,000 BO will be achieved. As this is the only producing well in the field, cancellation of overproduction will not harm correlative rights. No additional wells are necessary to drain this small reservoir.

#### **FINDINGS OF FACT**

1. Notice of this hearing was issued to Delta Exploration Company, Inc., the only operator of record in the Wright Hook (Wright Sand) Field, on April 20, 2006.
2. The Delta Exploration Company Peeler Lease Well No. 1 was the discovery well of the Wright Hook (Wright Sand) Field in 2003, and is the only well in the field.
3. The Peeler No. 1 was perforated from 5234' to 5242', and received a discovery allowable of 160 BOPD.
4. The well received an MER of 575 BOPD on March 1, 2006, and its cumulative recovery has been 151,000 BO.
5. Producing at higher oil rates, up to 900 barrels per day, will allow greater ultimate recovery.
  - a. A semi-log plot of production versus water cut shows a change in slope at daily oil rates above 150 BO and another at daily oil rates above 500 BO.
  - b. The increase in water cut slows at both inflection points.
  - c. Water cut will still increase if the well is produced at rates of 900 BOPD, but not as

rapidly as if the well continues to be produced at rates below 575 BOPD.

- d. Slower increases in water cut will allow the well to produce longer, thereby recovering more oil.
  - e. The maximum ultimate recovery, if this application is approved, is 575,000 BO.
6. Cancellation of this well's overproduction will not harm the correlative rights as Delta Exploration Company is the only operator in the field.

#### **CONCLUSIONS OF LAW**

- 1. Proper notice was given to all necessary parties as required by applicable statutory and regulatory provisions.
- 2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.
- 3. Approval of increased oil allowable for the Delta Exploration Company Peeler Lease Well No. 1, in the Wright Hook (Wright Sand) Field, will prevent waste and promote conservation.
- 4. Cancellation of the overproduction of the Delta Exploration Company Peeler Lease Well No. 1, in the Wright Hook (Wright Sand) Field, will not harm correlative rights.

#### **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends approval of the request of Delta Exploration Company, Inc. to produce its Peeler Lease Well No. 1, in the Wright Hook (Wright Sand) Field, at daily rates up to 900 barrels of oil.

Respectfully submitted,

Margaret Allen  
Technical Hearings Examiner