THE APPLICATION OF ENERGYQUEST II, L.L.C. TO CONSIDER INCREASED NET GOR AUTHORITY FOR ALL WELLS IN THE MANVEL (4970) FIELD, BRAZORIA COUNTY, TEXAS

Heard by: Andres J. Trevino, P.E. on April 29, 2011

Appearances: Representing:

Phil Hudgens EnergyQuest II, L.L.C. Jeff Yoesel

#### **EXAMINER'S REPORT AND RECOMMENDATION**

# **STATEMENT OF THE CASE**

EnergyQuest II, L.L.C. requests authority to produce all wells in the Manvel (4790) Field under increased net gas-oil ratio authority with a daily gas limit of 500 MCFD. EnergyQuest further requests that wells in the Lemmer, J. Lease in the Mavel (F.B. II, Oligocene) Field and wells in the Belcher, W.T. "B" Lease in the Manvel (F.B. I, Oligocene) Field also be granted an increased net gas-oil ratio authority with a daily gas limit of 500 MCFD. EnergyQuest also requests that all overproduction for the wells be canceled.

This application was unprotested and the examiner recommends approval of increased net gas-oil ratio authority with a daily gas limit of 500 MCFD and cancellation of overproduction for all wells in the Manvel (4790) Field, the Lemmer, J. Lease in the Mavel (F.B. II, Oligocene) Field and wells in the Belcher, W.T. "B" Lease in the Manvel (F.B. I, Oligocene) Field.

#### **DISCUSSION OF EVIDENCE**

The Manvel (4790) Field was discovered in 1966 at a depth of 5,000 feet. The top allowable in the field is 225 BOPD per MER allowable, with a gas oil ratio limit of 2,000:1 scf/barrel. Because of the high GORs of some wells, the wells receive a penalized oil allowable as low as 8 BOPD. Over time oil production in the wells declined while gas production remained steady, causing the GORs in the wells to increase. All wells have high water cuts of 98% to 99% water. EnergyQuest is attempting to recover any additional oil left behind in this almost depleted reservoir.

The Manvel field area is structurally influenced by a piercement salt dome. There are numerous fields in the area created by the numerous pay horizons and separated by faulting. The Manvel (4970) Field has produced 3.7 MMBO and has approximately 1% remaining reserves. The reservoir drive mechanism is a solution gas with a partial water

drive. There is no gas cap in the reservoir. Due to declining reservoir pressures, some wells are generating gas oil ratios as high as 12,866 cubic feet per barrel. EnergyQuest did not test individual wells as all wells were on artificial lift either rod pump, electric submersible pump or gas lift. EnergyQuest further requests a casinghead gas limit of 500 MCFD for wells on the Lemmer, J. Lease in the Manvel (F.B. II, Oligocene) Field and for wells in the Belcher, W.T. "B" Lease in the Manvel (F.B. I, Oligocene) Field. The reservoir characteristics for these fields are similar as the Manvel (4790) Field. Restricting oil production from the wells in this nearly depleted reservoir is not necessary to prevent waste.

The Way, H.J., "A" Lease has 15,061 MCF of casinghead gas and 898 BO accumulated overproduction. The Lemmer, J. Lease has 1,203 BO accumulated overproduction and the Belcher, W.T. "B" Lease has 1,560 BO accumulated overproduction as of January 2011. EnergyQuest requests that all overage be canceled.

### FINDINGS OF FACT

- 1. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of hearing.
- 2. The top allowable in the field is 225 BOPD per MER allowable, with a gas oil ratio limit of 2,000:1 scf/barrel.
- 3. The Manvel (4790) Field was discovered in 1966 at a depth of 5,000 feet.
- 4. The Manvel field area is structurally influenced by a piercement salt dome. There are numerous fields in the area created by the numerous pay horizons and separated by faulting.
- 5. The Manvel (4970) Field has produced 3.7 MMBO and has approximately 1% remaining reserves.
- 6. The reservoir drive mechanism is a solution gas with a partial water drive. There is no gas cap in the reservoir.
- 7. All wells have high water cuts of 98% to 99% water are on artificial lift either rod pump, electric submersible pump or gas lift.
- 8. EnergyQuest further requests a casinghead gas limit of 500 MCFD for wells on the Lemmer, J. Lease in the Manvel (F.B. II, Oligocene) Field and for wells in the Belcher, W.T. "B" Lease in the Manvel (F.B. I, Oligocene) Field. The reservoir characteristics for these fields are similar as the Manvel (4790) Field.

- 9. Restricting oil or gas production from the well is not necessary to prevent waste.
- 10. The Way, H.J., "A" Lease has 15,061 MCF of casinghead gas and 898 BO accumulated overproduction. The Lemmer, J. Lease has 1,203 BO accumulated overproduction and the Belcher, W.T. "B" Lease has 1,560 BO accumulated overproduction as of January 2011.

### **CONCLUSIONS OF LAW**

- 1. Notice of this hearing was given as specified in the provisions of all regulatory codes.
- 2. All things have occurred or been accomplished to give the Commission jurisdiction in this matter.
- 3. Approval of increased net gas-oil ratio authority with a casinghead gas limit of 500 MCFD for all wells in the Manvel (4790) Field, the Lemmer, J. Lease in the Manvel (F.B. II, Oligocene) Field and the Belcher, W.T. "B" Lease in the Manvel (F.B. I, Oligocene) Field and cancellation of overproduction will prevent waste and will not harm correlative rights.

## RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends that all wells in the Manvel (4790) Field, the Lemmer, J. Lease in the Manvel (F.B. II, Oligocene) Field and the Belcher, W.T. "B" Lease in the Manvel (F.B. I, Oligocene) Field be authorized to produce under net gas-oil ratio authority with a daily gas limit of 500 MCFD and that all accumulated overproduction for all wells in the Manvel (4790) Field, Lemmer, J. And Belcher, W.T. "B" leases be canceled.

Respectfully submitted,

Andres J. Trevino, P.E. Technical Examiner