

**THE APPLICATION OF SUE-ANN OPERATING, L.C. TO CONSIDER INCREASED NET GOR AUTHORITY FOR ALL WELLS IN THE KOONTZ (RUSSELL) FIELD, VICTORIA COUNTY, TEXAS**

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**Heard by:** Andres J. Trevino, P.E. on January 7, 2010

**Appearances:**

Dale E. Miller

**Representing:**

Sue-Ann Operating, L.C.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Sue-Ann Operating, L.C. requests authority to produce all wells in the Koontz (Russell) Field under increased net gas-oil ratio authority with a daily gas limit of 450 MCFD. Sue-Ann requests the top allowable be increased to 102 BOPD from 82 BOPD as the 1947 allowable yardstick for a field producing between 5,000' and 6,000' on a 40 acre unit allows. Sue-Ann also requests that all overproduction for the well be canceled.

This application was unopposed and the examiner recommends approval of increased net gas-oil ratio authority with a daily gas limit of 450 MCFD, a top allowable of 102 BOPD for the field and cancellation of overproduction for all wells in the field.

**DISCUSSION OF EVIDENCE**

The Koontz (Russell) Field was discovered in 1959 at a depth of 5,852 feet. The allowable in the field is 82 BOPD, with a casinghead gas limit of 164 MCFD per well. The 1947 top allowable for a 40 acre unit in a field 5,000 to 6,000 feet deep is 102 BOPD. Sue-Ann requests the top allowable be increased to the appropriate 102 BOPD top allowable. The field had no wells when Sue-Ann drilled two new wells, the Keeran No. 14 and the Keeran Estate No. 11. Sue-Ann is attempting to recover any additional oil left behind in this partially depleted reservoir.

The Keeran No. 14 was completed in November 2008 with perforations between 5,941 feet and 5,947 feet. On initial test, the well produced at a rate of 58.4 BOPD, 98 MCF of gas and 33 BWPD flowing through a 16/64" choke with 540 psi flowing tubing pressure. Because the well was producing with a GOR of 9,936 cuft/bbl the well received a penalized oil allowable of 16 BOPD.

The Keeran Estate No. 11 was completed in January 2009 with perforations between 5,873 feet and 5,879 feet. On initial test, the well produced at a rate of 52.3 BOPD, 127 MCF of gas and 0 BWPD flowing through a 8/64" choke with 1690 psi flowing tubing pressure. Because the well was producing with a GOR of 15,080 cuft/bbl the well received a penalized oil allowable of 11 BOPD. Over time oil production in both wells declined while gas production remained steady, causing the GORs in both wells to increase.

The wells were tested at various rates. The testing demonstrates that the wells are rate sensitive and produce at higher gas-oil ratios when restricted to rates near the current allowable of 164 MCFD. At a 24/64" choke, the Keeran No. 14 produced 190 MCFPD, 18 BOPD and 30 BWPD with a GOR of 10,470 cu.ft/bbl. At a 16/64" choke, the well produced 76 MCFPD, 5 BOPD and 14 BWPD with a GOR of 15,200 cu.ft/bbl. At reduced rates, the well begins to load, as evidenced by decreasing flowing tubing pressures and increase in water-oil ratio. The most stable production occurred at rates of about 200 MCFD, when the average gas-oil ratio was the lowest at approximately 10,470 cubic feet per barrel.

The Keeran Estate No. 11 produced 420 MCFPD, 33 BOPD and 1 BWPD with a GOR of 13,595 cu.ft/bbl on a 30/64" choke. At a 20/64" choke, the well produced 377 MCFPD, 23 BOPD and 0 BWPD with a GOR of 16,391 cu.ft/bbl. At reduced rates, the well begins to load, as evidenced by decreasing flowing tubing pressures and increase in water-oil ratio. The most stable production occurred at rates of about 420 MCFD, when the average gas-oil ratio was the lowest at approximately 13,595 cubic feet per barrel.

Restricting oil or gas production from the well is not necessary to prevent waste.

The Keeran No. 14 has 9,088 MCF of casinghead gas accumulated overproduction and the Keeran Estate No. 11 has 26,184 MCF of casinghead gas accumulated overproduction as of November 2009. Sue-Ann Operating 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 Koontz (Russell) Field is 82 BOPD and 164 MCFD. There are two oil wells in the field.
3. The Koontz (Russell) Field was discovered in 1959 at a depth of 5,852 feet. The 1947 top allowable for a 40 acre unit in a field 5,000 to 6,000 feet deep is 102 BOPD.
4. The Keeran No. 14 was completed in November 2008, on initial test, the well

produced at a rate of 58.4 BOPD, 98 MCF of gas and 33 BWPD flowing through a 16/64" choke with 540 psi flowing tubing pressure.

5. The Keeran Estate No. 11 was completed in January 2009, on initial test, the well produced at a rate of 52.3 BOPD, 127 MCF of gas and 0 BWPD flowing through a 8/64" choke with 1690 psi flowing tubing pressure.
6. The Keeran No. 14 and the Keeran Estate No. 11 are rate sensitive and produce at higher gas-oil ratios and begin to load when restricted to rates near the current allowable of 164 MCFD.
7. The most stable production occurred at rates between 200 to 420 MCFD, when the average gas-oil ratios were the lowest.
8. Restricting oil or gas production from the well is not necessary to prevent waste.
9. The Keeran No. 14 has 9,088 MCF of casinghead gas accumulated overproduction and the Keeran Estate No. 11 has 26,184 MCF of casinghead gas accumulated overproduction as of November 2009.

### **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 450 MCFD for all wells in the Koontz (Russell) 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 Koontz (Russell) Field be authorized to produce under net gas-oil ratio authority with a daily gas limit of 450 MCFD and that all accumulated overproduction for all wells in the field be canceled. It is further recommended the top allowable be increased to the appropriate 1947 yardstick allowable of 102 BOPD from 82 BOPD.

Respectfully submitted,

Andres J. Trevino, P.E.  
Technical Examiner