

April 24, 2002

OIL AND GAS DOCKET NO. 08-0230685

**THE APPLICATION OF CHEVRON U.S.A. INC FOR INCREASED GAS/OIL RATIO
AUTHORITY FOR ITS W.A. ESTES LEASE WELL NO. 108, SAND HILLS, W.
(SILURIAN) FIELD, CRANE COUNTY, TEXAS**

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: February 14, 2002

Hearing held: April 24, 2002

Appearances

Frank Cusimano

Dana C. Larson

Tina Flowers

Representing

Chevron U.S.A. Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Chevron U.S.A. is seeking authority to produce up to 650 MCF/D from its W.A. Estes Lease Well No. 108 whether the well is classified as a gas well or an oil well in the Sand Hills, W (Silurian) Field. The applicant is also asking to have this well's overproduction canceled.

DISCUSSION OF THE EVIDENCE

The Sand Hills, W. (Silurian) Field was discovered in 1981, and has three wells on the proration schedule, all operated by Chevron. The W.A. Estes Well No. 108 was recompleted to the Sand Hills, W. (Silurian) Field, as a gas well, in February of 2001. It was perforated between 5986 and 5996 feet, in the upper Montoya Formation. A drill stem test indicated saltwater just below the perforations and the reservoir most probably has a water drive. Well No. 108's initial potential was 8 BOPD and 1295 MCF/D. In July, 2001, the well was placed on a rod pump and the production of oil (with a gravity of 33 degrees API) increased enough that the well was reclassified as an oil well.

The Sand Hills, W. (Silurian) Field produces from the Fusselman and underlying Montoya Formations, both of Silurian age. The formations produce from structural closures against an updip pinchout beneath the basal Permian unconformity. The daily production limit for oil wells in the Sand Hill, W. (Silurian) Field is 102 barrels of oil and 204 MCF, but the subject well's oil allowable is penalized to 16 barrels per day due to high gas/oil ratio. Well No. 108 has produced over 204 MCF per day since it was reclassified and its current production rate is 610 MCF, 3 BO and 51 BW per day. Cumulative production has been 7000 BO, 272 MMCF of gas and 109,000 BW.

Chevron's Well No. 109 is shown on the proration schedule in the W.A. Estes Lease as producing 1 BOPD and 164 MCF/D. It produces from a different formation than Well No. 108--the

shallower Fusselman. Current overproduction for the two oil wells on the W.A. Estes Lease is shown as 126 MMCF and 47 BO.

Although Well No. 108 is being pumped, Chevron step-rate tested it between March 14 and April 18, 2002. When the choke was pinched back to near the daily gas limit, all liquid production ceased and the gas/oil ratio became infinite. When the choke was partially opened, some oil and water were produced but the gas/oil ratio was higher than when the choke was unrestricted.

This test indicates that producing Well No. 108 at higher rates will prevent waste. If required to produce at the daily gas limit of 204 MCF for oil wells, the well's remaining oil reserves-- estimated at 45,700 barrels--will be unrecovered. The applicant requested the W.A. Estes Well No. 108 be allowed to produce up to 650 MCF/D, the highest producing rate during the test. The test also indicates that this well should be reclassified as a gas well as it produced over 100,000 cubic feet per barrel. Chevron asks that Well No. 108 be allowed to produce at the unrestricted rate of 650 MCF/D, regardless of its classification.

All three wells in the Sand Hills, W. (Silurian) Field are on the same lease, but Well No. 108 is the only well completed in its particular reservoir. One of the other wells produces from the Fusselman and another is completed in a reservoir fault-separated from the W.A. Estes Well No. 108. No correlative rights will be harmed if the overproduction of Well No. 8 is canceled.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Sand Hills, W. (Silurian) Field on March 6, 2002.
2. The subject well, the W.A. Estes Well No. 108, was completed in February of 2001, and perforated between 5986 and 5996 feet in the upper Montoya Formation.
3. Well No. 108's initial potential was 8 BOPD and 1295 MCF/D, and it was classified as a gas well.
4. In July, 2001, the well was placed on a rod pump and the oil production increased such that the well was reclassified as an oil well.
5. Well No. 108 has been producing a few barrels of 33 degree API oil and over 600 MCF per day since it has been on pump.
6. Water production is now 50 barrels a day and is increasing, indicating a probable water drive.
7. The daily allowable for wells in the Sand Hills, W. (Silurian) Field is 102 BO and 204 MCF, and the subject well has accumulated about 125 MMCF of overproduction.
8. A test conducted between March 14 and April 18, 2002, on the Well No. 108 shows that producing the well at higher rates will prevent waste.

- a. On an unrestricted choke, the well averaged 5 BO, 605 MCF and 53 BW per day, for a gas/oil ratio of 120,000 cubic feet per barrel.
 - b. When the choke restricted the well near its daily gas limit, the well produced an average of 215 MCF per day with no liquids, for an infinite gas/oil ratio.
 - c. On an intermediate choke size, the well averaged 2 BO, 410 MCF and 15 BW per day, for a gas/oil ratio of 205,000 cubic feet per barrel.
 - d. If the well is restricted to the daily gas limit of 204 MCF for oil wells, the remaining recoverable 45,700 barrels of oil will be unrecovered.
9. The well's producing characteristics indicate that it should be classified as a gas well again, but the same unrestricted rate will prevent waste regardless of the well's classification.
 10. All three wells carried in this field are on the same lease, but Well No. 108 is the only well in its particular reservoir.
 11. Requiring the W.A. Estes Well No. 108 to make up its overproduction of gas is not necessary to protect correlative rights.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.
2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.
3. The requested increase in gas allowable for the W.A. Estes Well No. 108 will prevent waste and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the Chevron U.S.A. Inc. W.A. Estes Well No. 108, in the Sand Hills, W. (Silurian) Field, be allowed to produce up to 650 MCF of gas, whether the well is classified as an oil well or a gas well. All overproduction for this well should be canceled.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: May 21, 2002