

January 9, 2002

OIL AND GAS DOCKET NO. 08-0229993

THE APPLICATION OF DEVON ENERGY PRODUCTION COMPANY L.P. FOR INCREASED GAS OIL RATIO AUTHORITY, RUNNING W (WICHITA ALBANY) AND SAND HILLS (TUBB) FIELDS, CRANE COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: November 12, 2001

Hearing held: January 4, 2002

Appearances

John Soule
David Yaw

Representing
Devon Energy Production Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Devon Energy is seeking increased gas/oil ratio authority to allow oil wells in the Running W (Wichita Albany) Field to produce up to 650 MCF per day. Devon is also seeking increased gas/oil ratio authority for two wells on its McKnight Lease in the Sand Hills (Tubb) Field, with daily gas limits of 580 MCF for Well No. 192 and 90 MCF for Well No. 193.

DISCUSSION OF THE EVIDENCE

The Running W (Wichita Albany) Field was discovered in 1960, at a depth of 5356 feet. There are 11 active wells on the oil proration schedule operated by Devon and two other operators each have an active oil well. There are nine active wells on the gas proration schedule, but only two have deliverabilities over 100 MCF/D. The gas field is classified as associated, 100% AOF. Both the oil and gas fields are on Statewide Rules and the yardstick daily allowable for oil wells at this depth is 82 barrels of oil and 164 MCF.

The Wichita Albany section productive in this field is highly lenticular, and is only a secondary target for area wells. Usually wells are first produced from the Wolfcamp formation. After the Wolfcamp is depleted, wells are perforated in the Wichita Albany. Most wells are then recompleted to the Tubb Formation and when depleted, are downhole commingled.

The applicant has previously applied for increased gas/oil ratio authority on seven other wells in the Running W (Wichita Albany) Field. The approved daily gas limits have ranged from 300 MCF to 1200 MCF. Some of the oil wells have increased gas production enough that they have been reclassified as gas wells. The two wells tested for this hearing have already become statutory gas wells

but had not been reclassified at the time of the hearing. Overall, the test data for the McKnight Lease Well Nos. 183 and 197 show that the gas and oil producing rates for wells in this field can be increased without increasing the wells' gas/oil ratios or wasting reservoir energy.

Both the McKnight Lease Well Nos. 183 and 197, in the Running W (Wichita Albany) Field, were tested between November 17 and December 6, 2001. The following results were obtained for Well No. 183:

FTP	Daily Average Oil	Daily Average Gas	Average Gas/Oil Ratio
160	0.5 barrels	211 MCF	458,000 ft ³ /bbl
160	0.3 barrels	192 MCF	738,000 ft ³ /bbl
550	0.2 barrels	179 MCF	796,000 ft ³ /bbl
570	0.2 barrels	165 MCF	825,000 ft ³ /bbl

The most efficient gas/oil ratio occurred when the average daily oil rate was 0.5 barrel and the average daily gas rate was 211 MCF, the highest tested.

The following results were obtained for Well No. 197:

Choke size	Daily Average Oil	Daily Average Gas	Average Gas/Oil Ratio
15/64th"	5 barrels	594 MCF	124,000 ft ³ /bbl
10/64th"	1 barrels	490 MCF	350,000 ft ³ /bbl
8/64th"	2 barrels	394 MCF	225,000 ft ³ /bbl
7/64th"	1 barrels	302 MCF	302,000 ft ³ /bbl

The most efficient gas/oil ratio occurred when the average daily oil rate was 5 barrels and the average daily gas rate was 594 MCF. The applicant is requesting a daily gas limit of 650 MCF for all remaining oil wells in this field.

The Sand Hills (Tubb) is a large field discovered in 1930, at a depth of 4500 feet. There are 360 prorated oil wells, 15 active gas wells and many inactive wells in the field. The field rules prescribe 40 acre density with a top allowable of 41 BOPD and a daily gas limit of 82 MCF/D. Exxon has applied for many increased gas/oil ratio authorities for its wells in this field, usually with daily gas limits of 250 to 500 MCF. The gas wells are limited by a four-fold Statewide Rule 49(b) limit. Devon operates nine active oil wells and is requesting increased daily gas limits for two of its oil wells.

Both Devon's McKnight Lease Well Nos. 192 and 193 were tested between November 17 and December 6, 2001. The following results were obtained for Well No. 192:

Choke size	Daily Average Oil	Daily Average Gas	Average Gas/Oil Ratio
16/64th"	71 barrels	724 MCF	10,232 ft ³ /bbl

15/64th"	68 barrels	675 MCF	9894 ft ³ /bbl
14/64th"	64 barrels	583 MCF	9113 ft ³ /bbl
13/64th"	60 barrels	566 MCF	9381 ft ³ /bbl

The most efficient gas/oil ratio did not occur at the highest rate but rather when the average daily oil rate was 64 barrels and the average daily gas rate was 583 MCF. The applicant is requesting a daily gas limit of 580 MCF for this well.

The following results were obtained for Well No. 193:

Choke size	Daily Average Oil	Daily Average Gas	Average Gas/Oil Ratio
16/64th"	20 barrels	108 MCF	5390 ft ³ /bbl
15/64th"	19 barrels	97 MCF	5204 ft ³ /bbl
14/64th"	20 barrels	88 MCF	4487 ft ³ /bbl
13/64th"	14 barrels	68 MCF	4833 ft ³ /bbl

The most efficient gas/oil ratio occurred not at the highest rates but rather when the average daily gas rate was 88 MCF. The applicant is requesting a daily gas limit of 90 MCF.

Devon is asking for the cancellation of all over production for these wells, since most of it occurred during the testing of the wells.

FINDINGS OF FACT

1. Notice of this hearing was given to the operators in the Running W (Wichita Albany) Field and all operators offsetting Devon Energy Production Company's McKnight Lease in the Sand Hills (Tubb) Fields, on December 21, 2001.
2. The Running W (Wichita Albany) Field was discovered in 1960, and the allocation formula for the nine active gas wells is suspended.
3. The Running W (Wichita Albany) Field has a top allowable of 82 BOPD and a daily gas limit of 164 MCF.
4. There are 11 active wells on the oil proration schedule operated by Devon and two other operators each have an active oil well.
5. Seven other wells in the Running W (Wichita Albany) Field have increased net gas/oil ratios authorized, with approved daily gas limits from 300 MCF to 1200 MCF.
6. The two wells tested, the McKnight Nos. 183 and 197, are already gas wells but their tests showed lower gas/oil ratios at the highest daily gas rates during the test: 211 MCF for Well No. 187, and 594 MCF for Well No. 197.
7. A daily gas allowable for oil wells of 650 MCF will not waste reservoir energy in the lenticular

Running W (Wichita Albany) Field.

8. The Sand Hills (Tubb) is a large field discovered in 1930, with hundreds of oil wells and 15 active gas wells.
9. The field rules prescribe 40 acre density with a top allowable of 41 BOPD and 82 MCF/D for oil wells, while the gas wells have a four-fold multiple Statewide Rule 49(b) allowable.
10. Exxon has applied for many increased gas/oil ratio authorities for its wells in this field, usually with daily gas limits of 250 to 500 MCF.
11. Devon operates nine active oil wells and is requesting increased daily gas limits for the two wells it tested, its McKnight Lease Well Nos. 192 and 193.
 - a. The most efficient gas/oil ratio for Well No. 192 occurred when the average daily rates were 64 barrels of oil and 583 MCF; the applicant is requesting a daily gas limit of 580 MCF.
 - b. The most efficient gas/oil ratio for Well No. 193 occurred when the average daily rates were 20 barrels of oil and 88 MCF; the applicant is requesting a daily gas limit of 90 MCF.
8. Requiring the subject wells tested to make up overproduction may cause waste by requiring the wells to produce at inefficient rates.

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 daily gas limit to 580 MCF for the McKnight Lease Well No. 192 and to 90 MCF for the McKnight Lease Well No. 193, Sand Hills (Tubb) Field, will prevent waste and protect correlative rights within the field.
4. The requested increase in daily gas limit to 650 MCF for oil wells in the Sand Hills (Tubb) Field will prevent waste and protect correlative rights within the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the Devon Energy Production Company McKnight Lease Well No. 192 be allowed to produce up to 580 MCF per day and the Devon Energy Production Company McKnight Lease Well No. 193 be allowed to produce up to 90 MCF per day in the Sand Hills (Tubb) Field. All oil wells in the Running W (Wichita Albany) should be allowed to produce up to 650 MCF of gas per day. All overproduction for the Devon Energy Production Company McKnight Lease Well Nos. 183, 192, 193, and 197 should be canceled.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: January 24, 2002