OIL AND GAS DOCKET NO. 08-0232039

THE APPLICATION OF PHILLIPS PETROLEUM COMPANY FOR MER AND INCREASED GAS OIL RATIO AUTHORITY, GOLDSMITH (CLEAR FORK) AND GOLDSMITH (5600) FIELDS, ANDREWS AND ECTOR COUNTIES, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: July 25, 2002
Hearing held: September 19, 2002

Appearances

	Representing
Timothy George	Phillips Petroleum Company
Kerry Pollard	

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Phillips Petroleum is seeking an MER and increased gas/oil ratio authority to allow oil wells on its Frank "B" and Embar Leases in the Goldsmith (Clear Fork) and Goldsmith (5600) Fields to produce up to 450 BO and 1575 MCF per day. Phillips is also seeking to have all overproduction for the wells on these leases canceled. The examiner recommends approval.

DISCUSSION OF THE EVIDENCE

The Frank "B" and Embar Leases are just to the east of a major waterflood operated by Phillips, known as the Goldsmith Andector Unit. Injection wells on this unit inject into both the upper Clear Fork [under the name of Goldsmith (5600) field] and Tubb and lower Clear Fork [under the name of Goldsmith (Clear Fork) field]. The Goldsmith fields are huge fields, producing from the Clear Fork and other Paleozoic formations, that were discovered in the late 1940's along the eastern edge of the Central Basin Platform.

When the Andector Unit was formed it included the flat-lying rock up to the eastern edge of the shelf. The unit's cumulative production is 7.8 million barrels of oil and 147 BCF of gas, and it has 150 active wells. Phillips has recently discovered excellent wells on the Frank "B" and Embar Leases that are on the much steeper eastern slope of the structure.

Phillips submitted a type log, the GCDU Well No. 273, which shows the uppermost Clear Fork porosity at 5610'. This is the top of the interval in the Goldsmith (5600) Field for Railroad Commission purposes. The top of the Tubb (which is in the middle of the stratigraphically defined Clear Fork Formation) is at 6000' in the type well, and the base of the lower Clear Fork is at 6530'. The interval

from the top of the Tubb to the base of the section is the Goldsmith (Clear Fork) Field for commission purposes. Both fields are flooded simultaneously in the Goldsmith Andector Unit under exceptions to Statewide Rule 10 as will be the subject wells.

The Goldsmith Andector wells are and the subject wells will be classified in the Goldsmith (Clear Fork) Field. Rules for this field require 330-660' wells spacing, 40 acre proration units with 20-acre optional units, and allocation based 75% on acreage and 25% per well. The top allowable is 111 BOPD and 222 MCF/D, though the Goldsmith Andector Unit has a capacity allowable along with an entity for density designation.

Production from the Goldsmith Andector Unit has always had a relatively high gas/oil ratio despite the waterflood. The applicant's applied for increased gas/oil ratio authority of 3500 cubic feet per barrel is probably less than the actual producing gas/oil ratio of the wells in the waterflood unit. The waterflood on the Goldsmith Andector Unit has been successful and Phillips believes it may be pushing oil onto the edge Embar and Frank "B" Leases.

The good production on the two subject leases may be due to untapped lenses in the highly stratigraphic Clear Fork Formation as well as the waterflood. It is important to capture any oil being pushed there by the waterflood before it is pushed down the slope past the subject leases. Phillips plans on drilling as many as ten more wells.

Phillips tested three wells on the eastern edge of the Goldsmith Andector Unit, during July and August, 2002. The GANDU Lease Well Nos. U-09 and V-10 loaded with liquids when flowed on the smallest choke sizes and produced only gas. As the choke sizes were increased, the gas/oil ratios were in the range of 5000 to 10,000 cubic feet per barrel. The highest producing rates during the tests were 187 BOPD and 1338 MCF/D. The GANDU Lease Well No. Q-95 is on pump and its highest daily rates were 13 BO and 557 MCF, with gas/oil ratios in the range of 50,000 to 80,000 cubic feet per barrel.

The three wells on the Frank "B" Lease and one of the two wells on the Embar Lease were tested during July and August, 2002. In general, on the larger choke sizes, production was more stable and the gas/oil ratio was unchanged or somewhat lower. Producing the wells near the current allowable caused oil production to be erratic or non-existent.

The following results were obtained for the four wells:

Well No.	Highest Daily Oil	Highest Daily Gas	Efficient Gas/Oil Range
30	273 barrels	1035 MCF	3000-5000 ft^3/bbl
31	424 barrels	579 MCF	1000-1500 ft^3/bbl
32	434 barrels	420 MCF	less than 1000 ft^3/bbl
63	80 barrels	273 MCF	3000-5000 ft^3/bbl

The applicant believes that a top oil allowable of 450 BOPD per well will not cause waste and will allow any banked oil to be recovered before being pushed off the shelf edge. Numerous wells on the Goldsmith Andector Unit produce with gas/oil ratios above 2000 cubic feet per barrel, despite the waterflood. Several of these wells tested on the eastern flank of the field produced efficiently at gas rates above 900 MCF/D (the gas limit for oil wells with an MER of 450 BOPD and permitted gas/oil ratio of 2000:1). Approving a daily gas limit of 1575 MCF/D will encourage conservation and further development on this flank of the field.

Phillips is asking for the cancellation of all over production for these wells, since most of it occurred during the testing of the wells. The oldest wells on the Frank "B" and Embar Leases were completed in June of 2002. Phillips operates all of the offsetting leases.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Goldsmith (Clear Fork) and (5600) Fields on August 30, 2002.

2. The subject Frank "B" and Embar Leases are just to the east of a major waterflood operated by Phillips as the Goldsmith Andector Unit.

3. Injection wells on the Goldsmith Andector Unit inject into both the upper Clear Fork [under the name of Goldsmith (5600) field] and Tubb and lower Clear Fork [under the name of Goldsmith (Clear Fork) field].

4. Producing wells on the subject leases and the Goldsmith Andector Unit are downhole-commingled in both fields and carried in the Goldsmith (Clear Fork) Field.

5. The Goldsmith (Clear Fork) Field has a top allowable of 111 BOPD and a daily gas limit of 222 MCF.

6. The newly developed subject leases are just off the eastern shelf edge and may have encountered untapped lenses in the highly stratigraphic Clear Fork Formation.

7. The waterflood on Phillips Goldsmith Andector Unit may be pushing oil onto the subject leases and it is important to capture any such oil before it is pushed down the slope past the subject leases.

8. Testing of three wells on the eastern side of the waterflood unit showed that decreasing the choke sizes on these wells did little to reduce their high gas/oil ratios.

9. The Phillips Goldsmith Andector Unit has entity for density authority and capacity allowables.

10. The three wells on the Frank "B" Lease and one of the two wells on the Embar Lease were tested on different choke sizes during July and August, 2002.

11. Production during the tests was more stable and the gas/oil ratio was unchanged or somewhat lower on larger choke sizes.

12. Producing the wells near the current allowable caused the oil production to be erratic or non-existent due to liquid loading.

13. The highest daily oil rate during the well tests on the Embar and Frank "B" Leases was 434 barrels.

14. The efficient gas/oil ratio for the various wells during the tests ranged from less than 1000 to 3000-5000 cubic feet per barrel.

15. Requiring the subject wells to make up overproduction that occurred during the tests will cause them to be produced 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 1575 MCF and oil allowable to 450 barrels of oil for each well on the Embar and Frank "B" Leases, carried in the Goldsmith (Clear Fork) Field, will promote conservation and protect correlative rights within the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the Frank "B" and Embar Leases in the Goldsmith (Clear Fork) and Goldsmith (5600) Fields be allowed to produce up to 450 BO and 1575 MCF per day. All overproduction for the wells on these leases should be canceled.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: October 21, 2002