OIL AND GAS DOCKET NO. 02-0247793

THE APPLICATION OF LEGEND NATURAL GAS II, LP., INC. TO CONSOLIDATE THE TULSITA-WILCOX (ERA), TULSITA-WILCOX (8,900) AND MEAGAN (WILCOX 9000) FIELDS INTO A NEW FIELD TO BE KNOWN AS TULSITA-WILCOX (MWC) FIELD AND ADOPT RULES FOR THE TULSITA-WILCOX (MWC) FIELD, BEE, GOLIAD AND KARNES COUNTIES, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: June 6, 2006
Hearing held: July 18, 2006

Appearances

	Representing
Bill Spencer	Legend Natural Gas II, LP.
Mark Petter	

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Legend Natural Gas II, LP. ("Legend") is requesting that the Tulsita-Wilcox (Era), Tulsita-Wilcox (8,900) and Meagan (Wilcox 9000) Fields be consolidated into a new field to be known as Tulsita-Wilcox (MWC) Field. The notice of hearing referred to the Meagan (8900) Field but there is no such field. The requested field rules for the consolidated field are summarized as follows:

1. Designated interval from 8928' to 9765', as shown on the log of the Pennzoil (now Legend) NPU (Porter) Lease Well No. 5;

2. 467'-1200' well spacing;

3. 160 acre gas proration units with optional 40 acre units; and

4. allocation based on 95% on deliverability, and 5% per well, with the allocation formula suspended.

DISCUSSION OF THE EVIDENCE

All five of the current wells in the subject fields are on Legend's North Pettit Unit that was formed in the 1940's. If this application is approved, Legend plans to drill infill wells and may also re-

enter some plugged wells.

The Tulsita-Wilcox (Era) Field was discovered in 1990 at a depth of 9534'. It is an associated field with no current oil wells, and is under Statewide Rules. It has two gas wells with deliverabilities of 499 and 280 MCFD.

The Tulsita-Wilcox (8,900) Field was discovered in 1963 at a depth of 8962'. This field has one shut-in well and one active well with a deliverability of 97 MCFD. The field has cumulative production around 23-24 BCF. Field rules for the Tulsita-Wilcox (8,900) Field were adopted in Docket No. 2-67,304 and specify 933'-1867' well spacing, 160 acre proration units and allocation based on acreage.

The Meagan (Wilcox 9000) Field was discovered in 1984 at a depth of 8990'. It has two wells, with deliverabilities of 557 and 99 MCFD. This field has cumulative production of about 10 BCF. Legend has recently completed two new wells in this field that are expected to produce 1-2 BCF. Field rules were adopted January 1, 1989, in Docket No. 2-92,45, and provide for 467'-1320' well spacing, 160 acre units and allocation based on acreage.

All three fields produce from the Middle Wilcox sequence. The Meagan (Wilcox 9000) and Tulsita-Wilcox (8,900) Fields produce from the shallower sands known as the Z Sand and Z Sand Lower. The Tulsita-Wilcox (Era) Field produces from the G-4 sand. The G-1, G-2, G-3 and G-5 sands are in the interval between 8928' and 9765' as shown on the log of the NPU (Porter) Lease Well No. 5. These sands have tested gas-bearing in some wells and have the potential to be productive, particularly if they can be combined with other sands.

The entire series of Middle Wilcox sandstones from the G-5 through the Z represent successive progradational events. Depositional environments include shallow to distal marine. Even sandstones deposited at the same time may have been deposited in different environments, resulting in reservoir discontinuities. Sandstones can be present in one well and disappear in an offsetting well only 380' away. Some gas-bearing downdip sandstones are correlative with sandstones that are updip and wet.

The producing sandstones are located along a trend that is just southeast of a major southwest-northeast trending fault. There is another major fault to the south. Because of the reservoir discontinuitites, many of the sands have limited drainage areas. Wells completed in the main channel system have drained 100 acres and more. Legend believes infill drilling on 40 acre density will be necessary to recover all of the gas from some of the smaller sands.

Legend believes that producing the sandstones together within the proposed Middle Wilcox interval (shown between 8928' and 9765' on the electric log of the NPU (Porter) Lease Well No. 5) is a reasonable method to recover the remaining resources. All of the Middle Wilcox reservoirs are volumetric, without water drives. Water analyses indicate there will be no scaling due to downhole commingling and in fact, water has been commingled on the surface without problems. Cross flow should not be problem because of Legend's low pressure collection system. If a new reservoir is encountered at higher pressure, Legend will deplete that reservoir before commingling it with more depleted reservoirs.

Gas from this field area contains 2-3% CO2 which can cause corrosion and premature abandonment of wells. Downhole commingling will allow reserves to be produced faster and will lower the economic limit of each reservoir allowing the recovery of additional gas. Field consolidation will

allow all of these Middle Wilcox sandstones to be fracture stimulated together, reducing the additional cost to complete these wells. Consolidation of this interval will prevent waste, as the G-1, G-2, G-3 and G-5 sandstones to not appear to be prolific enough to be stand-alone completions. Their reserves will go unrecovered unless allowed to be commingled with more prolific sandstones.

State statutes require two factors in the allocation formula of a field that combines multiple reservoirs. An allocation formula based 95% on deliverability and 5% per well will satisfy statutory requirements. All three fields have had their allocation formulas suspended as there is a market for all of the gas produced. The allocation formula in the consolidated Tulsita-Wilcox (MWC) Field can be suspended.

FINDINGS OF FACT

1. Notice of this hearing was mailed to all operators in all fields proposed to be consolidated on June 30, 2006.

2. The Tulsita-Wilcox (Era) Field was discovered in 1990 at a depth of 9534', and it has two gas wells. The field operates under Statewide Rules.

3. The Tulsita-Wilcox (8,900) Field was discovered in 1963 at a depth of 8962' and has one active well. Field rules specify 933'-1867' well spacing, 160 acre proration units and allocation based on acreage.

4. The Meagan (Wilcox 9000) Field was discovered in 1984 at a depth of 8990', and has two gas wells. Field rules provide for 467'-1320' well spacing, 160 acre units and allocation based on acreage.

5. The Tulsita-Wilcox (8,900) Field and Meagan (Wilcox 9000) Field produce from the Middle Wilcox Z sand and Z sand lower, while the Tulsita-Wilcox (Era) Field produces from the Middle Wilcox G-4 sand.

6. The Tulsita-Wilcox (8,900) Field has produced 23-24 BCF and the Meagan (Wilcox 9000) Field has produced about 10 BCF.

7. Wells completed in the main channel sandstone have drained over 100 acres while many of the lenticular sandstones will drain much less.

8. Adoption of 40 acre optional density, with its standard spacing of 467'-1200', will allow the recovery of additional reserves from sandstones will small areal extents.

9. The interval from 8928' to 9765', as shown on the log of the Pennzoil (now Legend Natural Gas II, LP.) NPU (Porter) Lease Well No. 5 includes all of the producing Middle Wilcox sandstones in the Tulsita-Wilcox (Era), Tulsita-Wilcox (8,900) and Meagan (Wilcox 9000) Fields.

10. Consolidation of the Tulsita-Wilcox (Era), Tulsita-Wilcox (8,900) and Meagan (Wilcox 9000) Fields, with the adoption of the proposed interval, will prevent waste.

a. This is an area with corrosive gas (CO_2) which causes wellbores to be at risk of premature abandonment.

b. Commingling within this Middle Wilcox interval will allow the production of marginal zones, particularly the G-1, G-2, G-3 and G-5, that would not otherwise be produced at all.

c. Field consolidation will allow all of the Middle Wilcox sandstones to be fracture-stimulated together, reducing the additional cost to complete these wells.

10. A two-factor allocation formula, such as the one proposed based 5% per well and 95% on deliverability, is required for a field which combines several unconnected reservoirs.

11. All wells in the Tulsita-Wilcox (Era), Tulsita-Wilcox (8,900) and Meagan (Wilcox 9000) Fields are producing at capacity and there is a market for all the gas they can produce.

CONCLUSIONS OF LAW

1. Proper notice was issued as required by all applicable codes and regulatory statutes.

2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.

3. The requested field consolidation and proposed field rules will prevent waste, protect correlative rights and promote continued development of the resultant Tulsita-Wilcox (MWC) Field.

4. The Tulsita-Wilcox (MWC) Field meets all the criteria established for suspension of the allocation formula under Statewide Rule 31(j).

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends approval of the application of Legend Natural Gas II, LP., for consolidation of the Tulsita-Wilcox (Era), Tulsita-Wilcox (8,900) and Meagan (Wilcox 9000) Fields into a new field to be known as Tulsita-Wilcox (MWC) Field, along with the requested field rules, as per the attached order. The allocation formula for the Tulsita-Wilcox (MWC) Field can be suspended, subject to Rule 31(j).

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner