## OIL AND GAS DOCKET NO. 02-0267115

THE APPLICATION OF GEOSOUTHERN ENERGY CORPORATION TO CONSOLIDATE THE FLINTSTONE (CRETACEOUS CHALK) FIELD INTO THE DE WITT (EAGLE FORD SHALE) FIELD AND TO CONSIDER TEMPORARY FIELD RULES FOR THE DE WITT (EAGLE FORD SHALE) FIELD, DE WITT COUNTY, TEXAS

**HEARD BY:** Andres J. Trevino, P.E., Technical Examiner

**HEARING DATE:** October 5, 2010

APPEARANCES: REPRESENTING:

APPLICANT:

John Soule Geosouthern Energy Corporation

Richard Borstmayer Rick Johnston

**INTERESTED PARTIES:** 

John Soule Petrohawk Energy Corp.

Taylor Lepley Rick Johnston

George Neale Pogo Producing Company

Fitzsimons Oil and Gas Management Trust

Clark Jobe Murphy Exploration & Production Co.

Brian R. Sullivan Pioneer Exploration

Meri Lynn Gobran

Tim George Lightning Oil Company

Jamie Nielson Burlington Resources Oil and Gas Co. LP.

Jennings Steen Steen Family Interests

## **EXAMINER'S REPORT AND PROPOSAL FOR DECISION**

# STATEMENT OF THE CASE

Geosouthern Energy Corporation requests that the Flintstone (Cretaceous Chalk) Field be consolidated into the De Witt (Eagle Ford Shale) Field and that certain wells in De Witt County be transferred into the field. Geosouthern also requested that temporary field rules be adopted the De Witt (Eagle Ford Shale) Field, which are summarized as follows:

- Designation of the De Witt (Eagle Ford Shale) Field as the correlative interval from 13,284 feet to 13,513 feet as shown on the log of the Geosouthern Energy Corporation's Migura Well No. 1;
- 2. 330' lease line spacing and no between well spacing with special provisions for 100 foot first and last "take points", and an off-lease penetration point for horizontal wells with an included "box rule" stating that the as-drilled location of a well will be considered in compliance with spacing rules if it falls within a rectangle of which two sides are parallel to the permitted drainhole and 33 feet on either side of the drainhole;
- 3. 320 acre gas proration units with 10% tolerance, additional acreage based on lateral length with maximum acreage of 704 acres, multiple drainholes allowed, no Form P-15 plats;
- 4. Allocation based on 100% acreage with AOF status, elimination of semiannual G-10 testing requirements;

Geosouthern also requests to transfer one well which is completed in the Eagle Ridge (Eagle Ford Shale) Field be transferred into the De Witt (Eagle Ford Shale) Field.

This application was unprotested and the examiner recommends approval of Geosouthern's request for field consolidation and adopted temporary field rules.

## DISCUSSION OF THE EVIDENCE

The De Witt (Eagle Ford Shale) Field is a non-associated field discovered in 2009. The field is in the early stages of horizontal development with three wells currently placed in the field on the September 2010 proration schedule. An additional three wells have been assigned to the De Witt (Eagle Ford Shale) Field and additional wells are in various stages of completion, drilling and permitting in the field.

The Flintstone (Cretaceous Chalk) Field is a non-associated field discovered in 2008. The field has two wells currently placed in the field on the September proration

schedule. Both wells are located in De Witt County and are completed in the same interval as the proposed interval for the De Witt (Eagle Ford Shale) Field. Geosouthern proposes to consolidate the Flintstone (Cretaceous Chalk) Field into the De Witt (Eagle Ford Shale) Field as is in the same geographic location as the De Witt (Eagle Ford Shale) Field and produces from the same formation. Geosouthern requests one additional well, the Pioneer Natural Resources Charles Riedesel GU 1, Well No. 1, completed in the Eagle Ridge (Eagle Ford Shale) Field, be transferred to the De Witt (Eagle Ford Shale) Field. This well is also completed in the same area and formation as the De Witt (Eagle Ford Shale) Field. Pioneer has no objection to the transfer.

Geosouthern is attempting to drill long laterals in the Eagle Ford Shale. There are problems associated with steering the horizontal lateral exactly as proposed. The requested 10% tolerance "box rule" will allow for deviations up to 33 feet from the permitted drainhole location without the necessity of obtaining a Statewide Rule 37 exception.

Geosouthern is requesting a spacing rule requiring a minimum of 100 feet to the lease line from the first and last take points of a horizontal drainhole, with 330 feet from lease lines on all points on the drainhole perpendicular to the lease line. The 100 foot lease line spacing for the first and last take points allows maximum recovery from vertical fractures created when fracture stimulating the Eagle Ford Shale.

The spacing and horizontal rules requested for the De Witt (Eagle Ford Shale) Field are similar to those adopted in the Hawkville (Eagle Ford) Field in La Salle and McMullen Counties and the Sugarkane (Eagle Ford Shale) Field in Bee, Karnes and Live Oak Counties. The proposed 320 acre density rule is common to both the Hawkville and Sugarkane field. Both fields also have a rule in place providing for a multiplying factor for acreage assignment to horizontal wells. Sugarkane has a factor of 0.2 and Hawkville has a factor of 0.16. Geosouthern requests the factor of 0.2 for the De Witt (Eagle Ford Shale) Field. Off lease penetration will allow increased hydrocarbon recovery as the lateral will make greater contact with the formation as the well is turned from vertical to lateral off lease. The proposed horizontal rules are requested as to allow the maximum recovery of hydrocarbons from the unconventional Eagle Ford Shale.

Geosouthern requests that allocation be based on 100% acreage. Further, it is requested that the allocation formula be suspended in the field, as there is a 100% market for all the gas produced from wells in the field.

Additionally, Geosouthern requests that the field rules exempt wells from semiannual G-10 testing. The Eagle Ford is tight formation and G-10 testing of wells in such a reservoir does not provide meaningful information due to the short pressure drawdown seen in a 24 hour period. Further, shutting-in wells for testing can result in difficulties in returning the wells to production. Testing the wells twice yearly is not necessary for proration purposes.

#### FINDINGS OF FACT

- 1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
- 2. The De Witt (Eagle Ford Shale) Field is a non-associated field discovered in 2009. The field is in the early stages of horizontal development with three wells currently placed in the field on the September 2010 proration schedule.
- 3. The Flintstone (Cretaceous Chalk) Field is a non-associated field discovered in 2008. The field has two wells currently placed in the field on the September 2010 proration schedule and are located in De Witt County and are completed in the same interval as the proposed interval for the De Witt (Eagle Ford Shale) Field.
- 4. The De Witt (Eagle Ford Shale) Field should be defined as the correlative interval from 13,284 feet to 13,513 feet as shown on the log of the Geosouthern Energy Corporation's Migura Well No. 1.
- 5. The proposed spacing rule including special provisions for "take points" and an offlease penetration point for horizontal wells will provide consistency in developing the fields and will allow greater flexibility in selecting future drilling locations.
- 6. Field rules providing for 320 acre density is appropriate on a temporary basis. Other Eagle Ford fields such as the Hawkville (Eagle Ford) Field in La Salle and McMullen Counties and the Sugarkane (Eagle Ford Shale) Field in Bee, Karnes and Live Oak Counties have similar density rules.
- 7. The requested spacing rule requiring a minimum of 100 feet from lease lines to the first and last take points of a horizontal drainhole, with 330 feet minimum distance measured perpendicular from all points between the first and last take points on the drainhole to the lease line, will provide flexibility in developing the field with horizontal drainholes. Similar language has been adopted in numerous Eagle Ford fields.
- 8. Because of the difficulties in steering a horizontal lateral, the proposed box rule is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
- 9. Allocation based on 100% acreage will protect correlative rights.
- 10. Suspension of the allocation formula in the field is appropriate, as there is a 100% market for all the gas produced from the field.

- 11. Semi-annual G-10 testing for wells in the field is not necessary to allocate allowable to wells in the field.
- 12. Transferring the Pioneer Natural Resources Charles Riedesel GU 1, Well No. 1, into the De Witt (Eagle Ford Shale) Field is appropriate as the well is also completed in the same area and formation as the De Witt (Eagle Ford Shale) Field.

#### **CONCLUSIONS OF LAW**

- 1. Proper notice of this hearing was issued.
- 2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
- 3. Consolidation of the fields as proposed by Geosouthern Energy Corporation is necessary to prevent waste and protect correlative rights.
- 4. The proposed temporary field rules for the field is necessary to prevent waste, protect correlative rights and promote the orderly development of the field.
- 5. The field meets the requirements for suspension of the allocation formulas pursuant to Statewide Rule 31(j).

#### RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends that the Commission approve the field consolidation, temporary field rules for the De Witt (Eagle Ford Shale) Field, and well transfer, as set forth in the attached Final Order.

Respectfully submitted,

Andres J. Trevino, P.E. Technical Examiner