

THE APPLICATION OF SAMSON LONE STAR, LLC TO AMEND FIELD RULES FOR THE HEMPHILL (DOUGLAS) FIELD, HEMPHILL COUNTY, TEXAS

HEARD BY: Andres J. Trevino, P.E. - Technical Examiner
Marshall F. Enquist - Legal Examiner

HEARING DATE: July 12, 2012

APPEARANCES:

REPRESENTING:

APPLICANT:

James M. Clark

Samson Lone Star, LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field rules for the Hemphill (Douglas) Field were originally adopted on June 2, 1986 in Docket No. 10-87,013. The rules currently in effect for the field are summarized as follows:

1. 467'-933' well spacing;
2. 640 acre gas units plus 10% tolerance; optional 160 acre units;
3. Allocation based on 50% deliverability and 50% acreage.

It is requested that the field rules be amended as follows:

1. Designation of the field as the correlative interval from 7,768 feet to 8,088 feet as shown on the log of the Forest Oil Corporation Flowers Lease No. 5014;
2. 467'-933' well spacing between vertical wells, 0' well spacing between vertical and horizontal wells, 660' well spacing between horizontal wells, 200' lease line spacing for the first and last take points with special provisions for "take points", no perf zones and a 47 foot "box" rule, off site penetration points for

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horizontal wells;

3. 640 acre gas units with an optional 160 acre gas units and a modified Rule 38 exception procedure for 80 acre gas units after notice, 40 acre oil unit density, no individual proration plats;
4. Allocation based on 50% deliverability and 50% acreage, with continuation of AOF status.
5. Stacked lateral well rules with take points within 300' as seen on common horizontal plane.

This application was unopposed and the examiners recommend that the field rules for the Hemphill (Douglas) Field be amended as proposed by Samson.

DISCUSSION OF EVIDENCE

The Hemphill (Douglas) Field was discovered in 1977 and there are currently 140 wells producing from the field, 121 gas wells and 19 oil wells. Average production from the gas wells is 100 MCF per day. Cumulative production from the oil field is about 263,025 barrels of oil. The field is classified as associated prorated with AOF status. There are twelve operators in the field. Samson recently drilled the first horizontal well, the Walker Ranch 10 No. 3H in the field. Samson is proposing to drill additional horizontal wells and requests additional horizontal rules for consistency and in order to promote the efficient and effective development of the remaining hydrocarbons.

The Hemphill (Douglas) Field has never had a designated interval adopted. The designated interval from 7,768 feet to 8,088 feet as shown on the log of the Forest Oil Corporation Flowers Lease No. 5014 includes three distinct Douglas sands, the Douglas "A", the Douglas "B", and the Douglas "C". The Douglas sands interval has a gross interval that is 420 feet thick with each individual sand member having a net pay thickness of 20 to 40 feet of variable quality reservoir sand. The Douglas sands have a average 10% porosity with a water saturation of 30% and permeability between 0.03 md to 0.8 md. Each sand is usually found throughout the area, however the reservoir quality and pay may vary from well to well. In one well all three sands may be productive while the next well may only have one sand that is productive.

Samson requests 467'-933' well spacing between vertical wells, 0' well spacing between vertical and horizontal wells, 660' well spacing between horizontal wells, 200' lease line spacing for the first and last take points with special provisions for "take points", no perf zones and a 47 foot "box" rule for horizontal wells. Samson argues that the proposed spacing is necessary to allow drilling of horizontal wells between the numerous existing vertical wells. The proposed field rules will provide consistency with other horizontal play fields in the State under going horizontal drilling

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Samson proposes a tolerance “box rule” for horizontal drainhole wells that would allow drainholes to deviate 47 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. As drilled wells for which all points are located within the “box” would be considered in compliance with their drilling permits.

Samson requests a 200' leaseline spacing for the first and last take points as it would increase the ultimate recovery from the Douglas formation. The dual lease line spacing is commonly adopted when lease lines are perpendicular to horizontal laterals. The preferred orientation for the laterals in the field is north south. Most leases are 640 acre sections with lease lines running east west. The additional 267 foot spacing closer to the leaseline at the first and last take points will recover additional hydrocarbons that would otherwise be left in place as the lateral length will be 534 feet longer on a 640 acre section.

Samson believes that some areas of the subject field could be developed to a density greater than 160 acres per well. However, Samson acknowledges that there are operators in the field which do not believe the field should be developed as densely. It is therefore requested that the 640/optional 160 acre density rule remain in effect, but that special provisions be adopted for the field which will allow the administrative approval of Rule 38 exceptions after notice to all operators and unleased mineral owners of tracts within 1,867 feet of any point on a horizontal well within the correlative interval. If no written protest is received after 21 days of Commission issued notice of an application, or if waivers are received, the application will be approved administratively without the filing of evidence to support the exception. If a written protest is received, the application will be set for hearing. This same procedure is in place in the Lipscomb (Cleveland) Field and was adopted in Oil & Gas Docket 10-0269213 in April 2011.

Samson also requests that spacing rules for the field be adopted to accommodate the drilling of stacked horizontal lateral wells. The gross thickness of the Douglas interval is over 420 feet. Within the correlative interval there are three distinct intervals that are productive. Each interval, the Douglas "A", the Douglas "B", and the Douglas "C" sands, may contain oil and may be developed with stacked horizontal laterals in the future. Samson believes that several separate laterals may be necessary to effectively develop the reservoirs with horizontal wells. Similar stacked lateral rules have already been adopted in numerous horizontal play fields in the state. The rule would allow stacked horizontal laterals within the Douglas correlative interval that are drilled from different wellbores to be considered a single well for regulatory purposes. Additionally, Samson requests off-lease penetration to allow the additional recovery of reserves by allowing the lateral to be horizontal at a legal lease line location. An additional stage frac will be placed on each lateral if off lease penetration is allowed.

Because the proposed designated interval contains multiple productive intervals, a two factor allocation formula is required by statute. Samson proposes that allocation be based on 50% deliverability and 50% acreage and continuation of AOF status.

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FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Hemphill (Douglas) Field was discovered in 1977 and there are currently 140 wells producing from the field, 121 gas wells and 19 oil wells. The associated field has twelve operators in the field.
3. Samson recently drilled the first horizontal well in the field, the Walker Ranch 10 No. 3H. Samson is proposing to drill additional horizontal wells.
4. Field rules that provide for 467'-933' well spacing between vertical wells, 0' well spacing between vertical and horizontal wells, 660' well spacing between horizontal wells, 200' lease line spacing for the first and last take points, take point language, off lease penetration, stacked laterals and a "box rule" for horizontal wells will provide consistency with other horizontal play fields in the State under going horizontal drilling.
5. The Hemphill (Douglas) Field should be designated as the correlative interval from 7,768 feet to 8,088 feet as shown on the log of the Forest Oil Corporation Flowers Lease No. 5014 as it includes the entire Douglas Sandstone inclusive of three distinct Douglas sands, the Douglas "A", the Douglas "B", and the Douglas "C".
6. The proposed 47 foot "box rule" is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
7. The 200' lease line spacing for the first and last take points will result in the recovery of additional hydrocarbons.
8. Certain leases in the field require may additional infill drilling to maximize recovery from the field. Samson believes that some areas of the subject field could be developed to a density greater than 160 acres per well. However, Samson acknowledges that there are operators in the field which do not believe the field should be developed as densely.
9. Allowing off-lease penetration will allow an additional stage frac to be placed on each lateral causing the recovery of additional reserves that would otherwise be left in the ground.
10. Given that the gross thickness of the Douglas interval in this field is over 430 feet, and contains three distinct Douglas sands, the Douglas "A", the

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Douglas "B", and the Douglas "C". multiple stacked laterals may be required to fully develop the reservoir.

11. The proposed "stacked lateral" rule for the Hemphill (Douglas) Field will allow stacked horizontal laterals within the Douglas correlative interval that are drilled from different wellbores to be considered a single well for regulatory purposes.
12. Allocation based on 50% deliverability and 50% acreage and continuation of AOF status is a reasonable allocation formula which satisfies statutory requirements.

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. Amending field rules for the Hemphill (Douglas) Field is necessary to prevent waste, protect correlative rights and promote development of the fields.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission amend field rules for the Hemphill (Douglas) Field, as proposed by Samson Lone Star, LLC.

Respectfully submitted,

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Technical Examiner

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