

July 21, 2005

OIL AND GAS DOCKET NO. 03-0243278

APPLICATION OF DELTA EXPLORATION COMPANY, INC. TO CONSOLIDATE THE SHERALIZ (W3-B), SHERALIZ (W8), AND SHERALIZ (WILCOX 2) FIELDS INTO THE NEWTON FIELD AND AMEND THE FIELD RULES FOR THE NEWTON FIELD, NEWTON COUNTY, TEXAS

HEARD BY: Thomas H. Richter, P.E.

DATE OF HEARING: July 20, 2005

APPEARANCES:

J. David Hall, attorney
John F. Miller

REPRESENTING:

Delta Exploration Company, Inc.

EXAMINER'S REPORT AND RECOMMENDATION
STATEMENT OF THE CASE

This is the unopposed application of Delta Exploration Company for the Commission to consider consolidating the Sheraliz (W3-B), Sheraliz (W8) and Sheraliz (Wilcox 2) Fields into the Newton Field. It is also proposed that the field rules for the Newton Field be amended by the addition of a rule to allow Rule 11 exceptions on a fieldwide basis. The examiner recommends approval of the application.

DISCUSSION OF THE EVIDENCE

The Sheraliz (W3-B) Field was discovered December 12, 1968 at 9,845' subsurface depth. The field is governed by Statewide Rules and currently there are no wells in the field. Cumulative production for the field is 109,045 BO. Only two wells have ever produced from the field.

The Sheraliz (W8) Field was discovered January 2, 1969 at 10,215' subsurface depth. The field is governed by Statewide Rules and currently there are no wells in the field. Cumulative production for the field is 117,037 BO. Only three wells have ever produced from the field.

The Sheraliz (Wilcox 2) Field was discovered November 9, 1989 at 9,779' subsurface depth. The field is governed by Statewide Rules and currently there is one producing well in the field operated by Delta Exploration. Cumulative production for the field is 106,390 BO. This is the only well that has ever produced from the field and it is currently producing 500 BOPM.

The Newton Field was discovered February 6, 1949 at 10,965' subsurface depth. The field

is governed by Special Field Rules adopted by Order No. 03-0222493 effective October 5, 1999 which provide for the entire combined correlative interval from 9,660' to 11,600' as shown on the Burns Well No. 2, GB & CNG RR Co. Survey, A-680, Newton County shall be designated as a single reservoir for proration purposes and be designated at the Newton Field. The allocation formula is based on 95% W-10 potential and 5% per well. Minimum well spacing and density are subject to Statewide Rules. The top allowable for a well in the field is 225 BOPD. Cumulative production from the field is 1,582,711 BO. Delta is the only operator in the field with 17 producing wells at approximately 20,000 BOPM. Before Delta acquired the field area, the monthly production prior to 2000 was 550 BOPM.

Consolidation of the subject fields into the Newton Field will provide for the recovery of reserves that otherwise would go unrecovered. The designated interval of the Newton Field includes at least eight Wilcox Formation Sands. The Newton Field has been developed from east to west through its history. The Sheraliz Fields were all located farther west of the Newton Field. Delta Exploration has an active drilling program that is extending westward which is now entering the Sheraliz reservoir area. The fields all produce from the Wilcox sands. The Sheraliz Fields were granted new field designations based on what was believed at the time to be a "saddle" separating them from the Newton Field. With Delta's continued development of the Newton Field, the logs of recently drilled wells show there is no separation between the fields.

All wells in the Newton Field area must be directionally drilled because of surface restrictions and environmental conditions. This entire area is restricted due to wetlands and marshes (the Reese Marsh and the Saydons Marsh). In addition this is a pine tree forest that is surface owned by a lumber harvesting corporation. Therefore, logging roads are used as lease roads and for equipment movement. Surface locations are always located next to a lease/logging road. The wetland/marshes basically prohibit the building of surface locations at regular lease line parameters.

The typical well will be drilled vertical to approximately 4,000' (the base of the usable quality water is 2,700' and surface casing will be set at 3,200'). From this point a directional mud motor and MWD (measurement-while-drilling) survey tool will be installed and directional drilling will be commenced. Directional drilling will continue until a horizontal displacement of at least a regular lease line location is reached and the wellbore will be brought back to the vertical at approximately 8,000'. At this time the directional drilling equipment will be laid down. The remainder of the wellbore will be drilled using conventional tools and drilling methods. The required inclination surveys will be run through out the remainder of the straight hole portion.

Delta Exploration asserts that it should not be required to continue to use directional drilling tools from the turn point to the total depth because of the extra cost that would be required. Delta Exploration also requests that if only conventional drilling methods and tools are used, it not be required to run a directional survey to ascertain the exact bottomhole/completion interval location of the well. Wells drilled from regular locations are not required to have directional surveys run unless the total cumulative displacement of the inclination survey shows the bottomhole location could be off the lease. In the instant case, the exact subsurface location from the lease line will be known before the conventional drilling is commenced. The inclination survey would then be keyed

from that point, the only difference being that the keyed point is not on the surface of the ground but some 8,000' below the surface. The top of the first Wilcox is approximately 9,400'. Production casing is usually set at approximately 12,000'. A review of the inclination data from 19 other wells that have been drilled in the Newton Field Area that at least penetrated the Wilcox Sands show the wells do not drift appreciatively for the depth the wells are drilled to. The accumulative displacements range from a low of 116' (inclination angle of .645 degrees for a total depth of 10,300') to a high of 330' (inclination angle of 1.612 degrees for a total depth of 10,730'). Delta Exploration has permits for 15 more wells at present.

EXAMINERS' OPINION

The examiner believes that wells drilled in the Newton Field will be in compliance with Statewide Rule 11 if drilled as proposed i.e. directionally drilled to a regular subsurface location/depth and then drilled with conventional tools and drilling methods to total depth. Attached is a copy of Statewide Rule 11. Section **(a) General** states that all wells shall be drilled as nearly vertical as possible by normal, prudent, practical drilling operations. A well may be granted a directional drilling permit pursuant to Subsection(d)(2)(A)(ii) ... "A permit for directionally deviating a well may be granted by the Commission where conditions on the surface of the ground prevent or unduly complicate the drilling of a well at a regular location."

Rule 11 does not require a directional survey be run on the entire wellbore length. Subsection(b)(1)(B) states "*Inclination surveys ... may be made either during the normal course of drilling or after the well has reached total depth.*" Subsequent Subsection (b)(1)(C) provides for the combination of both "*Copies of all directional or inclination surveys, regardless of the reason for which they are run, shall be filed **as a part of or in addition** (emphasis added) to the inclination surveys ...*"

Similar situations are contemplated by Rule 11. Subsection (c)(2)(C) states that a directional survey shall be commenced immediately below the surface casing. If surface casing is set more than 200 feet below the ground surface, the first directional point showing the inclination angle shall be used to determine the drift from the ground surface to that depth and the drift shall be assumed in the direction least favorable to the operator and shall be considered the starting point for the directional survey. In this case, the directional is run first, thus providing an exact location and depth designation. The inclination drift to total depth will be assumed to be in the direction least favorable to the operator.

The conventional drilling which will be resumed after the directional drilling portion of this wellbore does not fall under the definition of Random Deviation as defined by Subsection (d)(1)(B) of Rule 11.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.

2. There was no protest at the call of the hearing.
3. The Sheraliz (W3-B) Field was discovered December 12, 1968 at 9,845' subsurface depth. The field is governed by Statewide Rules and currently there are no wells in the field.
4. The Sheraliz (W8) Field was discovered January 2, 1969 at 10,215' subsurface depth. The field is governed by Statewide Rules and currently there are no wells in the field.
5. The Sheraliz (Wilcox 2) Field was discovered November 9, 1989 at 9,779' subsurface depth. The field is governed by Statewide Rules and currently there is one producing well in the field operated by Delta Exploration.
6. The Newton Field was discovered February 6, 1949 at 10,965' subsurface depth.
 - a. The field is governed by Special Field Rules adopted by Order No. 03-0222493 effective October 5, 1999 which provide for the entire combined correlative interval from 9,660' to 11,600' as shown on the Burns Well No. 2, GB & CNG RR Co. Survey, A-680, Newton County shall be designated as a single reservoir for proration purposes and be designated at the Newton Field.
 - b. The allocation formula is based on 95% W-10 potential and 5% per well.
7. Consolidation of the subject fields into the Newton Field will provide for the recovery of reserves that otherwise would go unrecovered.
 - a. The designated interval of the Newton Field includes at least eight Wilcox Formation Sands.
 - b. The Sheraliz Fields (Wilcox Sands) are all located west of the Newton Field.
 - c. The Sheraliz Fields were granted new field designations based on what was believed at the time to be a "saddle" separating them from the Newton Field.
 - d. With Delta's continued development of the Newton Field, well logs show there is no separation between the fields.
8. Delta Exploration seeks a field rule pursuant to Statewide Rule 11 to allow the drilling of wells in the Newton Field without the necessity of having to run a directional survey over the entire length of the well borehole.
 - a. All wells in the Newton Field area must be directionally drilled because of surface restrictions and environmental conditions.
 - b. This entire area is restricted due to wetlands and marshes (the Reese Marsh and the

Saydons Marsh).

- c. This is a pine tree forest that is surface owned by a lumber harvesting corporation and logging roads are used as lease roads and for equipment movement.
 - d. Surface locations are always located next to a lease/logging road and the wetland/marshes basically prohibit the building of surface locations at regular lease line parameters.
9. The typical well will be drilled vertical to approximately 4,000' (the base of the usable quality water is 2,700' and surface casing will be set at 3,200').
- a. From this point a directional mud motor and MWD (measurement-while-drilling) survey tool will be installed and directional drilling will be commenced.
 - b. Directional drilling will continue until a horizontal displacement of at least a regular lease line location is reached and the wellbore will be brought back to the vertical at approximately 8,000' at which time the directional drilling equipment will be laid down.
 - c. The remainder of the wellbore will be drilled using conventional tools and drilling methods and the required inclination surveys will be run pursuant to Commission requirement through out the remainder of the straight hole portion.
 - d. The exact subsurface distance to the lease line will be known before the conventional drilling is commenced.
10. Wells drilled from regular locations are not required to have directional surveys run unless the total cumulative displacement of the inclination survey shows the bottomhole location/completion interval could be off the lease.

CONCLUSIONS OF LAW

- 1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
- 2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
- 3. Consideration for consolidation of fields and field rules, a determination of the effectiveness of the rules and appropriate actions is a matter within the Commission jurisdiction.
- 4. Adoption of the proposed consolidation of fields and adoption of the proposed field rules will prevent waste, foster conservation and protect correlative rights.

5. Rule 11 does not require a directional survey be run on the entire wellbore length. Subsection(b)(1)(B) states “ Inclination surveys ... may be made either during the normal course of drilling or after the well has reached total depth.” Subsequent Subsection (b)(1)(C) provides for the combination of both “Copies of all directional or inclination surveys, regardless of the reason for which they are run, shall be filed as a part of or in addition to the inclination surveys ...”

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed field consolidation and amending the field rules for the Newton Field to provide for the drilling of wells pursuant to Statewide Rule 11.

Respectfully submitted,

Thomas H. Richter, P.E.
Technical Examiner
Office of General Counsel

Texas Administrative Code

TITLE 16	ECONOMIC REGULATION
PART 1	RAILROAD COMMISSION OF TEXAS

CHAPTER 3 OIL AND GAS DIVISION**RULE §§3.11 Inclination and Directional Surveys Required**

(a) General. All wells shall be drilled as nearly vertical as possible by normal, prudent, practical drilling operations. Nothing in this section shall be construed to permit the drilling of any well in such a manner that the wellbore crosses lease and/or property lines (or unit lines in cases of pooling) without special permission.

(b) Inclination surveys.

(1) Requirements.

(A) An inclination survey made by persons or concerns approved by the commission shall be filed on a form prescribed by the commission for each well drilled or deepened with rotary tools, except as hereinafter provided, or when, as a result of any operation, the course of the well is changed. The first shot point of such inclination survey shall be made at a depth not greater than 500 feet below the surface of the ground, and succeeding shot points shall be made either at 500-foot intervals or at the nearest drill bit change thereto, but not to exceed 1,000 feet apart.

(B) Inclination surveys conforming to these requirements may be made either during the normal course of drilling or after the well has reached total depth. Acceptable directional surveys may be filed in lieu of inclination surveys.

(C) Copies of all directional or inclination surveys, regardless of the reason for which they are run, shall be filed as a part of or in addition to the inclination surveys otherwise required by this section. If computations are made from dipmeter surveys to determine the course of the wellbore in any portion of the surveyed interval, a report of such computations shall be required.

(D) Inclination surveys shall not be required in any well drilled to a total depth of 2,000 feet or less on a regular location at least 150 feet from the nearest lease line, provided the well is not intentionally deviated from the vertical in any manner whatsoever.

(E) Inclination surveys shall not be required on wells deepened with rotary tools if the well is deepened no more than 300 feet or the distance from the surface location to the nearest lease or boundary line, whichever is the lesser, and provided that the well was not intentionally deviated from the vertical at any time before or after the beginning of deepening operations.

(F) Inclination surveys will not be required on wells that are drilled and completed as dry holes and are permanently plugged and abandoned. If such wells are reentered at a later date and completed as producers or injection or disposal wells, inclination reports will be required and must be filed with the appropriate completion form for the well.

(G) Inclination survey filings will not be required on wells that are reentries within casing of previously producing wells if inclination data are already on file with the Railroad Commission of Texas (commission). If such data are not on file with the commission, the results of an

inclination survey must be reported on the appropriate form and filed with the completion form, except as provided by subparagraph (D) of this paragraph.

(2) Reports.

(A) The report form shall be signed and certified by a party having personal knowledge of the facts therein contained. The report shall include a tabulation of the maximum drifts which could occur between the surface and the first shot point, and each two successive shot points, assuming that all of the unsurveyed hole between any two shot points has the same inclination as that measured at the lowest shot point, and the total possible accumulative drift, assuming that all measured angles of inclination are in the same direction.

(B) In addition, the report shall be accompanied by a certified statement of the operator, or of someone acting at his direction on his behalf, either:

(i) that the well was not intentionally deviated from vertical; or

(ii) that the well was deviated at random, with an explanation of the circumstances.

(C) The report shall be filed in the district office by attaching one copy to each appropriate completion form for the well.

(D) The commission may require the submittal of the original charts, graphs, or discs resulting from the surveys.

(c) Directional surveys.

(1) When required.

(A) When the maximum displacement indicated by an inclination survey is greater than the actual distance from the surface location to the nearest lease line or pooled unit boundary, it will be considered to be a violating well subject to plugging and to penalty action. However, an operator may submit a directional survey, run at his own expense by a commission approved surveying company, to show the true bottom hole location of the well to be within the prescribed limits. When such directional survey shows the well to be bottomed within the confines of the lease, but nearer to a well or lease line or pooled unit boundary than allowed by applicable rules, or by the permit for the well if the well has been granted an exception to §§3.37 of this title (relating to Statewide Spacing Rule), a new permit will be required if it is established that the bottom hole location or completion location is not a reasonable location.

(B) Directional surveys shall be required on each well drilled under the directional deviation provisions of this section.

(C) No oil, gas, or geothermal resource allowable shall be assigned any well on which a directional survey is required under any provision of this section until a directional survey has been filed with and accepted by the commission.

(2) Filing and type of survey.

(A) Directional surveys required under this section must be run by competent surveying companies, approved by the commission, signed and certified by a person having actual knowledge of the facts, in the manner prescribed by the commission in accordance with §§3.12 of this title (relating to Directional Survey Company Report).

(B) All directional surveys, unless otherwise specified by the commission, shall be either single shot surveys or multi-shot surveys with the shot points not more than 200 feet apart, beginning within 200 feet of the surface, and the bottom hole location must be oriented both to the surface location and to the lease lines (or unit lines in cases of pooling).

(C) If more than 200 feet of surface casing has been run, the operator may begin the directional survey immediately below the surface casing depth. However, if such method is used, the inclination drifts from the surface of the ground to the surface casing depth must be added cumulatively and reported on the appropriate form. This total shall be assumed to be in the direction least favorable to the operator, and such point shall be considered the starting point of the directional survey.

(d) Intentional deviation of wells.

(1) Definitions.

(A) Directional deviation--The intentional deviation of a well from vertical in a predetermined compass direction.

(B) Random deviation--The intentional deviation of a well without regard to compass direction for one of the following reasons:

(i) to straighten a hole which has become crooked in the normal course of drilling;

(ii) to sidetrack a portion of a hole because of mechanical difficulty in drilling.

(2) When permitted.

(A) Directional deviation. A permit for directionally deviating a well may be granted by the commission:

(i) for the purpose of seeking to reach and control another well which is out of control or threatens to evade control;

(ii) where conditions on the surface of the ground prevent or unduly complicate the drilling of a well at a regular location;

(iii) where conditions are encountered underground which prevent or unduly hinder the normal completion of the well;

(iv) where it can be shown to be advantageous from the standpoint of mechanical operation to drill more than one well from the same surface location to reach the productive horizon at essentially the same positions as would be reached if the several wells were normally drilled

from regular locations prescribed by the well spacing rules in effect;

(v) for the purpose of drilling a horizontal drainhole; or

(vi) for other reasons found by the commission to be sufficient after notice and hearing.

(B) Random deviation. Permission for the random deviation of a well may be granted by the commission whenever the necessity for such deviation is shown, as prescribed in paragraph (3)(C) of this subsection.

(3) Applications for deviation.

(A) Applications for wells to be directionally deviated must specify on the application to drill both the surface location of the well and the projected bottom hole location of the well. On the plat, in addition to the plat requirements provided for in §§3.5 of this title (relating to Application to Drill, Deepen, Reenter, or Plug Back) (Statewide Rule 5), the following shall be included:

(i) two perpendicular lines providing the distance in feet from the projected bottomhole location, rather than the surface location, to the nearest points on the lease, pooled unit, or unitized tract line. If there is an unleased interest in a tract of the pooled unit or unitized tract that is nearer than the pooled unit or unitized tract line, the nearest point on that unleased tract boundary shall be used;

(ii) a line providing the distance in feet from the projected bottomhole location to the nearest point on the lease line, pooled unit line, or unitized tract line. If there is an unleased interest in a tract of the pooled unit that is nearer than the pooled unit line, the nearest point on that unleased tract boundary shall be used;

(iii) a line providing the distance in feet from the projected bottomhole location, rather than the surface location, to the nearest oil, gas, or oil and gas well, identified by number, applied for, permitted, or completed in the same lease, pooled unit, or unitized tract and in the same field and reservoir; and

(iv) perpendicular lines providing the distance in feet from the two nearest non-parallel survey/section lines to the projected bottomhole location.

(B) If the necessity for directional deviation arises unexpectedly after drilling has begun, the operator shall give written notice by letter or telegram of such necessity to the appropriate district office and to the commission office in Austin, and upon giving such notice, the operator may proceed with the directional deviation. The commission may, at its discretion, accept written notice electronically transmitted. If the operator proceeds with the drilling of a deviated well under such circumstances, he proceeds at his own risk. Before any allowable shall be assigned to such well, a permit for the subsurface location of each completion interval shall be obtained from the commission under the provisions set out in the commission rules. However, should the operator fail to show good and sufficient cause for such deviation, no permit will be granted for the well.

(C) If the necessity for random deviation arises unexpectedly after the drilling has begun, the operator shall give written notice by letter or telegram of such necessity to the appropriate district office and to the commission office in Austin, and, upon giving such notice, the operator may proceed with the random deviation, subject to compliance with the provisions of this section on inclination surveys. The commission may, at its discretion, accept written notice electronically transmitted.

(e) Surveys on request of other operators. The commission, at the written request of any operator in a field, shall determine whether a directional survey, an inclination survey, or any other type of survey approved by the commission for the purpose of determining bottom hole location of wells, shall be made in regard to a well complained of in the same field.

(1) The complaining party must show probable cause to suspect that the well complained of is not bottomed within its own lease lines.

(2) The complaining party must agree to pay all costs and expenses of such survey, shall assume all liability, and shall be required to post bond in a sufficient sum as determined by the commission as security against all costs and risks associated with the survey.

(3) The complaining party and the commission shall agree upon the selection of the well surveying company to conduct the survey, which shall be a surveying company on the commission's approved list.

(4) The survey shall be witnessed by the commission, and may be witnessed by any party, or his agent, who has an interest in the field.

(5) Nothing in these rules shall be construed to prevent or limit the commission, acting on its own authority, from conducting spot checks and surveys at any time and place for the purpose of determining compliance with the commission rules and regulations.

(f) Penalties.

(1) False reports. The filing of a false or incorrect directional survey shall be grounds for cancellation of the well permit, for pipeline severance of the lease on which the well is located, for penalty action under the applicable statutes, and/or for such other and further action as may be appropriate.

(2) Other. The same penalties and actions as set forth in paragraph (1) of this subsection shall be assessable against any operator who refuses to comply with a commission order which issues under subsection (e) of this section.