

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL AND GAS DOCKET NO. 01-0311764: APPLICATION OF NORTH SOUTH OIL, LLC TO
CONSIDER CREATING THE PROPOSED LULING BRANYON R 40 EXC FIELD PURSUANT
TO STATEWIDE RULE 40, CALDWELL AND GUADALUPE COUNTIES, TEXAS**

FINAL ORDER

The Railroad Commission of Texas ("Commission") finds that notice in the above-numbered docket was provided to all parties entitled to notice. A hearing in the above numbered docket was heard on March 5, 2018, by a Commission Technical Examiner and Administrative Law Judge (collectively, "Examiners") This proceeding was duly submitted to the Commission at a conference held in its offices in Austin, Texas. After considering the evidence and record in this case, the Commission adopts the following findings of fact and conclusions of law.

Findings of Facts

1. North South Oil, LLC ("North South") requests an exception to Statewide Rule 40 (16 TEX. ADMIN. CODE § 3.40) for wells in the Luling-Branyon Field where there is a depth severance of minerals within the correlative interval of the Luling-Branyon Field ("Field") in Caldwell and Guadalupe Counties, Texas. A list of the wells at issue ("Wells") is attached as Attachment A.
2. To accomplish the Rule 40 exceptions, North South requests creation of the Luling-Branyon R 40 Exc Field for operators with ownership of deep rights below a horizontal severance and to permit those deeper interval wells. In conjunction to the request for Rule 40 exceptions, North South filed an application to amend the Field's field rules to allow operators in the Field with ownership of the deeper rights below a horizontal severance to permit those deeper interval wells in the Luling-Branyon R 40 Exc Field. North South's application to amend the Field's rules is set for the Commission's consideration at its June 19, 2018 conference as Oil and Gas Docket No. 01-0308634 on the Oil and Gas Consent Agenda.
3. Approving a Rule 40 Exception for the Wells and transferring the Wells to the Luling-Branyon R40 Exc. Field would grant Statewide Rule 40 exceptions in the Luling-Branyon Field and permit the operators to develop the individual ownership in the Luling-Branyon Field as follows:
 - a. Operators of tracts with no horizontal severance of ownership within the designated interval for the Luling-Branyon Field AND operators of the shallow rights above a horizontal severance of ownership within that same interval shall permit wells under the Luling-Branyon Field (Field ID Number 55679001).

- b. Operators with ownership of deep rights below a horizontal severance within the designated interval for the Luling-Branyon Field shall permit wells under the Luling-Branyon R40 Exc. Field (Field ID No. 555679100).
 - c. Any operator using the Field ID Number for "deep rights" (Luling-Branyon R40 Exc Field) certifies, by use of that number, that the ownership of the oil and gas rights is divided horizontally on the tract for which the drilling permit is sought.
 - d. Where the ownership of oil and gas is horizontally divided, the Field Rules for the Luling-Branyon Field will apply separately to wells drilled under the Luling-Branyon Field and wells drilled under the Luling-Branyon R40 Exc Field, such that proration units on a tract above and below the horizontal division of ownership are independent and may overlap.
4. Notice of North South's request was provided to all operators of record in the Luling-Branyon Field.
5. No one has protested North South's request for the Statewide Rule 40 exceptions and to create the Luling-Branyon R40 Exc Field or North South's application to amend the Field's rules.
6. A hearing was held on March 5, 2018 regarding North South's requests to amend the field rules for the Luling-Branyon Field, for Statewide Rule 40 exception for 35 of its wells and to create the proposed Luling-Branyon R40 Exc Field. The application is unopposed. The Statewide Rule 40 exceptions, creating the proposed Luling-Branyon R 40 Exc Field and transferring the Wells was severed from the field rule amendment application and given its own docket number, which is used in this order.
7. Commission Oil and Gas staff ("Staff") filed an *amicus curiae* identifying an area of concern in the request to amend the field rules with a field-wide Statewide Rule 40 exception that could potentially result in waste by allowing the double assignment of acreage to multiple wells within a common, conventional, pressure/water drive reservoir.
8. A correlative interval for the Luling-Branyon Field was designated in Final Order No. 01-0262944 and the Luling-Branyon Field is defined as the entire correlative interval from 1,620 feet to 2,164 feet as shown on the log of the Texas Petroleum Investment Co. - J. E. Allen "A" Lease, Well No. 46 (API No. 42-187-33111). This interval is designated as a single reservoir for proration purposes and includes both the Austin Chalk and Edwards Formations.
9. The Luling-Branyon Field produces from conventional reservoirs, the Austin Chalk interval and the Edwards interval. However, the Austin Chalk and the Edwards intervals are not connected and are not in communication.

- a. The Edwards and Austin Chalk Formations are separated by two major shale formations (Eagle Ford and Del Rio), which are present throughout the Luling-Branyon Field area. There may be natural fractures within the individual productive zones, for example, there could be natural fractures within the Austin Chalk, and there could be natural fractures within the Edwards, but these natural fractures do not extend to cause communication between these two formations.
 - b. The Bureau of Economic Development (BEG) addresses the Austin Chalk portion of the Luling-Branyon Field separately from the Edwards portion of the Luling-Branyon Field. Per the BEG Atlas of Major Texas Reservoirs, the Austin Chalk Formation portion of the Luling-Branyon Field is a solution gas drive reservoir. The Edwards Formation portion of the Luling-Branyon field is a water drive reservoir.
10. There is a difference in mineral ownership within the Luling-Branyon Field. There are shallow rights, which is typically the Austin Chalk Formation. North South is only interested in developing deeper mineral rights within the Luling-Branyon Field, namely the Edwards Formation.
 - a. The Edwards Formation is located at the very base of the correlative interval for the Luling-Branyon Field.
 - b. If North South is not authorized to develop the Edwards Formation in the Luling Branyon Field, specifically with horizontal wells, waste will occur as there is no other way to produce these recoverable hydrocarbons within the Edwards Formation at this time.
 - c. This residual oil in the Luling-Branyon Field will go unrecovered if it can't be produced through this particular technology of drilling horizontal wells and producing the wells in the Edwards Formation at high water cuts.
11. Statewide Rule 40 prohibits the "double assignment" of acreage to non-stacked lateral, horizontal wells in the same field.
12. North South has received Statewide Rule 40 violation letters from the Commission that have resulted in oil overproduction due to the inability to assign an oil allowable to several of North South's leases.
 - a. North South has leased the rights to develop below the base of the Austin Chalk on the leases with current Statewide Rule 40 double assignment of acreage violations in the Luling-Branyon Field.
 - b. In total, North South is requesting to transfer 35 wells to the proposed Luling-Branyon Statewide Rule 40 exception field. The 35 are unable to be

assigned an allowable due to the double assignment of acreage with wells that are completed in the Austin Chalk Formation.

13. The Luling-Branyon Field was discovered on August 8, 1922 at a depth of 1,900 feet. The field has been producing for almost 100 years and the field is currently on 2-acre density. As of March 2018, there were 1,536 total wells on the proration schedule for the Luling-Branyon Field. Of these 1,536 wells, 131 were horizontal wells.
14. Horizontal wells drilled in the Edwards Formation are not hydraulically fracture stimulated. The wells are open-hole completions that produce simply by creating a new pressure sink in the immediate vicinity of the pore spaces and produce a lot of water.
15. The only way to continue to develop the Edwards Formation in the Luling-Branyon Field is by creating a relatively large draw-down in the immediate vicinity of the pore space. The horizontal well contacts a lot of reservoir volume and creates a pressure sink along the horizontal lateral, allowing the last remaining residual oil to be liberated.
 - a. The only way this residual oil in the Edwards Formation is going to be produced, is through horizontal wellbores at high water cuts.
 - b. This completion technique is analogous to a new technology.
16. In this case, an exception to Statewide Rule 40 is necessary for North South to produce its fair share of the hydrocarbons.
17. Granting an exception to Statewide Rule 40 in this case is necessary to prevent waste and to protect correlative rights.
18. In the past, the Commission has granted exceptions to Statewide Rule 40 and approved the Spraberry (Trend Area) R40 Exc Field in Oil and Gas Docket No. 7C-0283443 to prevent waste.
19. The Commission granted an exception to Statewide Rule 40 in Oil and Gas Docket No. 08-0309365.
20. A Statewide Rule 40 exception is necessary in order to allow North South to obtain an allowable to produce its wells in the Luling-Branyon Field where there is a depth severance of minerals within the correlative interval for the field.

CONCLUSIONS OF LAW

1. North South's application for Statewide Rule 40 exceptions in the Luling-Branyon Field where there is a depth severance of minerals within the correlative interval is necessary to prevent waste and protect correlative rights.
2. Pursuant to § 2001.144(a)(4)(A), of the Texas Government Code, and by agreement of the parties in writing or on the record, **the parties have waived the right to file a motion for rehearing and the Final Order in this case can be final and effective on the date the Final Order is signed.**

Therefore, it is **ORDERED** that the application of North South Oil, LLC for an exception to Statewide Rule 40 in the Luling-Branyon Field for the 35 wells listed on Attachment A and to create the proposed Luling Branyon R 40 Exc Field Caldwell and Guadalupe Counties, Texas is hereby **GRANTED**.

It is further **ORDERED** that the Luling-Branyon R40 Exc Field (Field ID No. 55679100), is hereby created and that the wells listed on Attachment A are transferred into the newly created Luling-Branyon R40 Exc Field (Field ID No. 55679100), without the need for a new drilling permit. However, a Form P-4, Producer's Transportation Authority and Certificate of Compliance, is required to be filed for all leases to change the field name. New lease numbers will be assigned if the operator does not already have an existing lease number assigned in the Luling-Branyon R40 Exc Field. Form P-16, Acreage Designation, and full lease plats are also required in the new field and should be sent to the Commission with the Form P-4 if acres are not already assigned to the operator's wells that meet the new field criteria. Operators must respond within sixty (60) days of this order's effective date.

Done this 19th day of June 2018.

RAILROAD COMMISSION OF TEXAS

Christi Craddick

CHAIRMAN CHRISTI CRADDICK

Ryan Sitton

COMMISSIONER RYAN SITTON

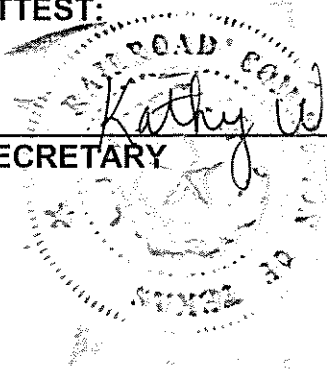
Wayne Christian

COMMISSIONER WAYNE CHRISTIAN

ATTEST:

Kathy Way

SECRETARY

The seal of the Railroad Commission of Texas is circular and features a five-pointed star in the center. The words "RAILROAD COMMISSION OF TEXAS" are inscribed around the perimeter of the seal.

ATTACHMENT A

API No. 42-055-35006 CR Ranch Unit 1H

API No. 52-055-35007 CR Ranch Unit 2H

API No. 42-055-35012 CR Ranch Unit 3H

API No. 42-055-35014 CR Ranch Unit 4H

API No. 42-055-35020 CR Ranch Unit 5H

API No. 42-055-35021 CR Ranch Unit 6H

API No. 42-055-35032 CR Ranch Unit 7H

API No. 42-055-35033 CR Ranch Unit 8H

API No. 42-055-35034 CR Ranch Unit 9H

API No. 42-055-35074 CR Ranch Unit 10H

API No. 42-055-35076 CR Ranch Unit 11H

API No. 42-055-35077 CR Ranch Unit 12H

API No. 42-055-35079 CR Ranch Unit 13H

API No. 42-055-35078 CR Ranch Unit 14H

API No. 42-055-34926 Clark 1H

API No. 42-055-34976 Clark 2H

API No. 42-055-35005 Clark 3H

API No. 42-055-35038 Ellison 1H

API No. 42-055-35039 Ellison 2H

API No. 42-055-35041 Ellison 3H

API No. 42-055-35064 Ellison 4H

ATTACHMENT A (continued)

API No. 42-055-35066 Ellison 5H

API No. 42-055-35065 Ellison 6H

API No. 42-055-35070 Ellison 7H

API No. 42-055-35072 Ellison 8H

API No. 42-055-35089 Ellison 9H

API No. 42-055-35096 Garwood Unit 1H

API No. 42-055-35016 Kornfuehrer 1H

API No. 42-055-35017 Kornfuehrer 2H

API No. 42-055-35092 Kornfuehrer 3H

API No. 42-055-35082 Leyendecker 1HR

API No. 42-055-35086 Leyendecker, R.F. 3H

API No. 42-055-35067 Young 1H

API No. 42-055-35069 Young 2H

API No. 42-055-35083 Young 3H