CHRISTI CRADDICK, *CHAIRMAN* RYAN SITTON, *COMMISSIONER* WAYNE CHRISTIAN, *COMMISSIONER*



RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

OIL & GAS DOCKET NO. 08-0312439

APPLICATION OF RIO OIL AND GAS (PERMIAN) II, LLC, FOR EXCEPTIONS TO STATEWIDE RULE 40 FOR VARIOUS LEASED TRACTS IN THE PHANTOM (WOLFCAMP) FIELD, REEVES COUNTY, TEXAS

AMENDED PROPOSAL FOR DECISION

HEARD BY:

Jennifer Cook – Administrative Law Judge Karl Caldwell – Technical Examiner

PROCEDURAL HISTORY:

Application Filed -Notice of Hearing -Hearing -Supplemental Notice of Hearing -Post-hearing Conference -Record Close -Proposal for Decision Issued - April 11, 2018 April 20, 2018 May 21, 2018 May 25, 2018 July 17, 2018 July 27, 2018 August 1, 2018 (amended August 13, 2018)

APPEARANCES:

For Applicant Rio Oil and Gas (Permian) II, LLC -Brian R. Sullivan, P.E., Attorney *McElroy, Sullivan, Miller & Weber, L.L.P.*

For Co-Applicant the Texas General Land Office -Robert Hatter, Deputy Director of Energy Resources

For Co-Applicant University Lands -Brian Owen, Vice President of Land

For Observer Cimarex Energy Co. and Cimarex Energy Co. of Colorado -David E. Jackson, Attorney Jackson Sjoberg & Townsend LLP

For Observer Anadarko E&P Onshore LLC -Ana Maria Marsland, Attorney *Osborn, Marsland & Hargrove*

For Observer BHP Billiton Pet(TXLA OP) Co-Rob Hargrove, Attorney Osborn, Marsland & Hargrove

Table of Contents

I.	Statement of the Case				
II.	Jurisdiction and Notice				
III.	Applicable Legal Authority				
IV.	Discussion of Evidence				
	A.	Evidence submitted at the May 21, 2018 hearing	5		
	В.	Evidence submitted at the July 17, 2018 post-hearing conference	7		
	C.	Subsequent correspondence to and from Commission staff	8		
V.	Examiners' Analysis				
	A.	Evaluation of the evidence at the May 21 hearing is the same as that provided in prior Commission orders also resulting from the May hearing.	10		
	В.	At the July hearing, the issues discussed relate to the fact that the Application is for leased tracts instead of identified Commission leases or wells; based on the evidence presented, the Examiners recommend approval with a limitation on duration.	11		
VI.		nmendation, Proposed Findings of Fact and Proposed Conclusions	15		

This Amended Proposal for Decision amends the original Proposal for Decision in order to substitute the revised tracts provided in the applicant's exceptions to the original Proposal for Decision. In the applicant's exceptions, the applicant removed one of the leased tracts from consideration and provided a revised plat and revised list of the tracts. This Amended Proposal for Decision replaces the original plat and list of leased tracts with the revised plat and list of leased tracts provided in the applicant's exceptions and changes the number of tracts from 15 to 14. Also submitted is a revised proposed final order with the revised plat and list of leased tracts attached.

In the revised proposed order, the word "not" in subsection 4 is removed as requested in the applicant's exceptions because the Administrative Law Judge and Technical Examiner agree that the change should be made. It conforms subsection 4 to Finding of Fact 1.d, which is the correct version.

I. Statement of the Case

There is no protest or opposition to the matters at issue. This case is presented in the format of a Proposal for Decision due to the novelty of the issues presented. The novelty is the fact that the request is for exceptions to Statewide Rule 40 for leased tracts that do not have Commission identifiers, such as a Commission lease number and no drilling permit applications have yet been filed.

Rio Oil and Gas (Permian) II, LLC ("Rio" or "Applicant") filed an application requesting exceptions ("Application") to Statewide Rule 40¹ for wells to be drilled on 14 leased tracts ("Leased Tracts") in the Phantom (Wolfcamp) Field ("Field") in Reeves County, Texas, subject to certain conditions. The proposed conditions would require notice to be given to affected operators 10 days before the filing of a drilling permit application and allow affected operators to protest and have a hearing regarding whether the permit application should be granted. A list of the Leased Tracts is attached as Attachment A² and a plat identifying the Leased Tracts is attached as Attachment B.³

The Texas General Land Office ("GLO") and University Lands appeared in support of Rio's Application. Cimarex Energy Company and Cimarex Energy Co. of Colorado ("Cimarex") appeared as observers. Anadarko E&P Onshore LLC ("Anadarko") and BHP Billiton Pet(TXLA OP) Co ("BHP") also appeared as observers. Anadarko and BHP, operators in the Field, expressed support regarding the language of the proposed conditions.

The Administrative Law Judge ("ALJ") and Technical Examiner (collectively "Examiners") respectfully submit this Amended Proposal for Decision ("PFD") and recommend the Railroad Commission ("Commission" or "RRC") grant exceptions to Rule 40 subject to the proposed conditions for the Leased Tracts. The Examiners propose a five-year duration for the exceptions such that the exception would apply for any permit

¹ 16 TEX. ADMIN. CODE § 3.40.

² Applicant July 17 Ex. 7.

³ Applicant July 17 Ex. 8.

Oil & Gas Docket No. 08-0312439 Amended Proposal for Decision Page 4 of 20

applications filed within five years of the final order in this matter, and for the duration of the life of the wells resulting from those permit applications filed within the five-year period.

II. Jurisdiction and Notice⁴

Sections 81.051 and 81.052 of the Texas Natural Resources Code provide the Commission with jurisdiction over all persons owning or engaged in drilling or operating oil or gas wells in Texas, and the authority to adopt all necessary rules for governing and regulating persons and their operations under the jurisdiction of the Commission.

Initially, Rio filed only an application to amend the Field rules to add rules regarding a field-wide Rule 40 exception subject to specified conditions. On April 20, 2018, the Hearings Division of the Commission sent a Notice of Hearing ("Notice") to Rio and all operators in the Field setting a hearing date on the application to amend the Field rules of May 21, 2018.⁵ Consequently, all parties received more than 10 days' notice of that application. The Notice contains (1) a statement of the time, place, and nature of the hearing; (2) a statement of the legal authority and jurisdiction under which the hearing is to be held; (3) a reference to the particular sections of the statutes and rules involved; and (4) a short and plain statement of the matters asserted.⁶ The hearing was held on May 21, 2018, as noticed. Rio, the GLO and the University Lands appeared in support of the application. Cimarex appeared in protest of the application to amend the field rules. Anadarko and BHP appeared and participated in the hearing, neither in support nor opposition of the application.

At the May 21 hearing, the parties conferred, and Rio requested Rule 40 exceptions for specified wells and leased tracts in the Field in addition to the application to amend the field rules. Specifically, Rio requested Rule 40 exceptions for its tracts in the Field for which Cimarex was not an affected operator. On May 25, 2018, the Hearings Division sent notice of the added Rule 40 exception requests to all operators in the Field and provided each an opportunity to protest and request a hearing on the protest. No one protested the Rule 40 exception requests.

On June 26, the ALJ issued an order severing this case from the case on the application to amend the Field's field rules. On July 6, 2018, the ALJ sent a letter to the participating parties and observers requesting a post-hearing conference and that the participants coordinate and agree to a date and time. On July 11, 2018, the ALJ sent a letter to the participants setting the post-hearing conference for the agreed date of July 17, 2018. Rio appeared and offered additional evidence in support of the Application. Cimarex, Anadarko and BHP appeared as observers and provided comments.

⁴ There was a hearing on May 21, 2018 and a post-hearing conference on July 17, 2018. The transcript for the May 21 hearing is referred to as "May 21 Tr. at [page(s)]." The transcript for the July 17 post-hearing conference is referred to as "July 17 Tr. at [page(s)]." Applicant's exhibits admitted at the May 21 hearing are referred to as "Applicant May 21 Ex. [exhibit no]." Applicant's exhibits admitted at the and after the July 17 post-hearing conference are referred to as "Applicant July 17 Ex. [exhibit no]."

⁵ See Notice of Hearing (April 20, 2018).

⁶ See Tex. Gov't Code §§ 2001.051, 052; 16 Tex. Admin. Code §§ 1.42, 1.45.

The Commission docket number for the application to amend the field rules is Oil & Gas Docket No. 08-0310653. The hearing on the application was recessed on May 21. It is currently set to resume on November 14, 2018. Cimarex remains the only protestant in that case.

III. Applicable Legal Authority

Any person drilling a well to produce oil and/or gas in Texas is required to obtain a permit from the Texas Railroad Commission.⁷ In addition, the Commission rules do not permit the "double assignment" of acreage to two different wells in the same Railroad Commission-designated field.⁸ Because the Commission-approved correlative intervals of several fields in Reeves County overlap, there can be issues as to the proper placement of wells in fields. This issue is further complicated when horizontal severances occur within the correlative interval for a given field. The question of how to permit and where to permit can become complicated.

IV. Discussion of Evidence

Applicant presented evidence in support of the Application. There is no protest of the Application and no evidence was submitted in opposition to the Application.

A. Evidence submitted at the May 21, 2018 hearing

At the May 21 hearing, Rio presented 21 exhibits and three witnesses, all of whom qualified as experts. Below is a summary of Rio's evidence.

These cases are not the first application for Rule 40 relief in the Phantom (Wolfcamp) Field. At a hearing on March 28, 2018, Rio requested individual well Rule 40 relief for its Brown State 44-2 Lease, Well No. 1H (the "Rio Well") in the Ford, West (Wolfcamp) Field. This Brown State matter was docketed as Oil & Gas Docket No. 08-0309365 and was approved by the Commission on April 5, 2018. At the May 21 hearing, Rio presented very similar evidence to what was presented on March 28, 2018. The biggest difference is that Rio expanded the evidence to address the entire Phantom (Wolfcamp) Field as opposed to only its one well.

Rio's first witness was Mr. Jon Baker, Senior Vice President for Geosciences and Evaluations.⁹ Mr. Baker testified that Rio holds leases on numerous tracts of land in Reeves County, Texas.¹⁰ These leases are generally depth-severed rights in the Wolfcamp Formation. For geologic identification and development purposes, Rio divides the Wolfcamp Formation into "benches" that are likely targets for horizontal drilling and production. From the top of the Wolfcamp down, these benches are identified by Rio as the WCXY, WCA1, WCA2, WCA4, WCB1, WCB2, WCB3 and WCC.¹¹

⁷ See 16 Tex. Admin. Code § 3.5.

⁸ 16 TEX. ADMIN. CODE § 3.40.

⁹ May 21 Tr. at 57-80. Mr. Baker submitted Applicant May 21 Ex. 2-14.

¹⁰ Applicant May 21 Ex. 2.

¹¹ Applicant May 21 Ex. 7. Rio provided Applicant May 21 Ex. 13 as an example of the severed ownership issue.

Rio provided an example showing the severed ownership issue.¹² There, BHP drilled two wells (the "BHP Wells") in the shallowest portions of the Wolfcamp Formation. The BHP Brown State 56-T2-44-1H well is located in what Rio describes as the WCA4 bench, and the horizontal lateral of BHP's BROWN STATE 56-T3-2 1H well is located in what Rio describes as the WCA1 bench. BHP did not further develop the Wolfcamp Formation and released the undeveloped Wolfcamp Formation below its wells. Rio leased and essentially owns all Wolfcamp benches below the WCA4 bench. Rio has been targeting the WCB1 bench within the lease rights of Rio. Because BHP has preexisting wells in the Phantom (Wolfcamp) Field, Rio could not drill its well(s) without a Rule 40 exception.

Prior to permitting the Rio Well, Rio was aware that the BHP Wells were producing from the Phantom (Wolfcamp) Field. Based on Rio's experience in the Midland Basin, it looked for another correlative field to place its well in. Mr. Baker compared the Texas Railroad Commission's designated correlative intervals for three fields to see if Rio's target bench fit within those designated intervals. Rio's WCB1 bench is within the correlative interval of the Ford, West (Wolfcamp), Wolfbone (Trend Area) and Phantom (Wolfcamp) Fields. From a geologic perspective, the Rio Well could appropriately be placed in any of those three fields.

Mr. Baker studied the relationship between the Delaware sub-basin and the Midland sub-basin. Mr. Baker prepared cross-sections to demonstrate that the Wolfcamp Formation is the same in the Midland sub-basin as in the Delaware sub-basin. Mr. Baker provided exhibits to demonstrate that in the Spraberry (Trend Area) Field (which includes the Wolfcamp Formation) in the Midland sub-basin there is a blanket Rule 40 exception where severed mineral estates exist. According to Rio, there is no geologic difference between the Wolfcamp in the Delaware sub-basin and in the Midland sub-basin, and thus a Rule 40 exception is geologically appropriate in this Field.

Mr. Dalton Smith, Senior Vice President for Business Development and Land was Rio's second witness.¹³ Mr. Smith testified to the land issues. Mr. Smith testified as to how Rio came into possession of the severed rights below the BHP Wells and in other tracts Rio leased from the GLO. He demonstrated the exact depths of the lease ownership severances in Sections 2 and 44 that were used in Mr. Baker's exhibits. Mr. Smith testified that he and Rio relied on past Commission practice when it permitted its well in the Ford, West (Wolfcamp) Field. For example, in 2013, in a severed leasehold ownership situation nearly identical to this situation, permits for earlier shallower wells were granted in one field, and Rio was granted a permit in a second field for its deeper wells.¹⁴ Each of the fields used—the Spraberry (Trend Area) Field and the Garden City, S. (Wolfcamp) Field—has overlapping correlative intervals in the Wolfcamp Formation. According to Rio, this same situation exists in this case. Mr. Smith further testified that in reliance on this past Commission well permitting and completion practice, Rio spent approximately \$105,000,000 to purchase severed leasehold rights covering lands owned by the State

¹² Applicant May 21 Ex. 13

¹³ May 21 Tr. at 26-47, 80-88. Mr. Smith sponsored Applicant May 21 Ex. 1, 15A, 15B and 16.

¹⁴ Applicant May 21 Ex. 1.

of Texas. He further testified that placing Rio's well in the Ford, West (Wolfcamp) Field was consistent with how Rio had permitted and produced wells in the Midland sub-basin.

Mr. Stacey Cude, P.E., President and CEO of Rio, was Rio's third witness.¹⁵ Mr. Cude testified there is explosive growth in the number of wells and production from the Phantom (Wolfcamp) Field.¹⁶ Mr. Cude analyzed wells in the area to create a type curve of WCB1 production.¹⁷ According to his analysis, the expected production from the Rio Well is 2.642 million barrels of oil equivalent.¹⁸ This results in severance and ad valorem tax of more than \$6,000,000 and approximately \$10,000,000 in royalty to the State of Texas. Further, Mr. Cude testified that no existing well is capable of draining the reserves that will be produced by Rio's well. Thus, unless this well is allowed to produce, substantial quantities of oil and gas will be wasted. Mr. Cude testified that loss will occur if operators are not allowed to develop all productive benches in the Phantom (Wolfcamp) Field.¹⁹ For each 10,000' lateral that is not drilled, according to Mr. Crude, there is a waste of 2,042,000 barrels of oil equivalent. Further, Mr. Cude testified that operators locate their wells so as not to interfere with both shallower and deeper wells. According to Rio's witnesses, drilling wells that interfere with one another decreases ultimate recovery and is in no operator's interest.

At the May 21 hearing, in an effort to carve out unprotested matters and more efficiently move those forward, Rio requested separate Rule 40 exceptions for its leased tracts that were not protested which amounts to all its leased tracts in the Field except those in which Cimarex is an affected operator. Notice of these added exception requests was sent to all operators in the Field. This case is one of those requests for exception and was severed from the amended field rule proceeding after the May 21 hearing.

B. Evidence submitted at the July 17, 2018 post-hearing conference

At the July 17 post-hearing conference, Rio provided testimony from two witnesses. A summary of Rio's July 17 presentation is below.

Rio offered the testimony of Mr. Dalton Smith, Senior Vice President at Rio.²⁰ Rio provided a tabulation of the tracts Rio has under lease and for which Rio seeks these Rule 40 exceptions.²¹ Mr. Smith noted the tabulation contains a full legal description of each tract and that the information is sufficient to identify the location and boundaries of the Leased Tracts. Rio provided a map of Reeves County identifying each of the tracts.²² Mr. Smith testified that in his experience, the tabulation and plat contain the types of information he has used in his career to obtain drilling permits from the Railroad Commission. Mr. Smith also offered to place a copy of the Commission's Final Order for

¹⁵ May 21 Tr. at 88-100. Mr. Cude presented petroleum engineering testimony and sponsored Applicant May 21 Ex. 17-20.

¹⁶ See Applicant May 21 Ex. 17.

¹⁷ See Applicant May 21 Ex. 18.

¹⁸ Applicant May 21 Ex. 19 is the type curve detailing the expected reserves from a WCB1 well.

¹⁹ See Applicant May 21 Ex. 20.

²⁰ July 17 Tr. at 17-52. Mr. Smith sponsored Applicant July 17 Ex. 2, 3.

²¹ Applicant July 17 Ex. 2.

²² Applicant July 17 Ex. 3.

this case in each of the GLO's mineral files identified on the tabulation and also file the Final Order in the property records of Reeves County, Texas for all of the Leased Tracts.

Based on questioning from the Examiners, Mr. Smith agreed that the Final Order in this case could be limited to the life of the lease, as opposed to existing in perpetuity.²³

Ms. Krystal Eversdyk also testified for Rio.²⁴ She has experience filing more than 100 drilling permits over a five-year period and testified as to the information typically required by the Commission's Drilling Permits Section to issue a drilling permit. Ms. Eversdyk demonstrated where information would be placed on a Form W-1 to properly identify the tracts to which this Rule 40 exception would apply.²⁵ Additionally, Ms. Eversdyk proposed that the Commission require Rio to place in the Remarks Section of the Form W-1 the following language, "The tract(s) for which this drilling permit is requested have a Rule 40 Exception granted in Oil and Gas Docket No. 08- 0312439. The Order in this Docket is attached for your convenience."

Ms. Eversdyk testified that the Commission uses the Remarks Section in this fashion to identify orders specifically applicable to a field or property. For example, the applicant identifies that the field is subject to an entity-for-density order removing the between well spacing on the subject tract.²⁶ Like the situation we have here, the tract upon which a well is drilled subject to the entity-for-density order was unknown at the time that order was issued. The same is true of field rules where the Commission adopts field rules and operators permit wells on tracts and receive proper Commission identifiers when the well is permitted and after the well is drilled.

Rio representatives also stated they had discussed this process with Commission permitting staff and left those discussions with the impression that staff found Rio's proposed process workable.

Cimarex does not protest this proceeding but did request that the record be clear that that a decision in this unprotested case does not affect the issues still unresolved in Rio's amended field rules application case that is protested by Cimarex and for which the hearing is scheduled to resume in November 2018. The parties and Examiners agreed that the findings and conclusions in this case do not impact that case and only affect this case and are based on the evidence presented in this case.

C. Subsequent correspondence to and from Commission staff

At the July post-hearing conference, to provide some context, Rio mentioned there is an ongoing process to amend Rule 40 to expressly provide a process for obtaining an exception when horizontal severances are involved. As a follow-up, the ALJ sent a letter to Haley Cochran, a Commission staff attorney, asking for the status of any Rule 40 rule

²³ At the request of the Examiners, Applicant July 17 Ex. 2, 3 have been updated by Rio and resubmitted and are referred to as Applicant July 17 Ex. 7, 8 (and labeled as late-filed exhibits).

²⁴ July 17 Tr. at 54-64. Ms. Eversdyk sponsored Applicant July 17 Ex. 4, 5.

²⁵ Applicant July 17 Ex. 4.

²⁶ Applicant July 17 Ex. 5 was provided as an example.

making process. In response, Ms. Cochran stated that Commission staff had conducted an internal review of provisions in Statewide Rule 40 and topics that possibly could be addressed in rule making. Staff created a first discussion draft of possible revisions to Rule 40 and on December 4, 2017, staff provided a copy of the draft to external stakeholders to start a conversation. According to staff, the conversation is ongoing and still in the early stages of development. As represented by the parties at the post-hearing conference, whether to amend the rule to include these types of exceptions is one of the topics.

The ALJ also sent a letter to Commission permitting staff as a follow-up about Rio's discussions with them and any concerns they have. Permitting asked that if Rule 40 exceptions are granted that:

- 1. The final order be attached to each applicable drilling permit application to drill, recomplete, or re-enter (i.e. Form W-1);
- 2. Rio define the upper and lower limits of development (in true vertical depth) in each Form W-1; and
- 3. The final order contain all available identifying information regarding each tract so staff can verify that the tract described on the Form W-1 is a tract covered by the order.

Staff also expressed concern about changing facts and circumstances and noted that dealing with depth severances is a relatively new issue.

Rio agrees to include all information requested by staff and has made efforts to address concerns. Specifically:

- 1. Rio agrees that the plat and list of Leased Tracts be attached to the order;
- 2. The list of Leased Tracts contains detailed identifying information;
- 3. Rio agrees to attach the plat and list of Leased Tracts with all applicable Form W-1s and to mark the plat and list to easily identify the applicable tract;
- 4. Rio agrees to file the final order (with the plat and list attached) in the county records;
- 5. Rio agrees to file the final order (with the plat and list attached) in the GLO's mineral file for each of the leases for the Leased Tracts; and
- 6. Rio agrees to define the upper and lower limits of development (in true vertical depth) in each Form W-1.

V. Examiners' Analysis

The Examiners recommend the Commission grant exceptions to Rule 40 subject to the proposed conditions for the Leased Tracts. The Examiners propose a five-year duration for the exceptions such that the exception would apply for any permit applications filed within five years of the final order in this matter, and for the duration of the life of the well as to those permit applications filed within the five-year period.

The use of Rule 40 exceptions to allow shallow and deeper horizontal development of tight reservoirs when there are horizontal severances is a relatively recent development. On December 2, 2014, the Commission issued an order amending the field rules for the Spraberry (Trend Area) Field to allow for development of both shallow and deep rights when there is a horizontal severance.²⁷ Rio analogizes the Field with the Spraberry (Trend Area) Field. There have been five Commission-docketed cases—each for a specific well in the Field—in which the Commission has granted a Rule 40 exception for Rio to develop deeper rights it obtained after a horizontal severance. One exception was granted by the Commission on April 24, 2018, after a hearing on March 28, 2018.²⁸ Four of the five were granted June 19, 2018, pursuant to the same May 21 hearing as this case (the "June 19 Orders").²⁹ The difference in this case is that exceptions are requested for tracts Rio has leased but no drilling permit for a well has been filed or presented. Consequently, there are no Commission identifiers associated with the tracts and no specific well plan being considered.

A. Evaluation of the evidence at the May 21 hearing is the same as that provided in prior Commission orders also resulting from the May hearing.

Because the May 21 evidence is the same as for the June 19 Orders the analysis of that evidence is the same. The Phantom (Wolfcamp) Field consists of a portion of the Third Bone Springs Formation and the entire Wolfcamp Formation. The Wolfcamp Formation contains a series of stacked "benches" that are the targets of horizontal drilling and production. Rio labels these benches from shallowest to deepest as the WCXY, WCA1, WCA2, WCA4, WCB1, WCB3 and WCC benches. Many oil and gas leases, including those issued by the State of Texas through the GLO and University Lands,

²⁷Application of Pioneer Natural Resources USA, Inc. to Amend Field Rules for the Spraberry (Trend Area) Field in Various Counties, Texas, Oil and Gas Docket Nos. 7C-0291169 and 7C-0291171 (December 2, 2014) (final order amending field rules to allow for Rule 40 exceptions).

²⁸ Complaint of BHP Billiton Petroleum (TXLA Operating) Company Regarding the Brown 44-2 Lease, Well No. 1H, Ford, West (Wolfcamp) Field, Reeves County, Texas; Oil & Gas Docket No. 08-0309365 (April 24, 2018) (final order granting Rule 40 exception).

²⁹ Application of Rio Oil and Gas (Permian) II, LLC for an Exception to Statewide Rule 40 for the Conquista State Unit 54-1-8 Lease, Well No. 1H, Phantom (Wolfcamp) Field, Reeves County, Texas; Oil & Gas Docket No. 08-0311740 (June 19, 2018) (final order granting exception); Application of Rio Oil and Gas (Permian) II, LLC for an Exception to Statewide Rule 40 for the Expedition State Unit 71-67 Lease, Well No. 1H, Phantom (Wolfcamp) Field, Reeves County, Texas; Oil & Gas Docket No. 08-0311741 (June 19, 2018) (final order granting exception); Application of Rio Oil and Gas (Permian) II, LLC for an Exception to Statewide Rule 40 for the Expedition State Unit 71-67 Lease, Well No. 2H, Phantom (Wolfcamp) Field, Reeves County, Texas; Oil & Gas Docket No. 08-0311742 (June 19, 2018) (final order granting exception); Application of Rio Oil and Gas (Permian) II, LLC for an Exception to Statewide Rule 40 for the Expedition State Unit 71-67 Lease, Well No. 3H, Phantom (Wolfcamp) Field, Reeves County, Texas; Oil & Gas Docket No. 08-0311743 (June 19, 2018) (final order granting exception).

contain horizontal "Pugh Clauses." These clauses require the release of formations when not timely developed by a lessee. When a Pugh Clause becomes operational in the Phantom (Wolfcamp) Field, horizontal severances of ownership are created. One operator owns the rights to drill and produce from the shallower bench(es) and another operator owns the rights to drill and produce from the deeper bench(es).

Statewide Rule 40³⁰ prohibits the "double assignment" of acreage to non-stacked lateral, horizontal wells in the same field. Without relief from Statewide Rule 40, operators who lease the deeper benches in the same Commission designated field after a severance caused by a Pugh Clause cannot obtain permits to drill and produce from these lower benches. The average 10,000-foot (Wolfcamp) B1 horizontal well in the Phantom (Wolfcamp) Field will produce 2,042,000 barrels of oil equivalent. Without relief from Statewide Rule 40, much of this production will go unrecovered.

In the past, the Commission has granted exceptions to Statewide Rule 40 to prevent waste and promote orderly development of production via horizontal wells.³¹

B. At the July hearing, the issues discussed relate to the fact that the Application is for leased tracts instead of identified Commission leases or wells; based on the evidence presented, the Examiners recommend approval with a limitation on duration.

The purpose of the July post-hearing conference was to discuss issues arising due to the fact that no Commission identifier exists for the tracts, such as a Commission lease number, and no permit application has been filed so there is no specified well location. In an effort to address these issues, Rio proposes four conditions be placed on the exception. Rio requests that the exception be with the following conditions:

- a. To apply for duplicate assignment of acreage, the Operator shall file with its drilling permit application remarks or a written certification that duplicate assignment of acreage is required because an existing deed, lease, or other contract confines the Operator to a distinct depth interval.
- b. Ten (10) business days prior to the filing of the drilling permit application, all drilling permit applicants shall provide written notice to each Commission-designated operator of any well shown on the RRC map at the time of the drilling permit application that satisfies the following criteria:
 (1) the other operator's well is assigned to an Unconventional Fracture Treated (aka UFT) field listed on the applicant's drilling permit application, (2) the other operator's well is geographically located within one-half mile of applicant's proposed well, and (3) the other operator's well falls within

³⁰ 16 TEX. ADMIN. CODE § 3.40.

³¹ See Tex. R.R. Comm'n, *Application of Pioneer Natural Resources USA, Inc. to Amend Field Rules for the Spraberry (Trend Area) Field in Various Counties, Texas,* Oil and Gas Docket Nos. 7C-0291169 and 7C-0291171 (Order issued December 2, 2014). In the Phantom (Wolfcamp) Field, the Commission has granted a Statewide Rule 40 exception in Oil & Gas Docket No. 08-0309365; June 19 Orders.

the geographic limits of applicant's lease. The notice shall include a copy of the drilling permit application and a copy of the plat showing the well's proposed location. The obligations of this subsection b shall be applicable to any Operator proposing wells on a lease, pooled unit, production sharing unit or allocation well where such lease, pooled unit, production sharing unit or allocation well covers less than all depths.

- c. The applicant shall provide copies of the well's as-drilled survey plat and any directional surveys to any party entitled to notice as described in subsection b above, within 15 days of receipt by applicant of such written request.
- d. If a timely (within 10 days of notice) filed written objection to the application is received by the Commission, the complainant may request a hearing, at which the complainant will bear the burden of proof to show that the proposed application will result in waste and/ or harm to correlative rights.

One reason for requesting these exceptions (and to amend the Field's rules) is so that a hearing will not be required for every well drilled. The conditions require notice to affected operators 10 days prior to the filing of the drilling permit application and a hearing is required if an affected operator objects.

Currently Rule 40 does not expressly provide a Rule 40 exception under this scenario and consequently there is no procedure in Rule 40 for such an exception. To obtain an exception, a Commission order is required. Typically, an operator seeking a Commission order applies to the Hearings Division, there is a hearing and the Examiners make a recommendation and present it to the Commission. In this case, Rio requested a hearing to address all the Leased Tracts and is requesting an order regarding the tracts (as opposed to one well) and that the order set out a process for obtaining such exceptions to specific wells in the Leased Tracts. At the hearing, the only evidence and argument presented was in support of the requested exceptions. No one provided any opposition to the requested exceptions.

One issue discussed was notice. Every operator in the Field was sent notice of the request to amend the field rules. A second notice was sent with the proposed conditions and the request for Rule 40 exceptions for the Leased Tracts; the list of Leased Tracts and a plat showing the Leased Tracts were included. Thus every operator in the Field which has Pugh Clauses in its leases, and consequently every affected shallow operator was provided notice. No one protested this Application. The proposed conditions require additional notice to affected operators, including shallow operators, at the time Rio has a specific well design and submits a drilling permit application. Affected operators can object and request a hearing at that time. Rio also offers to file the order, plat and list of leases with the county and include a copy with every involved mineral lease file at the GLO.

Oil & Gas Docket No. 08-0312439 Amended Proposal for Decision Page 13 of 20

Rio maintains this is a process similar to that used when an operator wants an exception to lease line spacing. To obtain and exception to lease line spacing limits, if no affected party protests, an exception can be approved administratively.³² Arguably, this factual scenario is similar to requesting an exception to lease line spacing— in this case, the parties point out Rule 40 prevents any drilling deeper than the shallow operator's leased interval, thereby preventing the operator with rights to deeper intervals from drilling on its lease. In this case, there is a hearing consistent with current practice; the difference is the hearing regards 14 tracts with the same basis for an exception and the same fact pattern.

The fact that the conditions place the burden of proof at hearing on the objecting operator was also discussed. Both Rio and Anadarko maintain that the proposed conditions are mutually reciprocal in the sense that when either a shallow or deep well is proposed, the party objecting to the proposed well has the burden. Two operators (Rio and Anadarko) urged that it is fair for the operator trying to prevent the drilling to have the burden given that in this situation (a UFT field and Pugh Clauses involved) Rule 40 acts as a hurdle preventing operators from producing their minerals interests and does not serve the purpose Rule 40 was intended for. Rio collaborated with at least one other operator in the field, Anadarko, to write the conditions. Another operator, BHP, appeared and finds the language in the conditions acceptable.³³ The Examiners do not see a basis to recommend something different than the language affected operators agree to and do not object to.

The parties discussed whether the Commission's capacity for regulatory oversight will be hindered because there are no Commission identifiers. The Commission assigns lease and permit numbers and has identifiers for a purpose; the identifiers are tools the Commission uses to track and perform its function of regulatory oversight. Rio argued there are instances when the Commission does not require Commission identifiers (such as lease numbers) and uses Commission docket numbers citing to Commission orders instead. For example, when there is a tract that is impacted by a Commission order regarding entity-for-density issues, there is a place on the drilling permit application for notations, and a notation regarding the entity-for-density order is placed on the permit application including the Commission docket number of the order. Rio has discussed with the permitting program for the same process to be used in this case. Rio's impression was that staff was not opposed and Rio's proposal is workable. Rio also offers to put a copy of the order, plat and list of leases with each permit application. After the posthearing conference, the Examiners sent staff a letter requesting any comments or concerns about the Application and Rio's proposal. Staff responded requesting specific information be included in drilling applications. Rio has agreed to include the information. For these reasons, the Examiners recommend that if the exceptions are granted, the list of Leased Tracts and the plat be attached to the order and the order require the following:

³² See 16 Tex. Admin. Code § 3.37.

³³ July 17 Tr. at 107.

- a. For each drilling application (Form W-1) filed with an exception as authorized by this Final Order, the applicant shall attach a copy of the Final Order including a copy of Attachment A and Attachment B.
- b. For each drilling application (Form W-1) filed with an exception as authorized by this Final Order, the applicant shall define the upper and lower limits of development (in true vertical depth) in each Form W-1.

There was a discussion as to whether the application is premature and vague in that no well plan has been identified. The 14 Leased Tracts are specifically defined. The list of tracts provides a legal description of the boundary, the lessor and lessees involved, the GLO mineral file number, the lease date and a reference to the location in the county records. There is a plat showing the location, including boundaries, of all 14 Leased Tracts. Rio explained that as the operator, it is preferable to determine precise well location in an area the operator is developing with the most current information, so Rio determines the location about the time it is ready to drill the well. Rio maintains that it would lose time and money if it had to have a hearing for every well and the process does not start until Rio files a permit application. Rio notes the hearing process can take months from the beginning until a final order is issued.

This case is one component early in the process of developing a methodology of allowing production in these situations within the regulatory framework. There are only a few orders on point. Through prior orders, the Commission has indicated an appreciation of the value and need to grant Rule 40 exceptions to further horizontal development when Pugh Clauses and UFT fields are at issue. There is also an ongoing discussion to amend Rule 40 to expressly provide for these types of exceptions; presumably such amendment would also include a process for obtaining the exception. This challenging because having one Application for 14 leased tracts is unique and these types of Rule 40 exceptions are relatively new. The newness of it lends a sense of uncertainty. The Examiners can see the benefit of waiting until a vetted process, such as a rule making process is complete or waiting until the application pertains to Commission-identified constructs such as a field or specific wells. The Examiners can also see the benefit of having a process in place now so as not to place an undue burden on operators.

For the reasons discussed, the Examiners recommend granting the exceptions with a limitation on duration as discussed below.

The issue of duration of the exception was also discussed at the post-hearing conference. Rio requests that the exceptions be perpetual or at least as long as Rio's contractual leases which were created as a result of released mineral rights pursuant to a Pugh Clause. Due to the early development of these types of exceptions, the Examiners are concerned that the process proposed by Rio may not be consistent with how this process evolves over time and with more vetting. Due to the lack of Commission identifiers, the Examiners are also concerned with the ability to track these exceptions and provide notice over the long term. For example, while current operators in the field have notice, as this case gets more remote in time, prospective operators will not have

been provided notice. The Examiners are concerned that this may cause confusion and problems going forward. Commission permitting staff also expressed concern about the process going forward over time. The Examiners recognize that there are situations in which leases and other Commission or court decisions are referenced for decades. However, this area of regulatory process is new, and the Examiners believe that it makes sense to include a duration for these exceptions to provide a safeguard for the fact that there are no specified wells or Commission identifiers and to allow the exceptions to be updated and incorporated to the Commission's process after more vetting of the issues involved. The Examiners recommend that the exceptions be granted as to the Leased Tracts for five years such that the exception would apply to wells for which the drilling application was filed within five years from the date the order in this case becomes final. Once a drilling application is filed, if the application is approved with the Rule 40 exception (i.e. subject to the four proposed conditions), the Rule 40 exception would attach to the well and stay with the well throughout the well's duration just as it would operate as any other Rule 40 exception after the drilling permit is issued.

All of the evidence and argument in this case was supportive of granting the exceptions requested in the Application. For all of the reasons discussed above and based on the evidence and record in this case, the Examiners recommend the Commission grant exceptions to Rule 40 subject to the proposed conditions for the Leased Tracts. The Examiners propose a five-year duration for the exceptions such that the exception would apply for any permit applications filed within five years of the final order in this matter, and for the duration of the life of the well as to those permit applications filed within the five-year period.

VI. Recommendation, Proposed Findings of Fact and Proposed Conclusions of Law

Based on the record and evidence presented, the Examiners recommend the Commission:

- a. Grant the exceptions to Rule 40 subject to the proposed conditions for the Leased Tracts,
- Include a five-year duration for the exceptions such that the exception would apply for any permit application filed within five years of the final order in this matter, and for the duration of the life of the well (the same as a typical Rule 40 exception) as to those permit applications filed within the five-year period;
- c. Include the information requested by permitting staff and agreed to by Rio; and
- d. Adopt the following findings of fact and conclusions of law.

Findings of Fact

- 1. Rio Oil and Gas (Permian) II, LLC ("Rio") submitted an application ("Application") requesting exceptions to Statewide Rule 40 for wells drilled on 14 leased tracts ("Leased Tracts") in the Phantom (Wolfcamp) Field ("Field") in Reeves County, Texas. Rio requests that the exception be subject to the following conditions:
 - a. To apply for duplicate assignment of acreage, the Operator shall file with its drilling permit application remarks or a written certification that duplicate assignment of acreage is required because an existing deed, lease, or other contract confines the Operator to a distinct depth interval.
 - b. Ten (10) business days prior to the filing of the drilling permit application, all drilling permit applicants shall provide written notice to each Commission-designated operator of any well shown on the RRC map at the time of the drilling permit application that satisfies the following criteria: (1) the other operator's well is assigned to a UFT field listed on the applicant's drilling permit application, (2) the other operator's well is geographically located within one-half mile of applicant's proposed well, and (3) the other operator's well falls within the geographic limits of applicant's lease. The notice shall include a copy of the drilling permit application. The obligations of this subsection b shall be applicable to any Operator proposing wells on a lease, pooled unit, production sharing unit or allocation well where such lease, pooled unit, production sharing unit or allocation well covers less than all depths.
 - c. The applicant shall provide copies of the well's as-drilled survey plat and any directional surveys to any party entitled to notice as described in subsection b above, within 15 days of receipt by applicant of such written request.
 - d. If a timely (within 10 days of notice) filed written objection to the application is received by the Commission, the complainant may request a hearing, at which the complainant will bear the burden of proof to show that the proposed application will result in waste and/ or harm to correlative rights.
- 2. Notice of Rio's request was provided to all operators of record in the Phantom (Wolfcamp) Field.
- 3. No one has protested Rio's request for the Rule 40 exceptions.
- 4. A hearing was held on May 21, 2018 regarding Rio's requests for Rule 40 exceptions as well as an application by Rio to amend the field rules for the Field. At the hearing, Rio appeared. Cimarex Energy Company and Cimarex Energy Co.

of Colorado ("Cimarex") appeared in protest of the request to amend the field rules. The Texas General Land Office ("GLO") appeared in support of Rio's requests for Rule 40 exceptions and application to amend the field rules. Anadarko E&P Onshore LLC ("Anadarko") and BHP Billiton Pet(TXLA OP) Co ("BHP") also appeared. Cimarex, Anadarko and BHP participated in the hearing and none opposed Rio's Rule 40 exception requests. The Application for these Rule 40 exception requests was severed from the other matters heard at the hearing and given its own docket number, which is used in this order.

- 5. The Phantom (Wolfcamp) Field consists of a portion of the Third Bone Springs Formation and the entire Wolfcamp Formation.
- 6. The Wolfcamp Formation contains a series of stacked "benches" that are the targets of horizontal drilling and production. Rio labels these benches from shallowest to deepest as the WCXY, WCA1, WCA2, WCA4, WCB1, WCB3 and WCC benches.
- 7. Many oil and gas leases, including those issued by the State of Texas through the GLO and University Lands, contain horizontal Pugh Clauses. These clauses require the release of formations when not timely developed by a lessee.
- 8. When a Pugh Clause becomes operational in the Phantom (Wolfcamp) Field, horizontal severances of ownership are created. One operator owns the rights to drill and produce from the shallower bench(es) and another operator owns the rights to drill and produce from the deeper bench(es).
- 9. Statewide Rule 40 prohibits the "double assignment" of acreage to non-stacked lateral, horizontal wells in the same field. *See* 16 TEX. ADMIN CODE § 3.40.
- 10. Without relief from Statewide Rule 40, operators who lease the deeper benches in the same Commission designated field after the operation of a Pugh Clause cannot obtain permits to drill and produce from these lower benches.
- 11. The prohibition against the "double assignment" of acreage where severed leasehold rights exist can cause waste as it prevents the recovery of hydrocarbons from the deeper benches and does not protect Rio's correlative rights to produce its deeper benches.
- 12. The average 10,000-foot horizontal well in the Phantom (Wolfcamp) Field will produce 2,042,000 barrels of oil equivalent. Without relief from Statewide Rule 40, much of this production will go unrecovered.
- 13. In this case, an exception to Rule 40 is necessary for Rio to produce its fair share of the hydrocarbons from its leasehold estate.

- 14. Granting the proposed Rule 40 exception in this case is necessary to prevent waste and to protect correlative rights.
- 15. In the past, the Commission has granted exceptions to Statewide Rule 40 to prevent waste and promote orderly development of production via horizontal wells. See Tex. R.R. Comm'n, Application of Pioneer Natural Resources USA, Inc. to Amend Field Rules for the Spraberry (Trend Area) Field in Various Counties, Texas, Oil and Gas Docket Nos. 7C-0291169 and 7C-0291171 (Order issued December 2, 2014).
- 16. In the Phantom (Wolfcamp) Field, the Commission has granted prior Statewide Rule 40 exceptions to Rio in Oil & Gas Docket No. 08-0309365, 08-0311740, 08-0311741, 08-0311742 and 08-0311743.
- 17. A Statewide Rule 40 exception is necessary from a geologic standpoint in order to develop hydrocarbons in the Wolfcamp Formation, and in this case to allow Rio to obtain drilling permits and allowables to drill, complete, and produce wells in the Leased Tracts.
- 18. A Rule 40 exception will allow Rio to develop the minerals that it purchased from the State of Texas and will allow hydrocarbons to be produced that would otherwise go unproduced.
- 19. Rio agrees to the following:
 - a. Rio agrees to attach the plat and list of Leased Tracts with all applicable Form W-1s and to mark the plat and list to easily identify the applicable tract;
 - b. Rio agrees to file the final order (with the plat and list attached) in the county records;
 - c. Rio agrees to file the final order (with the plat and list attached) in the GLO's mineral file for each of the leases for the Leased Tracts; and
 - d. Rio agrees to define the upper and lower limits of development (in true vertical depth) in each Form W-1.
- 20. A five-year duration for the exceptions as to the Leased Tracts will provide Rio the flexibility requested to develop its Leased Tracts.
- 21. A five-year duration for the exceptions as to the Leased Tracts would allow for reevaluation after the process is more vetted and would allow for updating as appropriate.
- 22. A five-year duration for the exceptions as to the Leased Tracts would address issues related to notice to prospective operators.

- 23. It is reasonable for the duration of the exceptions as to the Leased Tracts to be five years such that the exception would apply for any permit application filed within five years of the final order in this matter, and for the duration of the life of the well as to those permit applications filed within the five-year period.
- 24. Cimarex does not protest this proceeding but does request that the record be clear that that a decision in this unprotested case does not affect the issues still unresolved in Rio's amended field rules application case that is protested by Cimarex and for which the hearing is scheduled to resume in November 2018. The parties agreed that the findings and conclusions in this case do not impact that case.
- 25. The parties agreed on the record that they 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.

Conclusions of Law

- 1. Proper notice of hearing was timely issued to appropriate persons entitled to notice. See, e.g., TEX. GOV'T CODE §§ 2001.051, 052; 16 TEX. ADMIN. CODE §§ 1.42, 1.45.
- 2. The Commission has jurisdiction in this case. *See, e.g.,* TEX. NAT. RES. CODE § 81.051.
- Rio's proposed application for Rule 40 exceptions for wells drilled in the Phantom (Wolfcamp) Field on the Leased Tracts is necessary to prevent waste and protect correlative rights.
- 4. Rio's application for Rule 40 exceptions should be granted:
 - a. Subject to the proposed conditions for the Leased Tracts;
 - b. Include a five-year duration for the exceptions such that the exception would apply for any permit application filed within five years of the final order in this matter, and for the duration of the life of the well (the same as a typical Rule 40 exception) as to those permit applications filed within the five-year period; and
 - c. Include the information requested by permitting staff and agreed to by Rio.
- 5. The findings and conclusions in this case do not impact the application to amend the field rules is Oil & Gas Docket No. 08-0310653. The hearing on the application was recessed on May 21. It is currently set to resume on November 14, 2018.

6. Pursuant to section 2001.144(a)(4)(A) of the Texas Government Code, and by agreement of the parties on the record, <u>the parties have waived the right to file</u> <u>a motion for rehearing and the Final Order in this case can be final and effective on the date the Final Order is signed.</u>

Recommendations

The Examiners recommend the Commission grant exceptions to Rule 40 subject to the proposed conditions for the Leased Tracts. The Examiners propose a five-year duration for the exceptions such that the exception would apply for any permit applications filed within five years of the final order in this matter, and for the duration of the life of the well as to those permit applications filed within the five-year period.

Respectfully,

Jennifer Cook

Administrative Law Judge

Karl Caldwell Technical Examiner

Revised Late-Filed Rio Exhibit No. 7 Docket No. 08-0312439 Post-Hearing Conference July 17, 2018.

Rio Permitted Wells;			
Well Name	API#	Description	Permit Number
Expedition State Unit 71-			
67 #1H	42-389-36768	Section 67, G.A. Franklin Survey	835427
Conquista State Unit 54-			
1-8 #1H	42-389-36795	Section 68, R.S. Johnson Survey	835888
Expedition State Unit 71-			
67 #2H	42-389-37118	Section 33, Block 2	839619
Expedition State Unit 71-			
67 #3H	42-389-37119	Section 33, Block 2	839617

Rio Leases; Tract#

Tract #						
(see accompanying plat) 1	<u>RAL #</u>	Lessor BENTON LAND PARTNERSHIP COLLIER ENTERPRISES INC.	Lessee SANDRIDGE EXPLORATION AND PRODUCTION, LLC SANDRIDGE EXPLORATION AND PRODUCTION, LLC	Lease Date 09/16/10 08/26/10	Description Section 12 & N/2 of Section 13, Block 3 Section 12 & N/2 of Section 13, Block 3	Recording Reference 853/371 853/368
1		MAPECB13-NET, AN OKLAHOMA GENERAL PARTNERSHIP	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	10/12/10	Section 12 & N/2 of Section 13, Block 3	861/203
1		HURLEY TEXAS ROYALTY PARTNERSHIP	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	02/23/12	Section 12 & N/2 of Section 13, Block 3	12-02509
1		CENTURY 2000 ROYALTY PARTNERSHIP	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	02/23/12	Section 12 & N/2 of Section 13, Block 3	12-02508
1		CHARLES W, AND PATTY N, BROWN, LLC	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	02/23/12	Section 12 & N/2 of Section 13, Block 3	12-02507
1		CHEVRON USA INC.	E G L RESOURCES INC.	01/01/05	Section 1, Block 54, Township 4	17-09219
2	MF118870	STATE OF TEXAS, GEORGE P BUSH, COMMISSIONER OF THE GLO	RID CONQUISTA, LLC	08/01/17	Section 8. Block 54, Township 4	17-16266
3	MF118859	STATE OF TEXAS, GEORGE P BUSH, COMMISSIONER OF THE GLO	RIO CONQUISTA, LLC	08/01/17	Section 67. G.A. Franklin Survey	17-16264
4	MIL 110023	STATE OF TEXAS 020RGE P 005H, COMMISSIONER OF THE GLO	FOREST OIL CORPORATION	01/18/06	Section 71, G.A. Franklin Survey	1578
5			FOREST OIL CORFORATION	01/10/00	Section 71, G.A. Franklin Sulvey	1576
		MICHAEL ANDERSON HARRISON, W.O. HARRISON, JR. FAMILY LP, A TEXAS LIMITED PARTNERSHIP AND				
6 and 7		KATHRYN NELL HARRISON	TRAVERSE EXPLORATION, LLC	01/27/17	Section 12 & 16, Block 2	17-02711
		STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, MICHAEL ANDERSON HARRISON, W.O.				
8	MF118544	HARRISON, JR. FAMILY LP, A TEXAS LIMITED PARTNERSHIP AND KATHRYN NELL HARRISON	TRAVERSE EXPLORATION, LLC	02/01/17	Section 14, Block C20	17-02710
9	MF118695	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, SHARON M DARCY	WILDHORSE INTEREST, LLC	03/29/17	Section 22, Block 56, Township 3	17-07617
					Section 2, Block 56, Township 3	
10 and 11	MF118520	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, THE GEORGE R. BROWN PARTNERSHIP, LP	INVICTUS ENERGY, LLC	03/13/17	Section 44, Block 56, Township 2	17-05105
12		MRS SALLIE WYNNE REYNAUD, AS AGENT FOR THE STATE OF TEXAS	FORD CHAPMAN	09/21/70	Section 38, Block 57, Township 2	297/485
		LELA MAE WYNNE, SAMUELLA WYNNE PALMER AND RUTH WYNNE HOLLINSHEAD, AS AGENT FOR THE				
12		STATE OF TEXAS	FORD CHAPMAN	09/21/70	Section 38 Block 57, Township 2	297/489
13	MF118714	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, BLAKE OIL & GAS CORPORATION	RIO OIL AND GAS (PERMIAN) II, LLC	05/10/17	Section 22, Block 57, Township 2	17-09708
13	MF118715	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, BRUCE W. BLAKE	RIO OIL AND GAS (PERMIAN) II, LLC	05/16/17	Section 22, Block 57, Township 2	17-09709
13	MF118716	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, JACK E, BLACK JR	RIO OIL AND GAS (PERMIAN) II, LLC	05/10/17	Section 22, Block 57, Township 2	17-09710
13	MF118717	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, MARK D. BLAKE	RIO OIL AND GAS (PERMIAN) II, LLC	05/13/17	Section 22, Block 57, Township 2	17-09711
13	MF118718	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, ANN APPLING BRADFORD	RIO OIL AND GAS (PERMIAN) II, LLC	05/14/17	Section 22, Block 57, Township 2	17-09712
13	MF118719	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, CBAT CORPORATION C/O ROBERT K. WHITT	RIO OIL AND GAS (PERMIAN) II, LLC	05/04/17	Section 22, Block 57, Township 2	17-09713
13	MF118720	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, GAYLE D. FOGELSON	RIO OIL AND GAS (PERMIAN) II, LLC	05/22/17	Section 22, Block 57, Township 2	17-09714
13	MF118721	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, CAROLYN BLAKE JOHNSTON	RIO OIL AND GAS (PERMIAN) II, LLC	05/10/17	Section 22, Block 57, Township 2	17-09715
13	MF118722	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, JANE APPLING SIGLER AND JIMMIE B SIGLER	RIO OIL AND GAS (PERMIAN) II, LLC	05/10/17	Section 22, Block 57, Township 2	17-09716
		STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, CAROLE E. RUSH, TRUSTEE OF CAROLE E				
14	MF118583	RUSH LIVING TRUST	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Block 57, Township 2	17-05117
14	MF118583	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, LUTHER WESTBROOK OLSON, LLC	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Block 57, Township 2	17-05118
14	MF118583	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, CARL RUSHING OLSON, JR. LLC	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Black 57, Township 2	17-05119
		STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, CAROLINE OLSON FLANNERY SEPARATE				
14	MF118583	PROPERTY TESTAMENTARY TRUST FOR THE BENEFIT OF JOHN O FLANNERY JR.	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Block 57, Township 2	17-05120
14	MF118583	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, GEORGE ALBERT OLSON	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Block 57, Township 2	17-05121
		STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, PAULENA F. MITCHELL TESTAMENTARY				
14	MF118583	SEPARATE PROPERTY TRUST C/O CAROLE ELIZABETH RUSH, TRUSTEE	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Block 57, Township 2	17-05122
14	MF118583	STATE OF TEXAS, ACTING BY AND THROUGH ITS AGENT, MARION A OLSON, JR	BLAZE INTERESTS, LLC	03/16/17	E/2 E/2 of Section 18, Block 57, Township 2	17-05123

ATTACHMENT A

