

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

APPLICATION OF COG OPERATING, LLC FOR THE CREATION OF A NEW  
POOL, SPECIAL POOL RULES AND CONTRACTION OF THE GRAYBURG  
JACKSON-YESO POOL WITHIN THE DODD FEDERAL UNIT, EDDY  
COUNTY, NEW MEXICO

CASE NO. 14669

APPLICATION OF COG OPERATING, LLC FOR THE CREATION OF A NEW  
POOL, SPECIAL POOL RULES AND CONTRACTION OF THE GRAYBURG  
JACKSON POOL WITHIN THE BURCH-KEELY UNIT, EDDY COUNTY, NEW  
MEXICO

CASE NO. 14670

AMENDED APPLICATION OF COG OPERATING, LLC TO INCREASE WELL  
DENSITY AND FOR PRE-APPROVAL OF NON-STANDARD LOCATIONS IN  
THE DODD FEDERAL UNIT, EDDY COUNTY, NEW MEXICO

CASE NO. 14758

AMENDED APPLICATION OF COG OPERATING, LLC TO INCREASE WELL  
DENSITY AND FOR PRE-APPROVAL OF NON-STANDARD LOCATIONS IN  
THE BURCH-KEELY FEDERAL UNIT, EDDY COUNTY, NEW MEXICO

CASE NO. 14759

ORDER NO. R-13523

ORDER OF THE DIVISION

BY THE DIVISION:

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These cases came on for hearing at 8:15 a.m. on June 23, September 29,  
November 10, and December 15, 2011, at Santa Fe, New Mexico before Examiner  
William V. Jones.

NOW, on this 12<sup>th</sup> day of March, 2012, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of these cases and subject matter.

(2) COG Operating, LLC ("Concho") seeks in these cases Pool creation and Special Pool Rules for the Upper Yeso (Paddock and Blinebry) formations underlying both the Dodd Unit and the Burch-Keely Unit. For each of these Units, Concho seeks the following:

- a. In Case No. 14669, for the Dodd Unit, creation of a new oil pool extending from the top of the Glorieta down to the base of the Blinebry formation.
- b. In Case No. 14670, for the Burch-Keely Unit, a new oil pool extending from the top of the Glorieta down to a depth of 5000 feet below ground level.
- c. Also in Case Nos. 14669 and 14670, a depth bracket allowable of 300 barrels of oil per day and no limiting gas-oil ratio ("GOR").
- d. In Case Nos. 14758 (Dodd Unit) and 14759 (Burch-Keely Unit), pre-approve well locations within the Unit boundaries and increase the maximum allowed number of wells per standard spacing and proration unit to seven (7) wells producing from the Paddock formation and four (4) separate wells producing from the Blinebry formation.

(3) The nomenclature (pool contraction and creation) portion of Case No. 14669 was decided by the Director in Order No. R-12256-B issued on February 10, 2012. A new oil pool limited to the horizontal extent of the Dodd Unit was created and called the Dodd-Glorieta-Upper Yeso Pool for oil production from any formation located from the top of the Glorieta formation down to the base of the Blinebry formation. The effective date of that pool change is March 1, 2012.

(4) The nomenclature (pool contraction and creation) portion of Case No. 14670 was decided by the Director in Order No. R-10067-E issued on January 25, 2012. A new oil pool limited to the horizontal extent of the Burch-Keely Unit was created and called the Burch Keely- Glorieta-Upper Yeso Pool for oil production from any formation located from the top of the Glorieta formation down to 5000 feet below ground level which currently corresponds with the lower vertical limits of the "Unitized Formation" of the Burch-Keely Unit, as amended by Order No. R-7900-E, issued in Case No. 14558 on September 22, 2011. The effective date of that pool change is February 1, 2012.

(5) There is a recent decision in Order No. R-13382-E which is (“analogous”) to the requested Special Rules in these cases which concerned the Yeso formation in the vicinity of the Dodd Unit and Burch-Keely Unit. The Yeso formation in the case resulting in that decision and under the Dodd and Burch-Keely Units is located in the same east to west trend known as the “Northwest Shelf” of New Mexico. On September 8, 2011, the Division issued Order No. R-13382-E in Case Nos. 14613 and 14647, granting the applicant’s request to combine numerous Yeso formation pools into a new pool called the **Mar Loco-Glorieta-Yeso Pool (Pool Code 97866)** and, in addition, created temporary Special Pool Rules for that new pool setting a depth bracket allowable for oil of 300 barrels per day and a limiting Gas-Oil Ratio (“GOR”) of 3000 standard cubic feet of gas per barrel of oil. The Division also re-iterated Rule 19.15.15.9(A) NMAC allowing up to four (4) oil wells in the Yeso formation per standard spacing and proration unit.

(6) The relief requested by Concho in these cases concerns only the Upper Yeso (Paddock and Blinbry formations) and not the entire Yeso formation as in the analogous decision. The analogous decision also did not address the acreage included in the Burch-Keely Unit, the Dodd Unit, or the Grayburg-Jackson West Cooperative Unit.

(7) The Division in the analogous case considered and denied the following requests by applicants:

- a. To limit the number of oil wells per standard spacing and proration unit to only two (2) wells.
- b. A request for no limiting GOR and a separate request to maintain the limiting GOR at 2000 to 1.
- c. A request to set the depth bracket allowable at 187 barrels of oil per day per standard sized oil spacing and proration unit.

(8) The aforementioned analogous decision in Case No. 14613 was taken De Novo to the Oil Conservation Commission, but was dismissed at the request of the applicants on February 10, 2012.

(9) The top completion interval within the newly created Dodd- Glorieta-Upper Yeso Pool and in the Burch Keely- Glorieta-Upper Yeso Pool is less than 5000 feet of depth and is therefore allowed by Rule 19.15.20.12 NMAC a maximum of 80 barrels of oil per day (averaged over any calendar month) per standard 40-acre oil spacing and proration unit. Concho is requesting that the oil allowable be increased to 300 barrels per day with no limiting Gas Oil Ratio.

(10) Concho is the designated operator of the Burch-Keely Unit which consists of the following acreage:

**TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM**

Section 12: SE/4 SE/4  
Section 13: All  
Sections 23 through 26: All

**TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM**

Sections 18 and 19: All  
Section 30: All

(11) Concho is also the designated operator of the Dodd Unit which consists of the following acreage:

**TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM**

Section 10: E/2, E/2 W/2  
Section 11: All  
Section 14: All  
Section 15: E/2  
Section 22: SE/4, SE/4 SW/4, E/2 NE/4, SW/4 NE/4

(12) In support of its requests in these cases, Concho presented testimony and exhibits in the hearings from land, geology, and engineering witnesses. The portion of Case Nos. 14669 and 14670 asking for an increased oil and gas allowable was presented on September 29. Case No. 14759, asking for increased well density for the Burch-Keely Unit was presented in detail on November 10th. After that hearing, the application in Case No. 14759 was amended to increase the requested number of wells per spacing unit and also request pre-approved unorthodox well locations within the units. Amended Case No. 14759 and Case No. 14758 were presented at the December 15 hearing through affidavit. The record for Case No. 14759 presented on November 10 and December 15 was incorporated by reference into Case No. 14758 as both cases concern the same subject matter and both ask for the same rule exceptions.

(13) Notice was provided in these Cases as required by Division rules.

(14) Cimarex Energy Co. and ConocoPhillips Company both entered appearances in Case No. 14670 (Burch-Keely Unit). ConocoPhillips appeared through counsel (only) at the June 23<sup>rd</sup> hearing but did not present evidence.

(15) No other party appeared at any of these four hearing dates or otherwise opposed these applications.

(16) As proposed by Concho, the depth bracket allowable should be changed from 80 barrels to 300 barrels of oil per day within any standard oil spacing and proration unit. These Paddock and Blinebry reservoirs are approximately 500 feet and 1000 feet in gross thickness, respectively, the rock matrix has very low permeability, has no sharply defined gas-oil or oil-water contact, and is under primary recovery from solution gas drive. The Paddock and Blinebry formations and any wells drilled and completed in

those formations will be producing from the same Pool within any standard 40-acre oil spacing and proration unit and therefore must share in the oil allowable. Allowing 300 barrels per day (average per month) in any standard 40-acre oil spacing and proration unit will not prematurely dissipate reservoir energy or cause waste of oil or gas. Allowing a higher production rate will provide the incentive and economic viability for the operator to develop these reservoirs with an optimum number of wells, thereby preventing waste and protecting correlative rights. The 300 barrel per day depth bracket allowable was requested in these cases and is consistent with that granted in the analogous decision.

(17) Concho proposes no limiting gas oil ratio ("GOR"). The limiting GOR is intended to preserve reservoir energy and prevent waste from solution gas drive reservoirs. The limiting GOR for production from the upper Yeso formation within the Burch-Keely Unit and within the Dodd Unit should be set at 3000 standard cubic feet of gas per stock tank barrel of oil to prevent possible premature loss of reservoir energy, prevent waste of oil, and to match that limiting GOR granted in immediately surrounding wells producing from the Yeso formation in Order No R-13382-E (the analogous decision).

(18) Concho's proposed future well locations should be pre-approved within these Units, even if the location is otherwise unorthodox, except well locations within 330 feet of Unit boundaries or non-identically owned tracts. The pre-approval of unorthodox locations within these Units will increase the ability of the operator to optimally manage these reservoirs and should be approved.

(19) Concho proposes that within any one (1) oil spacing and proration unit, in lieu of the limitation of four producing wells in the pool comprising the Paddock and Blinbry, the Paddock formation be limited to seven (7) producing wells and the Blinbry formation be limited to four (4) producing wells. This request should be approved for vertical wells, and the top and bottom footage depths of each of these formations should be subject to approval by the Division's Artesia district geologist.

(20) When the application was filed, and when the hearing occurred, provisions of statewide and pool rules limiting the number of wells in a spacing unit applied to both vertical and horizontal wells. Effective on February 15, 2012, the Commission amended Rule 19.15.16.15.D NMAC to provide that:

[p]rovision[s] (sic) of statewide or special pool orders in effect on February 15, 2012 that limit the number of wells that may simultaneously produce from the portion of a pool or area underlying a spacing unit . . . do not apply to horizontal wells.

Neither the application nor any testimony in this case indicates that the applicant seeks limitations on the number of horizontal wells in the context of the new statewide rule dispensing with such limitations. Accordingly, the requested limitations on the number of wells that can produce within each spacing unit of the newly created pools should apply only to vertical wells.

(21) The two newly created pools cannot be extended beyond the boundaries of the units they are located in. Therefore wells completed in the Upper Yeso formation within one (1) mile of these pools but outside the pool boundaries should not be drilled or produced in accordance with these Special Pool Rules. Special Pool Rules granted herein should be limited to govern only wells drilled and produced within these two pools.

(22) These Special Pool Rules should be temporary and automatically expire on September 1, 2014 unless extended or made permanent by an order of the Division entered in a case filed before that date.

(23) With those modifications and conditions, Concho's proposal to establish Special Pool Rules for the newly created Dodd-Glorieta-Upper Yeso Pool and the Burch Keely-Glorieta-Upper Yeso Pool should be approved in order to prevent waste and protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the applications of COG Operating, LLC ("Concho"), the following Special Rules are hereby adopted:

**SPECIAL RULES  
FOR THE  
DODD- GLORIETA-UPPER YESO POOL  
And for the  
BURCH KEELY- GLORIETA-UPPER YESO  
POOL**

**Rule 1:** Each well completed or recompleted into these pools shall be spaced, drilled, operated, and produced in accordance with Division Rules or as otherwise specified in the Special Rules hereinafter set forth.

**Rule 2:** The allowable for a standard oil spacing and proration unit shall be based on a depth bracket allowable of 300 stock tank barrels of oil per day. In the event there is more than one well on a 40-acre proration unit, the operator may produce the allowable assigned to the unit from wells on the unit in any proportion.

**Rule 3:** As per Division Rule 19.15.20.13 NMAC, the limiting gas-oil ratio within these pools is hereby set at 3000 standard cubic feet of gas per barrel of oil.

**Rule 4:** Oil well locations are pre-approved within these Pools, even if the location is otherwise unorthodox, except well locations within 330 feet of the Dodd Unit or Burch-Keely Unit boundaries or within 330 feet of any non-identically owned tract.

**Rule 5:** No more than four (4) vertical wells shall produce simultaneously from the Blinebry formation within any one standard sized oil spacing and proration unit.

**Rule 6:** No more than seven (7) vertical wells shall produce simultaneously from the Paddock formation within any one standard sized oil spacing and proration unit.

**Rule 7:** Each standard sized oil spacing and proration unit may have simultaneously up to seven (7) producing completions from vertical wells in the Paddock formation and four (4) producing completions from vertical wells in the Blinebry formation.

(2) These Special Pool Rules shall be effective retroactively as of the date of pool creation.

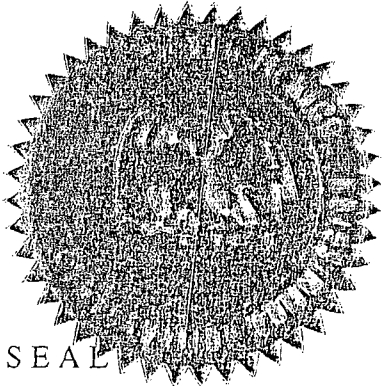
(3) Special Pool Rules granted herein shall be limited to govern only wells drilled and produced within these two pools and shall not extend beyond pool boundaries.

(4) The top and bottom footage depths of both the Paddock formation and the Blinebry formation shall be subject to approval by the Division's Artesia district geologist.

(5) Each of these Special Pool Rules shall expire September 1, 2014, unless extended or made permanent by an order of the Division entered in a case filed on or before that date.

(6) Jurisdiction of these cases is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in cursive script, appearing to read "Jami Bailey".

JAMI BAILEY  
Director