

**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 TO CONSIDER:**

**CASE NO. 15668
ORDER NO. R-14409
NOMENCLATURE**

**APPLICATION OF EOG RESOURCES, INC. FOR CREATION OF A NEW POOL
AND FOR A SPECIAL DEPTH BRACKET ALLOWABLE FOR THE WC-025 G-
09 S253336D; UPPER WOLFCAMP POOL, LEA COUNTY, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 11, 2017, at Santa Fe, New Mexico before Examiners William V. Jones and Michael A. McMillan.

NOW, on this 25th day of July 2017, the Division Director, having considered the testimony, the record and the recommendations of the Examiners,

FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) Cases No. 15668 and 15669 were combined for purposes of testimony, but separate orders are being issued for each case.
- (3) In Case No. 15668, EOG Resources, Inc. ("EOG" or "Applicant"), seeks to create a new oil pool for production from the Upper Wolfcamp formation and increase the depth bracket oil allowable within the new pool.
- (4) The proposed Bobcat Draw; Upper Wolfcamp Pool (Pool Code 98094) would initially comprise the following described acreage in Lea County, New Mexico:

Township 25 South, Range 33 East, NMPM

Section 25:	SW/4
Section 26:	All

Section 36: W/2

(5) The proposed pool would be assigned to well-completions heretofore placed within the WC-025 G-09 S253336D; Upper Wolfcamp Pool, while retaining the pool code.

(6) Applicant proposes to increase the existing 410-barrel of oil per day depth bracket allowable to 1400 barrels of oil per day for a standard 40-acre spacing and proration unit in the Bobcat Draw; Upper Wolfcamp Pool; leaving all other rules to be in conformance with statewide rules.

(7) Mewbourne Oil Company entered an appearance in the case and appeared through counsel at the hearing but did not oppose the application. No other party entered an appearance in this case or otherwise opposed this application.

(8) Applicant appeared at the hearing through counsel and presented exhibits and testimony showing the following.

- (a) The Brown Bear 36 State Well No. 701H (API No. 30-025-42153) is the discovery well for the proposed pool. That well was drilled horizontally into the Upper Wolfcamp formation at a true vertical depth of 12,533 feet and completed along the horizontal portion of the well. First production from this well was March 31, 2015.
- (b) The Depth Bracket Allowable shown in Division Rule 19.15.20.12(A) NMAC for discovery wells completed from true vertical depths of 12,000 to 12,999 feet is 410 barrels of oil per day per 40-acre spacing and proration unit.
- (c) Applicant provided notice of the proposed new pool and increased depth bracket allowable to all operators within the pool and all operators of Upper Wolfcamp formation well-completions within one mile of the pool boundaries.
- (d) The Upper Wolfcamp is very prolific in this area, so this pool continues to grow and will be adjusted in size through future nomenclature hearings.
- (e) The Upper Wolfcamp formation is composed of tight sandstones, organic shales, and carbonate debris flows. All three lithologies are being targeted and all are low porosity, low permeability, and require fracture stimulation to produce in paying quantities.
- (f) The Upper Wolfcamp is at its thickest and deepest in this portion of the basin, placing organic shales in the oil and gas generation window, leading to over-pressured conditions and contributing to prolific

production. The Wolfcamp is continuous over the area of the proposed pool.

- (g) The primary reason for the requested increased allowable is to enable simultaneous completion of clusters of wells within a project area which would yield production rates within 40-acre spacing and proration units over the existing depth bracket allowable.
- (h) In addition, individually completed wells in this proposed pool produce initially at over the existing allowable limit within a project area and would require initial production to be curtailed to conform with the existing oil allowable.
- (i) It has been empirically shown [see exhibits in this case] that simultaneous completion of wells located close to each other yields much higher oil production rates than if the wells are completed in succession.
- (j) Within the proposed pool, almost all 40-acre spacing and proration units have continued to produce over the existing depth bracket allowable limit.
- (k) This is a volatile oil reservoir as determined by API oil gravities in the mid to upper 40's and formation volume factor just over 2.0. It does however produce at the lower end of the gas oil ratio for this type of reservoir. The producing gas oil ratio has been steady at near 2000 SCF/Bbl., with the reservoir still saturated and above the bubble point.
- (l) The reservoir is over pressured and is under solution-gas-drive with no evidence of any other type of drive mechanism.
- (m) The steady 2000 to 1 gas oil ratio with a solution-gas-drive in a tight rock shows this reservoir is not rate sensitive and will not be harmed by allowing a higher production rate.
- (n) Curtailing these types of wells adds complexity which may result in reduction of overall recovery.

The Division concludes that:

(9) Applicant has shown that this reservoir was not harmed by production at rates over the existing oil allowable in the discovery well or succeeding wells. In addition, offsetting operators were made aware of this and have not complained or opposed this application.

(10) Applicant has shown that to maximize recovery from this reservoir, clusters of wells in a project area should be drilled and simultaneously completed. This will result in high initial production rates and increased ultimate recovery not possible by successive well drilling and completions as done in conventional reservoirs. This will also result in production rates over the existing depth bracket allowable.

(11) Applicant provided production plots and engineering testimony both showing that increasing the oil allowable in this reservoir will not be harmful or cause waste.

(12) EOG's proposal should be granted to prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of EOG Resources, Inc. ("EOG") to create a new pool for oil production from the Upper Wolfcamp formation and increase the depth bracket oil allowable within the pool is hereby approved.

(2) The **Bobcat Draw; Upper Wolfcamp Pool (Pool Code 98094)** is hereby created to extend vertically throughout the Upper Wolfcamp formation and initially include the following described acreage in Lea County, New Mexico:

Township 25 South, Range 33 East, NMPM

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(3) The Upper Wolfcamp formation in this pool shall extend from the top of the Wolfcamp formation approximately 500 feet down to the top of the Wolfcamp "B" marker.

(4) All well-completions in the Upper Wolfcamp formation which are currently assigned to the WC-025 G-09 S253336D; Upper Wolfcamp Pool or otherwise located within the boundaries of the Bobcat Draw; Upper Wolfcamp Pool, shall be dedicated to the new pool, **effective August 1, 2017**.

(5) The Special Rules for this pool shall be as follows:

**SPECIAL RULES FOR THE
BOBCAT DRAW; UPPER WOLFCAMP POOL**

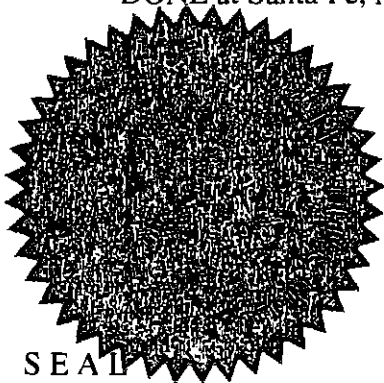
Rule 1: Each well completed or recompleted in the Bobcat Draw; Upper Wolfcamp Pool or within one mile thereof and not nearer to or within the limits of another

Upper Wolfcamp oil pool, shall be produced in accordance with the Special Rules hereinafter set forth.

- Rule 2: The top allowable for any standard 40-acre spacing and proration unit shall be 1400 barrels of oil per day per calendar month. The allowable may be produced in any proportion from any of the wells that contribute to the production attributed to such 40-acre proration unit.
- Rule 3: All other provisions not specifically addressed herein shall conform to Division Rules including the Limiting GOR of 2000:1 SCF/Bbl.
- Rule 4: Exceptions to these Special Rules shall be granted only as provided under Division rules.

(6) Jurisdiction of this case 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, reading "David R. Catanach".

DAVID R. CATANACH
Director