

**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:**

**CASE NO. 13956
ORDER NO. R-3127-E**

**APPLICATION OF COG OPERATING LLC FOR AN EXCEPTION TO THE
WELL DENSITY LIMITATIONS OF RULE 104B.(1) AND FOR
SIMULTANEOUS DEDICATION WITHIN THE UNIT AREA OF THE
GRAYBURG-JACKSON WEST COOPERATIVE UNIT, EDDY COUNTY, NEW
MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on July 26, 2007, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 3rd day of January, 2008, 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 this case and its subject matter.

(2) The applicant, COG Operating LLC ("COG" or "applicant"), seeks approval for a blanket exception to the oil well density limitations of Division Rule 104B.(1) and for simultaneous dedication of wells developed in the Unit Area of the Grayburg-Jackson West Cooperative Unit within all formations from the top of the Seven Rivers to the top of the Abo formation, Grayburg Jackson-Seven Rivers-Queen-Grayburg-Glorieta-Yeso Pool (28509), in Eddy County, New Mexico.

(3) Applicant is the operator of the Grayburg-Jackson West Cooperative Unit, the Unit Area of which is comprised of approximately 2400 acres of State of New Mexico and fee lands located in Eddy County, New Mexico, described as follows:

Township 17 South, Range 29 East, NMPM
Section 15: W/2 SW/4

Section 16: All
Section 21: All
Section 22: W/2 W/2, E/2 NW/4, NE/4 SW/4, NW/4 NE/4
Section 27: W/2 SW/4
Section 28: All

(4) The Grayburg-Jackson West Cooperative Unit Agreement was originally approved by the Oil Conservation Commission on October 4, 1966, by Order No R-3127. This order was subsequently amended on March 4, 1968 by Order No R-3127-A by including an additional 400 acres into the Unit.

(5) The Unitized Formation under the Unit Agreement as originally described was that portion of the Grayburg and San Andres formations encountered between the depths of 2200 feet and 3600 feet underlying the Unit Area. The Unit, as approved, was formed for the purposes of conducting primary and secondary recovery operations in the Unit Area. Waterflood operations are currently being conducted in the Grayburg and San Andres formations between the depths of 2200 feet and 3600 feet.

(6) On June 13, 2006, the Division entered Order No R-3127-B in Case No. 13609 which approved, *inter alia*, the extension of the vertical limits of the Unitized Formation and the Grayburg-Jackson Pool to include all formations from the top of the Seven Rivers formation to the base of the Yeso (Paddock) formation, being those depths from 1116 feet to 4636 feet below the Kelly Bushing as shown on the Schlumberger log of the Diamondback State Well No 1, located 2040 feet from the North line and 2140 feet from the East line of Section 28, Township 17 South, Range 29 East, Eddy County, New Mexico.

(7) On February 1, 2007, the Division entered Order No R-3127-C in Case No 13848, approving the subsequent extension of the vertical limits of the Unitized Formation and the pool to include all formations from the top of the Seven Rivers formation to the top of the Abo formation and including the Blinebry formation. As a consequence of Order No R-3127-C, all formations within the expanded vertical limits of the Unitized Formation are administered as a single common source of supply identified by the Division's nomenclature process as the Grayburg-Jackson Seven Rivers-Queen-Grayburg-Glorieta-Yeso Pool (28509), commonly called the Grayburg-Jackson Pool.

(8) Division Rule 104B.(1) has been interpreted as limiting densities for oil well development at no more than four wells per each 40-acre spacing and proration unit. The rule provides in part as follows: "*Only those 40-acre spacing units committed to active secondary recovery projects shall be permitted more than four wells.*"

(9) Certain 40-acre spacing units within the Grayburg-Jackson West Cooperative Unit are permissibly occupied by four or more wells currently operated in conjunction with the approved water flood project being conducted in the Grayburg and San Andres formations. Applicant seeks to drill additional wells to other formations within such areas in order to produce additional reserves, including reserves from the

Blinebry formation. However, because the various formations within the Unit Area are administered as a single common source of supply, Rule 104B.(1) is susceptible to interpretation in such a manner that the drilling of additional wells to other formations within spacing units occupied by four or more wells would be prohibited. As a result, otherwise recoverable reserves in other formations underlying a tract with four or more wells operated in conjunction with waterflood operations would be rendered inaccessible.

(10) The applicant presented testimony and evidence at the hearing showing that:

(a) The mineral ownership within the Unit is undivided by depths and is entirely State of New Mexico except for a 40-acre tract owned by Mossman Midwest Company out of Roswell.

(b) COG owns 100% of the working interests within this Unit.

(c) After the recent amendments, the vertical and horizontal boundaries of the Grayburg-Jackson Pool and the Grayburg-Jackson West Cooperative Unit are identical.

(d) In 40-acre spacing and proration units within the Grayburg-Jackson Pool having already four wells producing from the Grayburg-San Andres Waterflood, additional wells to be drilled and completed in the Blinebry would be prohibited by Rule 104B.(1). This prohibits COG in some areas from developing reserves from the Blinebry and other reservoirs within the Unit.

(e) COG has a pending administrative application with the Division asking for simultaneous dedication of Well No. 153 which was drilled to the Blinebry within a spacing unit already dedicated to four or more wells.

(f) COG voluntarily shut-in Wells No. 17 and 64, which wells could be considered out-of-compliance increased density wells, pending the outcome of this hearing case.

(g) COG is not asking for this relief in order to complete within any 40-acre spacing unit more than 4 wells within any one reservoir, except for the waterflooded Grayburg and San Andres formations.

(h) The Unit has always been a "Cooperative Unit," and all allocations are done based (only) on surface acres contributed to the Unit.

(i) Authorization to expand currently approved injection and waterflood operations into other formations is not sought by this application.

(j) COG frequently completes producing wells in both the Grayburg San Andres waterflooded interval and in the Paddock formation as downhole

commingles. COG attempts to keep those wells pumped off so as to prevent crossflow and maximize recovery from each interval.

(k) COG frequently drills wells and completes these wells in multiple formations that are not being waterflooded within the Unit and has not seen crossflow or waste due to this practice.

(l) COG is at this time focusing on developing the identified Blinebry formation oil reserves within the Unit. COG has evaluated reserves within the formations and determined that 10-acre drilling is justified within the Blinebry and the Paddock, especially when completing the wells as downhole commingles.

(m) COG estimates that without the type of relief being asked for in this case, Blinebry and Paddock drilling and completions will be restricted, preventing the State of New Mexico from receiving millions of dollars in royalty revenue.

(n) COG wishes for a blanket order to be issued in this case instead of applying individually (administratively) for simultaneous dedication within a 40-acre spacing unit each time a new well is drilled or completed.

(o) All offsetting operators have been notified of this application and no protests have been received.

(11) Clearly the Grayburg-Jackson Pool as it exists today consists of an overlap of many separate reservoirs which should, and must, be individually managed; and any limitation in number of completions per "spacing unit" within this pool as mandated in Division Rule 104B.(1) should apply only to those individual reservoirs.

(12) Granting this application will result with reasonable probability in the increased recovery of substantially more oil and associated gas from the Unit Area than would otherwise be recovered if Rule 104B.(1) were literally applied so as to prevent the drilling of additional wells to additional formations in those spacing units occupied by four or more wells.

(13) This application should be approved in order to promote conservation, prevent waste, and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of COG Operating LLC ("COG" or "applicant"), is hereby approved, allowing a blanket exception to the oil well density limitations of Division Rule 104B.(1) and for simultaneous dedication of wells developed within the Grayburg-Jackson West Cooperative Unit within all formations from the top of the Seven Rivers to the top of the Abo formation, Grayburg-Jackson Pool (28509), Eddy County, New Mexico, as follows:

(a) Within the Grayburg-Jackson West Cooperative Unit Area, more than four oil wells may simultaneously produce within any one standard 40-acre oil spacing and proration unit within the Grayburg-Jackson Pool.

(b) However, each individual geologic formation or reservoir not under secondary or tertiary recovery operations remains limited to a maximum of four (4) wells per spacing unit as per Division Rule 104B.(1).

(2) Jurisdiction is hereby 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.



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STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E.
Director