



November 29, 2011

State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Hand Delivered

Attn: Director Jami Bailey

RE: Vertical Boundaries of the Dodd Federal Unit ("Unit"); Eddy County, New Mexico

Dear Director Bailey,

We have recently learned that to persons not completely familiar with the Dodd Federal Unit Agreement, testimony before your agency related to the Unit, and the past interpretations of the vertical boundary of the Unit, the definition of "Unitized Formation" contained within the Unit Agreement and NMOCD Order R-12228 may be ambiguous. It appears that confusion arises from the term "Yeso/Paddock", when the intent was to refer to the entire Yeso Formation or to a depth of 5,000 feet, whichever is less. I have already met with Wesley Ingram at the Bureau of Land Management to discuss this issue. Mr. Ingram indicated that he agrees with COG Operating LLC's ("COG") interpretation of the vertical Unit boundary and he will sign a written document that memorializes that interpretation, but would also like for your agency to do the same.

Following the meeting with Mr. Ingram last week, COG prepared the attached *Interpretation of the Vertical Depth of the Dodd Federal Unit*. We hope, after you have read this letter and the attached materials, and have met with us, you will agree to sign the attached interpretation, too.

The Issue

The vertical boundaries of the Dodd Unit have been defined using the following phrase-- "the base of the Yeso/Paddock or 5,000'; whichever is less." The word Paddock should not have been used in the definition, as evidenced by the testimony and the subsequent actions of the past Unit operator (Marbob) and the regulatory agencies (i.e. numerous wells that were drilled to depths deeper than what is commonly considered to be the base of the Paddock, but less than 5,000 feet in depth, have routinely been approved as Unit wells).

Current Definition

On page 7 of Order R-12228, the NMOCD orders that "The 'Unitized Formation' [for the Dodd Unit] shall comprise that interval underlying the Unit Area the vertical limits of which extend from the top of the Seven Rivers formation to the base of the Yeso/Paddock formation or 5,000 feet beneath the surface, whichever is less, as reflected on the Spectral Density Dual Spaced Neutron Log for the Marbob Energy Corporation's Mary Dodd "B" Deep Federal Well No. 2 (API No. 30-015-31041) located 1980 feet from the North line and 1295 feet from the East line (Unit H) of Section 14, Township 17 South, Range 29E, NMPM."



Further, the Division ordered that "The Dodd Federal Unit Agreement and Dodd Federal Unit Operating Agreement . . . are hereby incorporated by reference into this order." The Unit Agreement and Unit Operating Agreement both use the same language to define the unitized interval as the Statutory Unitization Order.

Evidence of Intent

Since the Unit definition uses the phrase that some see as a problem, we ask you to consider additional support facts that interpret the Unit's boundaries. In particular, one must consider the language contained in the Unit Agreement itself, the testimony given in support of forming the Unit, and the way that the vertical Unit boundary has been interpreted in the past.

The Unit Agreement Itself

Exhibit B

Exhibit B to the Unit Agreement specifically refers to portions of Tract 1A as "limited to the depths from 4,000 feet beneath the surface to 5,000 feet beneath the surface."

The Type Log

The log referred to in the Statutory Unitization order, Unit Agreement and Unit Operating Agreement begins at depths that are below the base of the Paddock formation.

Testimony

Raye Miller's testimony in Case 13350, for the statutory unitization of the Dodd Unit is clear that the intention of Marbob, the prior operator, is to cut off the Unit at 5,000'.

"We would actually ask that the unit cover multiple formations, the Seven Rivers, Queen, Grayburg, San Andres, and what is called the Yeso-Paddock. **It's really identified as the Yeso, but some folks call it the Paddock formation.**" (Page 20)

"Now, we're only asking that the unit extend to a maximum depth of 5,000 feet . . . the only productive portion of the Yeso lays in the upper 400 to 500 foot of the Yeso formation . . . And so while the Yeso formation may extend below 5,000 feet, we would ask that the cut be made at a depth, you know, stratigraphic equivalent of the base of the Yeso or 5,000, whichever is lesser. And that way, **it basically becomes a clear-defined, 5,000 foot measured-depth cut as to the rights being contained inside the unit . . .** But we believe that across the entire area, the deepest portion of the field would be in section 22, and we don't believe there's any productive horizons below 5,000 feet in the Yeso formation. (Pages 42 – 43)



Raye Miller's testimony in Case 13386, for expansion of the Grayburg-Jackson pool to match the vertical boundaries of the Unit also indicates Marbob's understanding is that the Unit extends to 5,000 feet. This case resulted in Order R-12256.

"... by limiting our unit to 5,000 feet, yes, there is Yeso formation below that, but we believe ... that all of the productive interval in the Yeso is clearly above the 5,000 foot depth limit." (Pages 32 – 33)

The ordering language in Paragraph 4 of R-12256 says "Within the Dodd Federal Unit Area the Grayburg-Jackson Pool shall be renamed the Grayburg-Jackson-Yeso Pool". Thus, in 2005, the then OCD Director was attempting to clarify the language by using Yeso without using the word Paddock.

Past Interpretation

BLM

The BLM has approved several Dodd Unit APDs for wells to be completed below the base of the Paddock, but above 5,000 feet within the Yeso formation.

NMOCD

The NMOCD has approved several Dodd Unit APDs for wells to be completed below the base of the Paddock, but above 5,000 feet within the Yeso formation.

Conclusion

Treating the Unit as though it does not extend below the base of the Paddock down to 5,000 feet would contradict the language and scientific evidence presented in the hearings regarding the Unit Agreement itself, would differ from the clear intent of the party that created the Unit, and would be inconsistent with numerous APDs granted by the BLM and NMOCD since the creation of the Unit.

We respectfully request that you help us interpret the vertical Unit boundary, as aforesaid, in order to avoid any possible confusion in the future. If the current operator, COG, and the regulatory agencies agree on the interpretation of the vertical boundary of the Unit, then it is unlikely that this will be an issue again, as the vertical boundary of the Dodd Federal Unit will be officially recognized as the base of the Yeso formation or 5,000', whichever is less.

Respectfully,


Brandon K. Gaynor
Landman

Cc
Gabrielle Gerholt, Assistant General Counsel
David Brooks, Legal Hearing Examiner