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July 11, 2012

VIA EMAIL

Mr. David Brooks, Legal Examiner New Mexico Oil Conservation Division 1220 South St. Francis Drive, Santa Fe, NM 87505

> Re: NMOCD Case 14862 Application of ConocoPhillips Company for pre-approval of downhole commingling for the Basin-Mancos Gas Pool

Dear Mr. Brooks.

I am in receipt of a copy of a letter dated June 22, 2012 sent to Jami Bailey by Dave Mankiewicz, the Assistant Field Manager, Minerals-Farmington ("BLM"), expressing concerns that it is premature for the Division to make the Basin-Mancos Gas Pool ("Mancos Formation" or "Mancos") a pre-approved pool for downhole commingling.

On behalf of ConocoPhillips, I wish to dispel those concerns and urge you to approve this application. The BLM has mistakenly focused upon the Division's downhole commingling ("DHC") process when its concerns are about "horizontal wellbores" in the Mancos Formation. The BLM letter reflects a basic misunderstanding of how the Division has carefully managed downhole commingling of production from the Gallup section of the Mancos formation. It is unfortunate that the BLM failed to send a representative for the hearing on June 25, 2012 where it could have expressed its concerns directly to the expert witnesses and had those concerns answered.

Here are the facts that the BLM would have learned had it attended that hearing:

Division Order R-12984 (Case 14133) was based upon the testimony of Steve Hayden of the OCD-Aztec District Office who made no attempt to present any technical evidence to justify the pre-approval of downhole commingling of the Mancos with the Mesaverde and/or Dakota formation(s). Steve Hayden was an expert and processed all of

the requests in the San Juan Basin, by all companies on all types of leases, for downhole commingling and firmly believed it should be pre-approved by the OCD. He merely failed to supply any technical data at the hearing to support that expert geological opinion.

- (a) That hearing was held on May 29, 2008. Now some four years later, in Case 14862, at the hearing held on June 25, 2012, ConocoPhillips did what Mr. Hayden did not do.
- (b) There are sufficient data points throughout the San Juan Basin to justify downhole commingling of the Mancos with the Mesaverde and Dakota formations. While the BLM (point #1) focused upon the 200 Basin-Mancos wells, it somehow missed the fact that the Division has already: i) approved downhole commingling throughout the San Juan Basin for 144 Basin-Mancos wells; ii) pre-approved the downhole commingling of Basin-Mancos Gas Pool wells with any and all present or future pools within the Williams Production Company, LLC (now WPX Energy Production, LLC) Rosa Unit¹, which comprises some 54,209 acres in portions of Townships 31 & 32 North, Ranges 4, 5 & 6 West; iii) authorized the pre-approval of downhole commingling of twenty-one existing Gallup pools with Dakota and/or Mesaverde that span a large area within the San Juan Basin. See Exhibits 7 & 15 (Page 11), and testimony of Dryonis Pertuso at pages 75-81. Tr Case 14862.
- (c) The BLM (point #2) is factually wrong about the distribution of Mancos data points. Had it attended the hearing, the BLM would have learned that the Basin-Mancos data points are distributed throughout the San Juan Basin and are not limited to the four distinct areas highlighted on ConocoPhillips Exhibit 15, page 11. In addition, the Mancos data points are considerably more numerous and wide-spread if the data points for existing Gallup pools pre-approved for downhole commingling with Dakota and/or Mesaverde (i.e. Calloway-Gallup, Blanco-Mesaverde & Basin-Dakota) are taken into account.
- (d) The BLM (point #3) is concerned about Mancos pressures in a horizontal wellbore in the Rosa Unit. Had is attended the hearing, the BLM would have learned that the Division has already authorized Basin-Mancos commingling for all of the Rosa Unit in September 2008 by Order R-12991, Case 14146. See ConocoPhillips Exhibit 10 and 11, Case 14862. The BLM did not specify a well in the Rosa Unit and not knowing which well the BLM was referring to, Forest

¹⁻¹ A review of the OCD case file for Williams' application for a DHC "reference" case for the Rosa Unit (Case 14146, Order R-12991) reflects that approval was granted without any pressure data being presented and without any expert witness testifying—this was presented and approved without any technical evidence.

Bommarito, a COPC Reservoir Engineer contacted Marcia Bruggenjohann with WPX Energy, the Unit Operator, and she was unaware of any wells in the Rosa Unit that had pressure issues exceeding acceptable limits within State Rules.

- (e) Mancos pressures are at or below hydrostatic gradient throughout the San Juan Basin. For example see ConocoPhillips' Exhibit 15 at page 21, Case 14862
- (f) The BLM (point #4) questions the vertical limits of existing Gallup pools and used that as a basis for expressing concern about downhole commingling of the Basin-Mancos Gas Pool. Had is attended the hearing, the BLM would have learned that the Division intends to "freeze" the boundaries of existing Gallup pools and has defined the vertical limits of the Basin-Mancos Gas Pool to comprise all geologic sections from the base of the Point Lookout formation to the base of the Greenhorn member of the Mancos formation. In addition, ConocoPhillips is seeking pre-approval status for the Basin-Mancos Gas Pool, a pool whose vertical limits are well defined by the Division. This application does not affect existing Gallup pools whose vertical boundaries have not been clearly defined.
- (g) The BLM (point #5) mistaking uses this downhole commingling case to express concerns about horizontal wellbore. The Division already has in place horizontal wellbore rules. See Division Rule 19.15.16.15. Those existing OCD rules already allow horizontal wellbores to be downhole commingled. The procedure is that:
 - i. If the new well is a horizontal wellbore drilled and completed as an oil well only in one of the subsections of the Mancos Formation, then that well is subject to the existing horizontal wells. See Rule 19.15.16.15.
 - ii. In that instance, and if the operator chooses, the operator can file for the creation of a new pool for Mancos oil production, the pool boundaries to be carved out of the Basin-Mancos Gas Pool.

In addition, the Mancos formation in the San Juan Basin has been extensively developed for decades. This is not a new reservoir. While ConocoPhillips appreciates BLM's efforts to determine the "reasonable foreseeable development scenario," it is ConocoPhillips' belief that there is considerable existing knowledge of the Mancos formation in the San Juan Basin. There is existing data that is more than sufficient and widely available to demonstrate that the downhole commingling of Mancos reserves with Dakota and/or Mesaverde will actually prevent waste by allowing the recovery of marginal oil and gas reserves that may otherwise not be recovered if not for downhole commingling this production with other producing formations. Further, the BLM stated 'that industry has expressed significant interest in developing the Mancos Formation

using horizontal technologies...' The southern limits of the Basin-Mancos Gas Pool are the southern boundaries of San Juan and Rio Arriba Counties and only Section 21-T23N-R5W in Sandoval County. It is noteworthy that much of the new horizontal drilling activity in the Mancos in the San Juan Basin is south of the Basin-Mancos Gas Pool boundary in McKinley and Sandoval Counties.

- (h) The BLM is correct that this application in Case 14862 is silent about horizontal wellbores. This application intentionally includes all vertical and horizontal wellbores. An application for downhole commingling is not the place to find horizontal rules. If the BLM (point #6) is correct about the pressure in the Mancos formation for horizontal wellbores, Division Rule 19.15.12.11 would preclude the downhole commingling of Mancos production if the shut-in or flowing wellbore pressure is in excess of any commingled pool's fracture parting pressure.
- (i) If the new well is a horizontal wellbore drilled and completed as an oil well only in one of the subsections of the Mancos Formation, then that well is subject to the existing horizontal wells. See Rule 19.15.16.15.

It is in the best interest of all parties, including the BLM, to remember that the Basin-Mancos Gas Pool, including the Gallup section, is marginally productive and will be "wasted" if it is not downhole commingled with production from the Mesaverde and Dakota formations.

Sincerely yours,

W. Thomas Kellahin

cc:

Jami Bailey, Director-NMOCD
Dave Mankiewicz, BLM-Farmington
Charlie Perrin, OCD-Aztec District Office
Chuck Creekmore-COPC-Farmington
David Catanach, Consulting Engineer