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

APPLICATION OF WPX ENERGY PERMIAN, LLC FOR A HORIZONTAL SPACING UNIT AND COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO

Case No. 21371

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO

Case No. 21344

WPX ENERGY PERMIAN, LLC'S CLOSING STATEMENT WITH PROPOSED FINDINGS AND CONCLUSIONS

WPX Energy Permian, LLC ("WPX") submits this closing statement, as requested by the Oil Conservation Division ("Division"), in support of its Case No. 21371, and in opposition to COG Operating LLC's ("COG") competing Case No. 21344, both having been heard on October 22, 2020.

A. Introduction

On September 19, 2019, COG initially proposed its Rock Jelly Fed Com 701H – 705H Wells as two-mile laterals covering Sections 3 and 10, Township 26 South, Range 29 East, Eddy County, New Mexico. COG's proposed development plan coordinated well with WPX's plans to develop the W/2 of Sections 15 and 22, in the same township and range, with WPX's own two-mile laterals, involving the proposed French 22-15 Fed Com 411H - 413H and 421H – 422H Wells. Ideally, WPX would schedule its French Wells to be co-developed with the Horn Wells it

was developing as two-mile laterals in the E/2 of Sections 22 and 27, in order to avoid parent/child problems, and if WPX's plan is approved, WPX would develop its two-mile unit for the French Wells and the Horn Wells this next year. Transcript ("Tr.") 138: 13-15. Both COG's and WPX's two-mile development plans, taken together, proposed to fully develop the W/2 of Sections 3, 10, 15, and 22, and were consistent with other development plans in the immediate and surrounding area; therefore, WPX did not object to COG's original two-mile plan, Tr. 71: 4-14. COG pursued its development plan by submitting APD applications for its two-mile wells to BLM's rigorous approval process to acquire the proper APDs, which were approved for the development of COG's two-mile unit on October 8, 2020, two weeks before the hearing of the above-referenced cases. Tr. 21: 17-23.

On March 2, 2020, WPX received COG's re-proposal for changing the length of its Rock Jelly 701H-705H Wells from two miles to three miles, and extending the wells an extra mile into Section 15, which WPX had earmarked for its two-mile development plan. COG's change of plans precludes WPX from pursuing its development plan and confines WPX to the undesirable prospect of developing the W/2 of Section 22, as an economically wasteful and untenable one-mile unit, which in effect, under the constraints of the industry, would not be developed, relegating it to the status of an undeveloped resource. *See* Exhibit D, p. 103; Tr. 130: 8-24. After WPX made extensive, good faith negotiations with COG in an effort to resolve the conflict, *see* WPX's Exhibits A-4a through A-4f, WPX filed its competing pooling applications on July 7, 2020. WPX continued to negotiate with COG, offering, on August 26, 2020, a generous proposal in which WPX agreed to be a non-operator in the W/2 of Sections 15 and 22, if COG would develop and operate these sections on a two-mile basis, allowing COG to develop and operate the W/2 of Section 3 and 10 on a two-mile basis as COG originally proposed. WPX's

offer would have ensured the development of the W/2 of all four sections, leaving nothing to waste. COG refused this offer, and a hearing for the competing applications was held before the Division on October 22, 2020. In support of its two-mile development plan, WPX offers the following:

B. Legal Arguments:

I. WPX's Two-Mile Development Plan for the W/2 of Sections 15 and 22, Which Allows COG to Drill Two-Mile Wells in the W/2 Sections 3 and 10, Provides Superior Production and Prevention of Waste in Comparison to COG's Three-Mile Development Plan for Sections 3, 10, and 15.

As noted by the New Mexico Supreme Court, "prevention of waste is *paramount*." *Grace v. Oil Conservation Commission,* 531 P.2d 939, 946 (N.M. 1975) (emphasis added); *see also Continental Oil Co. v. Oil Conservation Commission,* 373 P.2d 809, 814 (N.M. 1962). Under the Oil and Gas Act, waste from "production" takes center stage. *See* NMSA 1978 Section 70-2-2 ("The *production* or handling of crude petroleum oil or natural gas…in such a manner or under such conditions or in such amounts as to constitute or result in waste is each hereby prohibited.") (emphasis added) Accordingly, the primary definition of waste in the Oil and Gas Act is the waste of production, as described in the first definition of waste in NMSA 1978 § 70-2-3A: "underground waste," that being the "producing" of wells "in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas *ultimately* recovered from any pool…." (emphasis added)

WPX is the only party in this contested hearing that has provided the necessary production data which allows the Division to make a determination of the waste from production between the two competing development plans. *See* WPX's Exhibits D-1, D-3, D-5, D-6, D-7 and D-8. COG has provided no exhibits of production data and therefore has failed to show the amount of production that would result from its development plan, an omission acknowledged by

COG's reservoir engineer. *See* Tr. 46: 1-6. Consequently, COG has provided the Division no basis on which to evaluate the extent of waste that would result from the reduced production in COG's development plan. The factors that undermine production from three-mile wells, at this early stage of their implementation and use, include not only the technical difficulties and risks associated with their drilling and operations, but given the uncertain coefficient of return when extending the lateral an extra third mile, the benefit of any additional production from the extension becomes questionable. *See* WPX's Exhibit D, p. 102 (testimony of WPX engineer Justin Stolworthy)[1]; *see also* Tr. 148: 9-20.

In contrast, WPX has shown, based on calculations that generously provide COG with its best-case scenario, Tr. 146: 1-9,[2] that the production from WPX's development plan would far surpass the production from COG's development plan. *See* WPX's Exhibit D-7 (comparing WPX's proposal for two-mile laterals in the W/2 of Sections 15 and 22[3] and two-mile laterals in the W/2 of Sections 3 and 10, with COG's proposal for its three-mile laterals in Section 3, 10 and 15, and one-mile laterals in the W/2 of Section 22, assuming the one-mile unit would be developed). WPX demonstrates that COG's proposal will effectively underproduce, in comparison with WPX's proposal, by 1,312,000 bbls of oil,[4] resulting in substantial waste, as defined by the Oil and Gas Act. *See* WPX's Exhibits D-7 and D-8. This estimated loss of

[1] Mr. Stolworthy was sworn in and accepted as an expert witness in engineering and reservoir matters. Tr. 124: 3-6.
[2] In every respect during its calculations of estimated production, WPX has been very gracious and generous to COG, giving them the benefit of the doubt in the underlying assumptions on which the calculations are based. *See* Tr. 146: 1-9; Tr. 159: 13-25.
[3] A question was raised by COG during the hearing, whether WPX could drill lay-down wells on either the east or west in Section 21 or 23. Tr. 133: 12-18. WPX responded that based on the frac geometry drilling the wells east-west would not be efficient and would be "essentially stranding those wells." *Id.* Frac geometry is a real physical limitation that limits production. Tr. 164: 14-25; Tr. 165: 1-2. An east-west orientation would create waste and would not be looking out for the owners. Tr. 134: 1-4. This is why 100% of the wells in this area have stand-up orientations. Tr. 133: 17-18.
[4] Value arrived at by calculating the area of Delta between the two curves in WPX's Exhibit D-7.

production presumes that WPX could reasonably develop the W/2 of Section 22 as a one-mile unit, which under industry conditions, it cannot.

WPX has demonstrated that such substantial loss of production in COG's plan results directly from the irregularly wide horizontal spacing of COG's laterals which are misplaced for the geology of this area. *See* Exhibit D, p. 103. (stating that COG's proposed horizontal spacing is nearly twice the norm in the area, while WPX's spacing is consistent with other peer operators in the area); *see also* WPX's Exhibit D-3 (showing that the average horizontal spacing of laterals by other operators in the area is 520', reflecting the average spacing of existing wells of Tap Rock, Mewbourne, XTO and COG, with the largest spacing at only 690'). COG proposes a horizontal spacing at 1165' for its Rock Jelly Wells, an obvious outlier for drilling and operations in this area, *see* Exhibits D-3 and D-6, while WPX's proposal of 510' spacing for its French Wells meets the conditions for optimal production of oil and gas, as demonstrated by the projected production data. *See* Exhibit D-7.

WPX's Exhibits D-3 and D-4 illustrate clearly the proper and most efficient horizontal and vertical spacing for the area surrounding Sections 3, 10, 15 and 22. In rebuttal, COG offered Rebuttal Exhibit E, which shows COG well development six to eight miles to the west. As one moves west out of the immediate area under review, one does begin to see wells with wider horizontal spacing; however, it is misleading for several reasons to argue that the wider spacing in lands to the west is applicable to optimal spacing for lands in the east, specifically in Sections 3, 10, 15 and 22. Tr. 178: 1-10. First, the geological properties of the rock changes toward the west, which can accommodate a looser spacing. *See id.* Secondly, the reservoir bends by over 50 feet as one moves west, and the production of the upper Wolfcamp A increases, allowing for a less tight spacing than that required in the subject lands located toward the east. Tr. 177: 17-25.

Furthermore, COG's map provides a truncated, and therefore, inaccurate representation of development in the reservoir by showing only six townships limited to New Mexico. To arrive at an accurate picture of the reservoir and its proper spacing, one must move down and to the east, as shown by the inclusion of two additional townships in WPX's map directly across the Texas border, illustrating that tighter horizontal spacing is required. Tr. 178: 11-23 (Mr. Stolworthy explaining: "The reservoir doesn't care if it's in New Mexico or Texas. It's all the same…If you want to compare apples to apples, you have to move down and to the east. That's why you don't see the development much farther west than what we're talking about here, is because the reservoir bends and the resource just isn't there."); *see also* WPX's Exhibits D-4 and A-5.

Another significant difference in lateral spacing between WPX's development plan and COG's development plan is WPX's inclusion of vertical spacing for laterals in two horizons, the Upper Wolfcamp A and Lower Wolfcamp A, and the absence of vertical spacing in COG's plan, which has laterals in only one horizon, the Upper Wolfcamp A. *See* WPX's Exhibits B-6a and B-6b. COG's absence of vertical spacing represents another anomaly inconsistent with efforts to achieve optimal development by operators in the area. *See* WPX's Exhibit D-3 (showing Tap Rock with 270' vertical spacing; Mewbourne with 240' vertical spacing; and XTO with 210' vertical spacing, while WPX proposes 200' vertical spacing for its French Wells, and COG proposes zero (0') vertical spacing for its Rock Jelly Wells).

This substantial loss, resulting from COG's improper spacing, does not take into account the fact that, under industry conditions, all of W/2 of Section 22 will likely not be developed

under COG's proposal, because it would be *impracticable* to do so;[5] such lack of development would result in the waste of all the resources underlying half of the section. *See* Tr. 130: 8-24; Tr. 136: 1-2. The waste of the W/2 of Section 22, through its nondevelopment, would result in a loss of production that exceeds 2,500,000+ bbls of oil and 12,000,0000,000 cubic feet of gas. *See* WPX's Exhibits D-1, D-7, and D-8; *see also* Tr. 167: 21-25 (Mr. Stolworthy acknowledging that the wide spacing used by COG is an effort to account for the inherent risk of three-mile wells at the expense of production). For all practical purposes, this represents the amount of waste that would actually result from the adoption of COG's development plan, and consequently, the W/2 of Section 22 being left undeveloped.

II. WPX's Two-Mile Development Plan Fully Protects Correlative Rights; COG's Three Mile Development Plan Does Not.

Under the Oil and Gas Act, each owner of property in a pool is afforded the opportunity, "so far as *practicable* to do so," to produce without waste the owner's just and equitable share of oil or gas in the pool, "being an amount, so far as can be *practicably* determined and so far as can be *practicably* obtained without waste," in order "to use the owner's just and equitable share of the reservoir energy." *See* NMSA 1978 § 70-2-33H. (emphasis added) As the Division should note, "practicable" and "practicably" appear three times in the statute and set the criteria by which protection of correlative rights should be determined. One of COG's main arguments is

[5] In WPX's calculations of waste under COG's plan, WPX is fair to COG by assuming that WPX would develop the W/2 of Section 22 at some point in 2025, a hypothetical that is unrealistic under industry conditions, which include both the current low price of oil and the preference for two-mile development over one-mile development when prices are higher. *See* Tr. 161: 3-10. The fact that WPX would not even consider developing the W/2 of Section 22, hypothetically speaking, until 2025 raises another issue of underproduction, which is the parent/child effect. In order to maximize production from wells drilled adjacent to one another, timing of the drilling is critical. If the parent well is drilled first and the drilling of the child well is postponed until a later date, the child well will underperform when finally drilled. WPX's plan for two-mile development in the W/2 of Section 22 would allow WPX and COG to drill two-mile wells in coordination with one another and in coordination with WPX's Horn wells in the E/2 of Sections 22 and 27, thereby avoiding the parent/child effect. COG's plan results in a best-case scenario of WPX's development of the W/2 of Section 22 being delayed at least until 2025, if not longer, and the more likely scenario of the W/2 of Section 22 not being developed at all. *See* Tr. 145, 1-4; Tr. 165: 6-24.

that, under its three-mile proposal, the W/2 of Section 22 theoretically is not stranded, because, as COG would argue, WPX is left to develop a one-mile unit in Section 22 if WPX decides to do so. *See* Tr. 135: 11-25; Tr. 136: 18-25; Tr. 137: 1-16. However, the fact that a unit may "theoretically" be developed does not meet the statutory standard of "practicability."[6] As Engineer Stolworthy points out, if the geology and production data show that a one-mile unit would be sub-economical, an operator theoretically could still drill the unit, technically speaking, but for *practicable* reasons, the operator would never do so, would be compelled by economic constraints to pursue two-mile units, and the one-mile unit would not be developed. *See* Tr. 137: 6-25; Tr. 135: 11-25; Tr. 163: 24-25; Tr. 164: 1-25.

In the present cases, the Division is presented two development plans, COG's plan which confines WPX to a one-mile unit that, for *practicable* reasons, would not be developed, and WPX's plan, which provides for the *practicable* development of the W/2 of Sections 15 and 22 by WPX and for the *practicable* development of the W/2 of Sections 3 and 10 by COG. WPX's development plan is the only plan that fully protects correlative rights because it is the only plan that satisfies the definition of correlative rights by securing "the opportunity afforded, so far as it is *practicable* to do so, to the owner of each property in a pool to produce without waste the owner's just and equitable share of the oil or gas…." *See* Section 70-2-33H. (emphasis added) By confining WPX to a one-mile unit in the W/2 of Section 22, COG restricts the owners in the W/2 of Section 22 to a unit that cannot *practicably* be developed, resulting in both the waste of substantial amounts of production, as above-described in Section B.I, and substantial economic

[6] Black Law's Dictionary, 7th Ed., p. 1191, defines "practicable" as "*reasonably* capable of being accomplished." (emphasis added) There is a decisive legal distinction between "capable of being accomplished," as argued by COG, and "*reasonably* capable of being accomplished," as argued by WPX. Thus, in order to uphold the proper standard for protecting correlative rights under §7-2-33H, the Division should select the development plan that is *reasonably* capable of being developed.

waste. Tr. 130: 8-24. In sum, under COG's plan, since the W/2 of Section 22 would likely not be developed, the owners' correlative rights, the rights to their just and equitable share of production, so far as *practicable* to obtain, would be undermined.

The owners in Section 22 understand the predicament they are in, and as a result, they have voiced their support for WPX's development plan, *see* WPX's Exhibit A-6, in order to protect their correlative rights. The Division has an obligation to protect the interests of each owner in the units involved, both WI owners and ORRI owners, but more importantly, the Division has a larger obligation to protect the public interest. By upholding the statute to protect correlative rights, that is, the right to produce one's just and equitable share without waste, the Division is in large part representing the public. *See Continental Oil Co. v. Oil Conservation Commission*, 373 P.2d 809, 818 (N.M. 1962); *see also El Paso Natural Gas v. Oil Conservation Commission,* 414 P.2d 496, 497 (N.M. 1966).[7] As noted by the *Continental* court, owners are understandably concerned with only their own interests, and therefore absent the Division, the public would not be represented. *See id.* By selecting WPX's development plan, and thereby avoiding the waste inherent in COG's development plan, not only would all individual owners receive increased shares of production without waste, but the Division would be upholding the public interest by ensuring the public would receive the benefit of tax revenues from the additional production. *See* WPX's Exhibits D-7 and D-8; Tr. 131: 2-24; *see also* NMSA 1978 §§ 7-29-4.1, 7-30-4, and -4.1, and 7-31-4, and -5 (representing oil and gas production tax rates received by the state which would be applied to the superior production amounts provided by WPX's development plan).

[7] "Recognizing the need and right of the state, in the interest of the public welfare, to prevent waste of an irreplaceable natural resource, the legislature enacted those laws." *El Paso Natural Gas Co. v. Oil Conservation Commission,* 414 P.2d 496, 487 (N.M. 1966).

WPX owns 100% working interest in Section 22, and allowing WPX to develop the W/2 of Sections 15 and 22, would provide it with 50% working interest in the unit, *see* WPX's Exhibit A-2, which more than meets the threshold of a proper basis for operatorship, given the amounts of production at stake. WPX has extensive experience as an operator in this area, and the geology for Section 15 and 22 is optimal for successful development of the two-mile unit. *See* WPX's Exhibit D, p. 101 (stating that WPX has drilled 42 Wolfcamp A wells in this area compared to COG's 2 wells); WPX's Exhibit B, p. 71 (stating the geology in Sections 15 and 22 allows two-mile laterals to optimize resource development); Tr. 141: 22-24 (stating that WPX, through its extensive experience in this area, has proven it has the best recipe for development). Given the fact that WPX's development plan is the only plan that demonstrates, through the presentation of production data, the prevention of waste, full protection of corrective rights of the owners, and an accounting for the public interest, it is the plan that should be selected for development.

III. Three-mile Wells Are Currently Untested and Risky, and Therefore the Advent of their Use in New Mexico Should Not Supplant Proven Plans.

COG requested that the Division take judicial notice of Case Nos. 21219 and 21220. Both the testimony in these cases and Mewbourne's Closing Statement illustrate the untested and risky nature of three-mile wells. No three-mile wells have been drilled and completed in New Mexico, and there exists only a few in all of the Permian Basin, far too little to determine their effectiveness. Three-mile wells have been drilled in neighboring Texas, within the Midland Basin, but as COG's own engineer, Mr. Simmons, acknowledges, there are technical differences between drilling in the Midland Basin and the Delaware Basin. *See* Tr. for Case Nos. 21219-20, at 53: 7-23. Mr. Simmons also acknowledges that there is a learning curve in the evolution of horizontal wells, starting with half-mile wells, currently progressing to 2.5-mile wells, but not

yet reaching in New Mexico the advent of three-mile wells. *See* Tr. for Case Nos. 21219-20, at 54: 1-25, and at 55: 1-3. Based on this testimony, Mewbourne concluded in its Closing Argument that three-mile wells are untried and riskier than other proven wells. *See* Mewbourne's Closing Argument, p. 7, ¶ 3.

WPX confirmed Mewbourne's observations about the inherent risks of three-mile wells, that "when you go from two-mile to three-mile [wells] your operational risks increase exponentially,…, because our drilling rigs, our casing design, our completion design, they are all based around two-mile development." *See* Tr. 147: 2-22. The technology for drilling wells started out with 5,000-pound circulators, then evolved to the present day 7,500-pound circulators for two-mile wells. *See* Tr. 148: 1-8. Three-mile well development requires 10,000-pound circulators, which are not available right now, forcing the customization of two-mile rigs. *See id.* Using 7,500-pound circulators to drill three-mile wells can create numerous problems, including value erosion, loss of production, and the possibility of a permanent loss of the lateral and associated reservoir. *See* Tr. 128: 12-14; Tr. 148: 9-20; Tr. 151: 1-25; Tr. 152: 1-15; Tr. 153: 1-9; Tr. 154: 1-15; *see also* WPX's Exhibit D-5 (graph in the bottom right corner showing the substantial underperformance of a three-mile well likely to have resulted from such technical problems).

The history of progression in lateral length warrants concern over these technical challenges. WPX points out that as the industry made the transition from one-mile to two-mile wells that it "lost a lot of laterals and ruined a lot of wells," especially in the beginning. Tr. 155: 12-13. Currently, two-mile wells are the standard, and at some point in the evolution to three-mile wells, the technology will be available that minimizes the risk. However, at the present time, WPX provides the best development plan, when the option is available for WPX to drill

two-mile wells in the W/2 of Sections 15 and 22, and COG to drill two-mile wells in the W/2 of Sections 3 and 10, as it had originally planned and earned BLM approval for, by showing, as required under federal statute, that COG's two-mile wells would result in the maximum ultimate recovery for the W/2 of Sections 3 and 10. Under WPX's plan, COG still has the opportunity to explore the drilling of its three-mile wells in the E/2 of Sections 3, 10, and 15, without infringing on the rights of other owners.

Operators are using two-mile rigs to drill three-mile wells in Texas, in the Midland Basin, but that is completely different rock than New Mexico's Delaware Basin. Tr. 149: 9-18. As Mr. Stolworthy points out, it is done in Texas, but it is done very inefficiently, with strain on existing technology, bumping up against stand-by pressure and slowing down motors. *See* Tr. 167: 9-17. This is why, according to Mr. Stolworthy and COG's own AFEs, it would cost COG almost $14 million per well to drill its three-mile wells in the Delaware Basis, where WPX can drill two-mile wells for half that cost per well, Tr. 147: 16-21, and still provide superior production and prevention of waste in its development plan. *See* WPX's Exhibit D-7; *also compare* AFEs in COG's Exhibit A-3 and AFEs in WPX's Exhibit A-3.

IV. COG's Claim of Waste in WPX's Development Plan is Unfounded and Misrepresented.

COG provides a narrow and restricted understanding of waste that fails to account for the forms of waste which are of primary concern in the Oil and Gas Act. COG looks only to, and provides data on, the economic costs of developing the resource, that is, the costs of drilling and operations, and not the waste of the product itself and associated costs of waste, compared with WPX which has factored both the economics of development and the prevention of waste. *See* Tr. 43: 12-24; Tr. 45: 22-25; Tr. 46: 1-6 (COG's engineer stating: "My exhibits speak more to the economics than they do the actual production."); *see also* Tr. 129: 17-25; Tr. 130: 1 (when

asked if COG provided any production data, Mr. Stolworthy said he did not see any, and acknowledged it was correct, therefore, that the Examiners cannot determine the extent of COG's waste and associated costs based on COG's exhibits).

Yet, in the Oil and Gas Act, production of oil and gas, and lack thereof, take center stage as the primary concern. *See* § 70-2-2. Four of the six definitions of waste in the Oil and Gas Act directly address concerns with waste from production, whether loss of production through lack of development, spacing and length of the laterals, and drilling, among other factors. *See* § 70-2-3.[8] The remaining two definitions of waste address potash resources and nonratable purchasing, which are inapplicable to the present cases. *See id.* The economics of drilling and operations as expressed by CapEx and NPV values play a minor role, when the primary concern of waste from production is not factored in. In fact, as stated in Case Nos. 21219 and 21220, "[e]conomics are not a significant factor in awarding operations (Commission Order No. R-10731-B)," *see* Mewbourne's Closing Argument, p. 4, and in those cases, same as in the present cases, no evidence was presented that COG would economically recover more oil and gas. In the present cases, WPX has, through its exhibits and testimony, demonstrated that WPX's development plan

[8] Even the definition of "surface waste" in §70-2-3B is evaluated in terms of loss of production, as the loss of surface is waste only if it results in the loss of beneficial use of oil or natural gas; the use of surface in and of itself is not waste if it promotes increased production. In Mr. Volk's Verified Statement, ¶ 6, and in his Exhibit C-4, COG argues that WPX's plan would require 50% more surface locations, implying that this results in surface waste. But, this is not the case. The same surface area would be used if COG drilled three-mile wells and confined WPX to the hypothetical drilling of one-mile wells, or if COG drilled two-mile wells and allowed WPX to drill its two-mile wells, as there would be the same 330' setbacks in each case, the same use of surface locations, and therefore the same use of surface area. In order to show that COG's plan would use less surface area, COG has to assume, as it shows in its Preferred Development Plan, depicted in Exhibit C-4, that the W/2 of Section 22 would not be developed, which is precisely the point WPX makes, that it would not be developed as a one-mile unit, but wasted. WPX's development of the W/2 of Section 22 as a two-mile unit, while respecting the state's 330' offset, would result in an abundance of production that would justify the use of the 330' setback and thus would not constitute surface waste. Plus, the state's requirement of the 330' setback is designed to protect correlative rights, as acknowledged by COG. Tr. 52: 20-25; Tr. 53: 1-2. Therefore, the 660' buffer, a combination of COG's setback and WPX's setback, by definition does not constitute waste, but is necessary to ensure that the owners in both units receive their just and equitable share of production in the units without waste.

would economically recover more oil and gas, substantially so, and that COG's development plan results in a substantial magnitude of waste. COG provides no evidence to the contrary.

Furthermore, WPX's engineer points out that COG's economic data in its Exhibits C-1 and C-4 are skewed and therefore provide an inaccurate representation. *See* Tr. 180: 15-25 (pointing out that COG's data has excluded the W/2 of Section 22, and therefore COG's comparison between WPX's and COG's plans is defective). When the comparison between the plans is properly calibrated, the numbers come out quite differently. *See* WPX's Rebuttal Exhibit 1. Under WPX's preferred plan of two-mile development for both operators in the W/2 of Sections 3, 10, 15 and 22 (plus COG's three-mile development in the E/2 of Sections 3, 10 and 15), COG's proposed NPV at 10%, based on its misaligned comparison, is actually a positive 33% when properly compared. *See id.* In addition, the proper comparison, of apples to apples, to use the words of Mr. Stolworthy, further shows that the CapEx costs are actually less in WPX's scenario, the productivity is increased by 17%, the rate of return is increased, and the D&C per foot is increased.[9] *See* Tr. 181: 3-20; *see also* WPX's Rebuttal Exhibit 1.

WPX's Rebuttal Exhibit 1 provides a chart, at the bottom, with the gross economic comparison of WPX's two-mile development versus if WPX were confined to one-mile development, and the economic differences are dramatic. *See* Tr. 181: 21-25; *see* WPX's Rebuttal Exhibit 1. It is not a practicable undertaking for WPX to develop the W/2 of Section 22 as a one-mile unit, and as a result, because WPX would not develop the unit, the correlative rights of the owners in the unit would not be protected if the Division confined WPX to the one-mile section. However, if WPX is allowed to develop the W/2 of Sections 15 and 22 as a two-

[9] Mr. Stolworthy's calculations in Rebuttal Exhibit 1 are as accurate as possible given the available data. He used the three-mile AFEs provided by COG, and WPX's numbers for the two-mile and one-mile wells. He also based his calculations on EUR estimates that were very generous on EURs for three-mile wells. *See* Tr. 182: 22-25; Tr. 183: 1-25.

mile unit, the owners would be afforded the opportunity to receive their just and equitable share of production without waste. *See* § 70-2-33H (showing that practicability of development and production is the proper standard for evaluating correlative rights); *see also* Tr. 166: 3-25; Tr. 167: 1-6.[10]

V. COG's Plan Has Been Vetted, And Approved, by the BLM Only for the Development of Sections 3 and 10 and the Drilling of Two-mile Wells.

On October 31, 2019, COG submitted its applications to the BLM for approval of two-mile laterals covering only Section 3 and 10. These APD applications corresponded with COG's well proposals, dated September 19, 2019, for its Rock Jelly Wells, proposed as two-mile laterals. It was not until April 22, 2020 that COG re-proposed its Rock Jelly Wells as three-mile wells covering Sections 3, 10, and 15. *See* COG's Exhibit A-3. In his Land Testimony, addressing BLM's approval of COG's three-mile wells, Mr. Hall asserted that "[f]ederal APDs for the proposed wells were approved on October 8, 2020." *See* COG's Exhibit A (Verified Statement of Hunter Hall), ¶ 8. However, in actuality, this is not the case. On October 8, 2020,

[10] COG will likely argue that in Case Nos. 21219-20, Mewbourne pursued the development of one-mile wells in Section 6, and that some operators may still consider the drilling of one-mile wells; however, Mewbourne's proposed wells are more than two miles from WPX's lands, and the specific constraints and limitations in geology and engineering of a section must be taken into account. Furthermore, in the present cases, unlike in Case Nos. 21219-20 where Mewbourne has no other option but a one-mile unit, WPX has the option, if granted, to drill two-mile wells instead of one-mile wells, and has demonstrated, herein, how WPX's proposed two-mile wells better protect correlative rights and prevent waste, while COG's proposed three-mile wells do not, and this should be the primary consideration when deciding between the two development plans. As a final consideration, the Division should note that both development plans in Case Nos. 21219-20 provide for the full development of the sections involved, while in the present cases, only WPX's plan guarantees the development of all sections.

the BLM approved the Rock Jelly Wells only as two-mile wells for Section 3 and 10, as originally proposed by COG, and has not approved the three-mile wells.[11] *See* Tr. p. 22: 4-11.

BLM's vetting process for APD approval is rigorous. Among the numerous criteria to be satisfied, COG must show that its proposed three-mile wells would result "in maximum ultimate recovery[12] of oil and gas with minimum waste and with minimum adverse effect on ultimate recovery of other mineral resources." 43 CFR §3162.1(a). COG has satisfied these criteria for its proposed and proven two-mile wells, but COG has not satisfied these criteria before the BLM for its proposed three-mile wells. In fact, COG has failed to provide any production data for its three-mile wells. Furthermore, the proposed encroachment of COG's three-mile well on WPX's two-mile development plan results in an adverse effect on the ultimate recovery of other mineral resources, namely, the bounty of production that WPX would generate from its two-mile wells.

C. Conclusion

COG had originally proposed development of Sections 3 and 10, both in the W/2 and E/2, with its Rock Jelly Wells as two-mile wells, a plan which the BLM reviewed and, based on its review, awarded APDs for two-mile wells, finding that the drilling of two-mile wells in these

[11] Mr. Hall confirms that COG's APD applications were only for two-mile units in Sections 3 and 10, Tr. 20: 9-12, and that the BLM evaluated the production, economics, and geology for a two-mile unit when granting the APDs. Tr. 20; 1-25. Mr. Hall claims that if COG applies to the BLM for approval of three-mile APDs, that the BLM would not have reason to deny the APDs because, as he describes, only the bottom hole would change. Tr. 22: 15-23. However, this is not the case. As Mr. Hall agrees, APD applications are governed by strict federal regulations, Tr. 19: 23-25, that account for production, waste, risk of operations, damage to resources, and environmental quality, among other numerous criteria. *See* 43 CFR §§3161.1 et al. There remains an open question whether the BLM would approve APDs for COG's three-mile unit given the fact that three-mile wells are riskier, can pose a greater threat to natural resources, the reservoir, and the environment, and because there is a question of diminishing returns from the third mile, three-mile wells might not achieve maximum ultimate recovery, as required by federal statute, compared to proven two-mile wells in the W/2 of Sections 3 and 10, and 15 and 22. Few if any three-mile wells have been drilled on federal lands in the Permian Basin, resulting in a dearth of data on which the BLM can rely for its review. To obtain federal APDs, COG would have to demonstrate to the BLM that a three-mile unit would satisfy the strict regulatory requirements.

[12] Maximum ultimate recovery means the recovery of oil and gas from leased lands which a prudent operator could be expected to make from that field or reservoir given existing knowledge of reservoir and other pertinent facts and utilizing common industry practices for primary, secondary or tertiary recovery operations. 43 CFR §3160.0-5.

sections would result in maximum ultimate recovery of oil and gas. WPX did not object to COG's original proposal because it allows WPX to develop the W/2 of Sections 15 and 22 in a manner that ensures maximum ultimate recover for its two sections. COG's re-proposal of the Rock Jelly Wells as three-mile wells, covering Sections 3, 10, and 15, undermines the effort to achieve maximum ultimate recovery of oil and gas in the W/2 of Sections 3, 10, 15 and 22. If COG is allowed to pursue its development plan, as re-proposed, it will confine WPX to a one-mile unit in the W/2 of Section 22, that practicably would alter its development plan, likely resulting in the loss of 2.5 million bbls of oil, 12 billion cubic feet of gas, and an additional loss of one million bbls of oil left permanently stranded in the reservoir due to COG's aberrantly wide horizontal spacing and lack of vertical spacing in the Wolfcamp A formation.

WPX's plan offers the ideal compromise for the splitting of Solomon's baby, a plan that would maximize production, prevent waste, protect correlative rights, and at the same time, promote the risk-laden transition to three-mile wells in New Mexico. WPX's plan provides for the drilling, as soon as this next year, of WPX's two-mile wells in the W/2 of Sections 15 and 22 and COG's drilling of two-mile wells in the W/2 of Section 3 and 10. And, at the same time, WPX's plan allows COG to proceed as a pioneer in the drilling of three-mile wells in the E/2 of Sections 3, 10, and 15, where COG can test and apply current technology to the drilling of three-mile wells at no risk or harm to any equipment, resources, correlative rights, or interests but its own. In the E/2 of said sections, WPX is not confined to a one-mile unit, but has the option to extend south and develop the E/2 of Sections 22 and 27 as a two-mile unit. This outcome is a win-win for WPX, COG and the state of New Mexico. New Mexico will be able to begin, in a responsible manner, the transition to three-mile wells, an important step in the development of its resources, and collect necessary data for the safe drilling and operation of future three-mile

wells; while ensuring that it receives maximum production, prevents waste and protects correlative rights in existing lands, specifically, the W/2 of Sections 15 and 22, that require the proven operations of two-mile wells for maximum recovery in an industry currently structured for the development of two-mile units. WPX's plan is the only plan that can guarantee the complete development of the W/2 of Sections 3, 10, 15 and 22, and thereby ensure maximum production. For the foregoing reasons, WPX respectfully requests that the Division approve WPX's development plan and deny COG's development plan.

D. Proposed Findings:

1. On September 19, 2019, COG originally proposed its Rock Jelly Wells as two-mile wells for the Wolfcamp formation underlying Sections 3 and 10, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico.

2. COG's two-mile well proposal allows WPX to develop the Wolfcamp formation as a two-mile unit underlying the W/2 of Sections 15 and 22, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico.

3. On October 31, 2019, COG submitted APD applications to the BLM for approval of its proposed two-mile wells.

4. On April 22, 2020, COG re-proposed its Rock Jelly Wells as three-mile wells, extending them into Section 15, which had been earmarked by WPX for development as a two-mile unit along with Section 22.

5. Beginning March 11, 2020, WPX, after receiving COG's re-proposal on March 2, 2020, entered into good faith negotiations that extended through October 7, 2020 to resolve the conflict, culminating in WPX offering to be a non-operator in the W/2 of Sections 15 and 22 if COG would develop the W/2 of Sections 15 and 22 as a two-mile unit along with the development of the W/2 of Sections 3 and 10 as a two-mile unit, in order to prevent waste, protect correlative rights and avoid the unnecessary drilling of untried and riskier three-mile wells.

6. On June 9, 2020, COG filed a pooling application in Case No. 21344, seeking an order pooling all mineral interests in the Wolfcamp formation underlying Sections 3, 10, and 15, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico.

7. On July 7, 2020, WPX filed a pooling application in Case No. 21371, seeking an order pooling all mineral interests in the Wolfcamp formation underlying the W/2 of Sections 15 and 22, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico.

8. COG did not provide production data to show estimated amounts of production received from its proposed three-mile wells or waste incurred from lack of production.

9. WPX provided production data of its proposed two-mile wells showing that WPX's plan would exceed the estimated production of COG's plan by 2.5 million bbls of oil, 12,000,000,000 cubic feet of natural gas, and avoid the stranding of an additional 1 million bbls of oil in the reservoir.

10. On October 8, 2020, the BLM approved COG's APDs for the development of Section 3 and 10 as a two-mile unit, which stand ready to be developed.

11. Currently two-mile wells provide a proven method within the industry for developing irreplaceable resources of oil and gas.

12. Rigs available for drilling wells, under existing technology, are rigs designed for the drilling of two-mile wells, which are currently being adapted for drilling three-mile wells.

13. WPX owns 100% working interest in Section 22, and therefore 50% working interest in the W/2 of Sections 15 and 22.

14. WPX is an experienced operator with experience operating in the subject lands and surrounding area.

15. The geology in the W/2 of Sections 3 and 10, and 15 and 22, is conducive for the optimal development of two-mile units.

16. The geology of the Midland Basin is qualitatively different from the geology of the Delaware Basin, a difference that should be taken into consideration when deciding between two-mile and three-mile development.

17. COG's estimated costs for drilling a three-mile well are twice that of WPX's costs to drill a two-mile well.

18. Owners in Section 22 support WPX's development plan over COG's development plan.

E. Proposed Conclusions:

1. The prevention of waste is of paramount importance and the primary concern of the Division.

2. Under the statutory standard for the protection of correlative rights, the Division should promote plans, so far as practicable to do so, which can be practicably developed to provide owners their just and equitable share of production without waste.

3. Based on the production data provided to the Division for review and consideration, the Division should acknowledge the need to avoid the kind of waste posed by COG's development plan and to encourage the kind of superior recovery of oil and gas presented by WPX's development plan, for the prevention of waste and protection of correlative on behalf of both the owners and the public.

4. Given current constraints and limitations of the industry, and the industry's preference for investing in two-mile development, WPX, and a majority of operators, would find the development of one-mile wells to be economically undesirable if the option of developing two-mile wells is available.

5. Both WPX and COG, given the approval of COG's two-mile APDs, are well positioned to promptly drill and develop two-mile units, the W/2 of Sections 15 and 22 for WPX, and the W/2 of Sections 3 and 10 for COG, as said units provide opportunity for practicable development that ensures the protection of correlative rights, the prevention of waste, and the unnecessary drilling of untried and riskier three-mile wells.

6. Given the potential waste of COG's development plan and the superior economic recovery of oil and gas from WPX's development plan, the Division finds that the 50% working interest held by WPX in the W/2 of Sections 15 and 22 provides a sufficient basis for operatorship, in conjunction with WPX's established experience as an operator in this area, and the geology shown to be conducive for optimal development.

7. Three-mile wells are untried in New Mexico and are riskier than proven two-mile wells, which should be taken into account when there is the option to drill two-mile wells under conditions of superior recovery.

8. Given that COG's estimated costs for drilling a three-mile well are twice that of WPX's costs, COG has not demonstrated sufficient recovery and prevention of waste to warrant the risk and expense of drilling three-mile wells in the W/2 of Sections 3, 10 and 15, when the option is available for drilling proven two-mile wells.

9. COG's application for three-mile wells in the W/2 of Sections 3, 10, and 15 should be denied.

10. The Division recognizes that, as drilling technology advances and adapts to the challenges of drilling three-mile wells in New Mexico's Permian Basin, the drilling of three-mile wells will likely become less risky over time, and therefore, should cautiously be encouraged; consequently, the Division should allow COG's proposed drilling of three-mile wells in the E/2 of Sections 3, 10 and 15, where the risk and potential harm, assumed by COG, can be better managed and contained, and not infringe upon the rights of WPX and its owners, as they develop their two-mile units covering the W/2 of Sections 15 and 22 and the E/2 of Sections 22 and 27.

Respectfully Submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was filed with the New Mexico Oil Conservation Division and was served on counsel of record via electronic mail on November 20, 2020:

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