RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION

Oil and Gas Docket No. 08-0302158

Application of Ammonite Oil & Gas Corporation Pursuant to the Mineral Interest Pooling Act for the Apache Pelican Unit, Well No. 106H, Phantom (Wolfcamp) Field, Loving County, Texas

Oil and Gas Docket No. 08-0306268

Application of Ammonite Oil & Gas Corporation Pursuant to the Mineral Interest Pooling Act for the Apache Pelican Unit, Well No. 109H, Phantom (Wolfcamp) Field, Loving County, Texas

Oil and Gas Docket No. 08-0306269

Application of Ammonite Oil & Gas Corporation Pursuant to the Mineral Interest Pooling Act for the Apache Pelican Unit, Well No. 108HR, Phantom (Wolfcamp) Field, Loving County, Texas

Oil and Gas Docket No. 08-0306270

Application of Ammonite Oil & Gas Corporation Pursuant to the Mineral Interest Pooling Act for the Apache Pelican Unit, Well No. A-1, Phantom (Wolfcamp) Field, Loving County, Texas

PROPOSAL FOR DECISION

EXAMINERS: Jennifer Cook – Administrative Law Judge
Richard Eyster, P. G. – Technical Examiner

PROCEDURAL HISTORY:
Hearing on the Merits Date - October 23, 2017
Completion of Post-Hearing Briefing and Close of Record - January 2, 2018
Proposal for Decision Issued - April 2, 2018

APPEARANCES:
For Ammonite Oil & Gas Corp. -
Robert G. Hargrove
Osborn, Marsland & Hargrove

For Apache Corporation -
Brian R. Sullivan, Sandra B. Buch and Eno Peters
McElroy, Sullivan, Miller & Weber, L.L.P.

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I. Statement of the Cases

Four docketed cases are presented together in this Proposal for Decision ("PFD") because they have common facts, parties and legal issues.

Ammonite Oil & Gas Corporation ("Applicant" or "Ammonite") filed four applications ("Applications") under the Mineral Interest Pooling Act ("MIPA"),[1] three requesting the Railroad Commission ("Commission") to pool its leased acreage into a unit for an already drilled horizontal well on Apache Corporation's ("Apache" or "Respondent's") Apache Pelican Unit ("Apache Unit") in Loving County. Ammonite's fourth application is for a proposed well in the Apache Unit. The four wells at issue are Well Nos. 106H, 108HR, 109H and proposed well A-1 (referred to as "106H," "108HR," "109H," "A-1" and collectively as "Wells"). Apache requests the Applications be denied.

Ammonite asserts the proposed pooling will prevent waste and protect correlative rights. Ammonite claims its leased riverbed tract should be pooled with the Wells on the Apache Unit such that the Apache Unit will be divided into five approximately equal portions, four to be MIPA units—one for each of the Wells, and each pooled with the corresponding segment of Ammonite's riverbed tract. As proposed by Ammonite, the fifth portion of the Apache Unit would contain Well No. 104H; Ammonite originally applied to have this well pooled with Ammonite's riverbed tract but withdrew the application after it realized a segment of the riverbed tract is already pooled with acreage on the other side of the river. The riverbed tract at issue traces the boundary of the Apache Unit facing the river. The riverbed tract meanders and consequently is nonlinear. The tract begins at one side of the Pecos riverbed and ends at the other, such that the tract is relatively narrow. Ammonite argues, due to the shape of the tract, it is not technologically or economically feasible to drill a well to produce the underlying minerals and the tract must be pooled for the tract's mineral interest owners to obtain their fair share of minerals and prevent waste.

Apache asserts there should be no forced pooling in this case. Apache claims the drilled wells do not produce minerals from Ammonite's riverbed tract. There is no drainage and Ammonite's acreage provides no contribution to production. Apache claims Ammonite's voluntary pooling offer was not fair and reasonable; it provided no benefit to Apache, would cause Apache to incur additional costs for additional equipment, would cause lease line spacing problems and unfairly dilute the Apache Unit mineral interest owners' portion. Apache further asserts pooling will not prevent waste or protect correlative rights. Apache claims the drilled wells do not drain minerals from the Ammonite tract. Pooling will not impact the amount of hydrocarbons produced or lost, so waste is not at issue. Apache also asserts pooling will not protect correlative rights because the Ammonite tract minerals are still in place beneath the Ammonite tract. In fact, Apache asserts, pooling will negatively impact the Apache Unit mineral interest owners' correlative rights by taking minerals produced solely from under the Apache Unit and giving a portion to Ammonite. Apache further asserts that the offer concerning the proposed Well A-1 is not fair and reasonable because it is vague and indefinite. Additionally, there was no expert testimony or substantive information establishing that

[1] TEX. NAT. RES. CODE §§ 102.001-102.112.

the A-1 will prevent waste, protect correlative rights or prevent the drilling of unnecessary wells.

The Administrative Law Judge and Technical Examiner ("Examiners") find insufficient evidence a fair and reasonable offer was made by Ammonite to Apache, which is required by the MIPA. Further, the Examiners find Ammonite has failed to demonstrate establishing the proposed pooled units will prevent waste, protect correlative rights or prevent the drilling of unnecessary wells. Moreover, the Examiners find there is no sufficient description of the proposed units such that the Applications should be denied. The Examiners recommend the Commission dismiss and deny the Applications.

The Examiners respectfully submit this PFD and recommend the Commission dismiss and deny the Applications.

II. Jurisdiction and Notice[2]

Sections 81.051 and 81.052 of the Texas Natural Resources Code provide the Commission with jurisdiction over all persons owning or engaged in drilling or operating oil or gas wells in Texas and the authority to adopt all necessary rules for governing and regulating persons and their operations under the jurisdiction of the Commission. The MIPA grants the Commission authority to pool mineral interests into a unit under certain conditions.[3]

On September 21, 2017, the Hearings Division of the Commission sent a Notice of Hearing on the Applications via first-class mail to all interested parties setting a hearing date of October 23, 2017.[4] The notice contained (1) a statement of the time, place and nature of the hearing; (2) a statement of the legal authority and jurisdiction under which the hearing is to be held; (3) a reference to the particular sections of the statutes and rules involved; and (4) a short and plain statement of the matters asserted.[5] The hearing was held on October 23, 2017, as noticed. Consequently, all parties received more than 30 days' notice.[6] Applicant and Respondent appeared at the hearing on October 23 and presented evidence and argument.

III. Applicable Legal Authority

At issue in these cases is whether Ammonite's mineral interests should be pooled into units for the Wells under the MIPA and involuntarily as to Apache and the other mineral interest owners of the proposed pooled units.

Pertinent sections of the MIPA at issue in this case are as follows:

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[2] The transcript for the hearing on the merits on October 23, 2017 is referred to as "Tr. at [pages:lines]." Applicant's exhibits are referred to as "Applicant Ex. [exhibit no(s).]." Respondent's exhibits are referred to as "Respondent Ex. [exhibit no(s).]."
[3] *See* TEX. NAT. RES. CODE § 102.011.
[4] Tr. at 48:10 to 50:10; Applicant Ex. 20-22.
[5] *See* TEX. GOV'T CODE §§ 2001.051, 2001.052; 16 TEX. ADMIN. CODE §§ 1.41, 1.42, 1.45.
[6] *See* TEX. NAT. RES. CODE § 102.016.

> Sec. 102.011. AUTHORITY OF COMMISSION. When two or more separately owned tracts of land are embraced in a common reservoir of oil or gas for which the commission has established the size and shape of proration units, whether by temporary or permanent field rules, and where there are separately owned interests in oil and gas within an existing or proposed proration unit in the common reservoir and the owners have not agreed to pool their interests, and where at least one of the owners of the right to drill has drilled or has proposed to drill a well on the existing or proposed proration unit to the common reservoir, the commission, on the application of an owner specified in Section 102.012 of this code and for the purpose of avoiding the drilling of unnecessary wells, protecting correlative rights, or preventing waste, shall establish a unit and pool all of the interests in the unit within an area containing the approximate acreage of the proration unit, which unit shall in no event exceed 160 acres for an oil well or 640 acres for a gas well plus 10 percent tolerance.
>
> Sec. 102.012. OWNERS AUTHORIZED TO APPLY FOR POOLING. The following interested owners may apply to the commission for the pooling of mineral interests:
> (1) the owner of any interest in oil and gas in an existing proration unit or with respect to a proposed unit;
> (2) the owner of any working interest; or
> (3) any owner of an unleased tract other than a royalty owner.
>
> Sec. 102.013. REQUIRED VOLUNTARY POOLING OFFER. (a) The applicant shall set forth in detail the nature of voluntary pooling offers made to the owners of the other interests in the proposed unit.
> (b) The commission shall dismiss the application if it finds that a fair and reasonable offer to pool voluntarily has not been made by the applicant.
> (c) An offer by an owner of a royalty or any other interest in oil or gas within an existing proration unit to share on the same yardstick basis as the other owners within the existing proration unit are then sharing shall be considered a fair and reasonable offer.[7]

According to the MIPA, for an applicant to prevail, the following must be established:

1. There are two or more separately owned tracts of land;
2. They are embraced in a common reservoir of oil or gas;
3. The commission has established the size and shape of proration units for the reservoir;
4. There are separately owned interests in oil and gas within an existing or proposed proration unit in the common reservoir;
5. The owners have not agreed to pool their interests;

[7] TEX. NAT. RES. CODE §§ 102.011, 102.012, 102.013.

6. At least one of the owners of the right to drill has drilled or has proposed to drill a well on the existing or proposed proration unit to the common reservoir;
7. An application for the Commission to pool has been made by one of the following:
   (1) the owner of any interest in oil and gas in an existing proration unit or with respect to a proposed unit;
   (2) the owner of any working interest; or
   (3) any owner of an unleased tract other than a royalty owner.
8. The applicant made a fair and reasonable offer to pool voluntarily; and
9. A pooled unit will avoid the drilling of unnecessary wells, protect correlative rights, or prevent waste.

If these criteria are met, the Commission must establish a unit and pool all the interests in the unit within an area containing the approximate acreage of the proration unit, which cannot exceed 160 acres for an oil well plus ten percent tolerance.

IV. Discussion of Evidence

Ammonite initially filed five MIPA applications regarding the Apache Unit. At hearing it was discovered that Ammonite had already pooled the northwest portion of the riverbed tract at issue as part of a separate unit not at issue in this case. Consequently, the portion of the riverbed tract already pooled cannot be pooled into any units proposed to be formed from the Apache Unit. After the hearing, Ammonite withdrew its application for a MIPA application regarding the Apache Unit's 104H well, which is the most northwest well on the Apache Unit. Ammonite's MIPA application regarding the 104H well was dismissed.[8]

A. Summary of Applicant's Evidence and Argument

Ammonite asserts the proposed pooling will prevent waste and protect correlative rights. Ammonite claims its leased riverbed tract should be pooled with the Apache Unit. The riverbed tract at issue traces the boundary of the Apache Unit facing the river. It meanders and consequently is nonlinear. The tract begins at one side of the Pecos River riverbed and ends at the other, such that the tract is relatively narrow. Ammonite argues that, due to the shape of the tract, it is incapable of drilling a well to produce the minerals and the tract must be pooled for the tract's mineral interest owners to obtain their fair share of minerals and prevent waste.

Ammonite's only witness was Mr. William Osborn. Mr. Osborn testified as a fact witness and not as an expert.[9] He is the president of Ammonite and co-owns the company with his wife. He has a Bachelor of Science in Geology, and a law degree from the University of Texas School of Law. In the past, he worked as a law clerk and examiner

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[8] *See* Tex. R.R. Comm'n, *Application of Ammonite Oil & Gas Corp Pursuant to the Mineral Interest Pooling Act for the Apache Pelican Unit, Well No. 104H, Phantom (Wolfcamp) Field, Loving County, Texas*, Oil and Gas Docket No. 08-0306267 (Order of Dismissal issued November 3, 2017).

[9] *See, e.g.*, Tr. at 28:15 to 29:7.

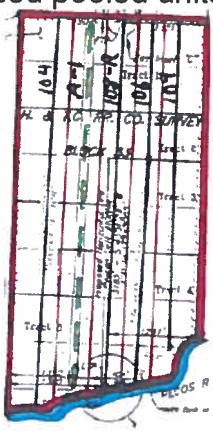
for the Commission. He left the Commission in 1989 and has been in private practice since, with a focus on oil and gas regulatory issues.[10]

Mr. Osborn founded Ammonite after he realized there were horizontal wells drilled to the river, but the leases did not include the riverbed. He approached the General Land Office ("GLO"), which manages the mineral rights of the riverbeds that are owned by the State of Texas. He testified that while no one case has a significant financial impact, the cumulative impact does. He has worked on approximately 200 similar situations with this issue.[11]

Mr. Osborn testified that on weekends he looks at horizontal drilling permits issued for wells that border the State's riverbeds. As he locates them, he compiles a list and nominates tracts at the GLO State lease sale. He nominated, as a tract, the section of the Pecos River that borders the Apache Unit; Ammonite was the successful bidder. Consequently, Ammonite is currently the lessee of an oil and gas lease with the GLO for this stretch of river. He has never seen a horizontal well that meanders and winds with a riverbed.[12]

Ammonite provided printouts from the Railroad Commission GIS mapping system showing the area of interest in this case. It is in Loving County along the Pecos River. There are four wells drilled on the other side of the river from the Apache Unit. The most northwest well is operated by a different operator, and Ammonite's riverbed tract is part of the pooled unit for that well. The other three wells are Apache wells and Ammonite's riverbed tract is not in a pooled unit for any of those wells.[13]

He also provided a copy of a plat of the Apache Unit with his added hand markings showing how he proposed the Apache Unit to be divided into five units; he also hand-marked in blue an estimate of the inclusion of the riverbed tract. This is the plat that he submitted with his offer to Apache to voluntarily pool the proposed units.[14] A cropped copy showing the hand-marked Apache Unit plat attached to the offer and depicting the proposed pooled units follows.



[10] Applicant Ex. 1; Tr. at 18:08 to 20:17.
[11] Tr. at 20:18 to 21:15.
[12] Tr. at 71:10 to 72:11.
[13] Tr. at 23:17 to 25:25; Applicant Ex. 3, 4.
[14] Applicant Ex. 2, 19; Tr. at 21:16 to 23:15.

The red lines are proposed boundaries. The green dashed line is the proposed A-1. Since Ammonite has withdrawn its MIPA application regarding the 104H, Ammonite requests that the 320-acre Apache Unit be divided into five 64-acre tracts and pool four of them, each with six-tenths of an acre of the adjacent Pecos riverbed tract. Thus, each of the four units would be approximately 64.6 acres.[15]

Ammonite provided Commission records relating to the 106H, 108HR and 109H. The 106H is the first well that was drilled. It is completed in the Sandbar (Bone Spring) Field. The permit application for the 109H includes both the Sandbar (Bone Spring) and the Phantom (Wolfcamp) Fields as proposed completion fields. The permit application for the 108HR proposes completion in the Phantom (Wolfcamp) Field. Apache has designated 320 acres to the Apache Unit. Apache splits the 320 designated acres into fourths, one fourth for each well in the unit—the 104H, 106H, 108HR and 109H. Eighty acres is designated for each well in the unit.[16]

First in a letter dated May 9, 2016, Ammonite sent Apache an offer to voluntarily pool only the 106H because the other Apache Unit wells were not drilled and Mr. Osborn was unaware of them.[17] After the additional three wells were permitted in the Apache Unit, in a letter dated May 23, 2017 (the "Offer Letter"), Ammonite sent Apache an offer to voluntarily pool the four wells permitted on the Apache Unit and the proposed A-1.[18] The purpose of the letters was to make the voluntary pooling offer required by the MIPA. The form of both letters is the same. It is a form offer Ammonite uses in other Ammonite MIPA cases and has used in cases before the Commission.[19] An attachment to the offer is Apache's plat of the Apache Unit, on which Mr. Osborn marked in blue the acreage to be contributed by Ammonite. Also attached to the May 9, 2016 letter is the lease Ammonite has with the GLO purporting to cover the riverbed tract adjacent to the Apache Unit. The lease states the tract is three acres. A general description for the proposed five units describing the acreage to be contributed by Ammonite in the Offer Letter is:

> Ammonite offers to contribute 0.6 adjacent riverbed acres to each unit, at the point where each 64 acre rectangle touches the river, such acreage being contributed from GLO riverbed lease 116165 to Ammonite. Ammonite would leave for decision by Apache the exact boundaries of each such unit, so long as 0.6 state riverbed acres, more or less, are contributed to each unit.[20]

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[15] *Ammonite Oil & Gas Corporation's Closing Argument in Support of its MIPA Applications* at 4 (November 29, 2017) ("*Ammonite Closing*").
[16] Tr. at 26:1 to 40:15; Applicant Ex. 5-17.
[17] Tr. at 41:2 to 41:19; Applicant Ex. 18.
[18] Tr. at 44:2 to 44:20; Applicant Ex. 19.
[19] Tr. at 41:24 to 42:7; Applicant Ex. 18, 19.
[20] Applicant Ex. 19 at 2.

Further in the Offer Letter, he provides a similar description as to each of the proposed five units.[21] Mr. Osborn testified he attempted to describe what the five units would be for the Wells.[22]

Regarding the proposed A-1, Mr. Osborn added that well due to a perceived gap in the drilling pattern of the Apache Unit between the 104H and the 108HR.[23] He proposed that Apache will operate that well, "if it is willing."[24] When asked about how the A-1 would work, Mr. Osborn testified:

> Well, hopefully there would be a joint operating agreement and designating Apache as operator with Ammonite contributing a small bit of acreage to a joint well for the proposed unit.[25]

He further testified Ammonite would propose to pay its portion of the cost of drilling in proportion to the acreage that it contributes to the A-1 unit. [26]

Mr. Osborn testified that Apache did send a response to the Offer Letter raising a variety of concerns about the terms in the offer. Mr. Osborn testified that he believes the concerns could have been worked out.[27]

Mr. Osborn testified that the May 23, 2017 letter supplemented by the earlier May 9, 2016 letter constitutes Ammonite's voluntary pooling offer required by the MIPA. He testified the offer is intended to be fair and reasonable.[28]

Ammonite seeks a risk penalty of 10%, and that is the risk penalty Ammonite proposed in its voluntary pooling offer. Mr. Osborn believes a ten percent risk factor is reasonable based on public statements made by Apache and his understanding that these are low risk wells. Mr. Osborn reviewed statements made by Apache during recent investor presentations. Mr. Osborn provided a document with some quotes by Apache.[29]

GLO has consented to the pooling that Ammonite is requesting, as reflected in a memorandum signed by GLO's Commissioner. The memorandum also suspends the primary terms of the applicable contractual leases pending resolution of these cases, referencing the force majeure clause in the leases.[30]

Mr. Osborn testified as to the applicability of the MIPA in this case and discussed MIPA requirements. Both fields at issue—the Sandbar (Bone Spring) and Phantom (Wolfcamp) Fields—were discovered after March 8, 1961. Mr. Osborn testified there is

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[21] *Id.* at 2, 3.
[22] Tr. at 45:4 to 45:23.
[23] Tr. at 45:24 to 47:3.
[24] Tr. at 46:9.
[25] Tr. at 46:12 to 46:15.
[26] Tr. at 45:24 to 47:3.
[27] Tr. at 47:4 to 48:1.
[28] Tr. at 48:2 to 48:9.
[29] Tr. at 67:11 to 70:11; Applicant Ex. 34.
[30] Tr. at 55:16 to 57:5; Applicant Ex. 29.

some overlap between the two designated intervals of these fields.[31] Mr. Osborn testified and submitted a map showing wells in the area on both sides of the Pecos River are completed in the Phantom (Wolfcamp) Field. He also provided maps showing Sandbar (Bone Spring) wells in the area. Based on this information, Mr. Osborn believes the Apache Unit and the tract proposed to be pooled are embraced in a common reservoir of oil or gas. Mr. Osborn testified the State's ownership of the riverbed ceases upstream from the proposed units towards New Mexico. [32]

Mr. Osborn testified Ammonite's concern with Apache not including Ammonite's riverbed tract in the Apache Unit is that the riverbed tract will be stranded with the mineral interest owners not receiving their fair share and that pooling will cure such stranding.[33]

Mr. Osborn acknowledged all the wells in the Apache Unit that have been drilled are in compliance with spacing requirements as to the river, and no exceptions to the spacing requirements have been applied for or granted.[34]

According to a status report from Ammonite to the GLO, and prepared by Mr. Osborn, for the period between 2011 and 2013, it shows 21 Pecos River tracts have been included in units. He also testified he does not know how many other Pecos River tracts the State has pooled in the Sandbar (Bone Springs) or Phantom (Wolfcamp) Fields. He does not know how much royalties have been paid or production claimed.[35]

Mr. Osborn provided no calculations or other evidence of the recoverable hydrocarbons under Ammonite's leased tract, the proposed units or the State's Pecos River riverbed. Ammonite provided no geologic or engineering evidence to support the Applications. Ammonite provided no metes and bounds survey of its tract.[36]

Mr. Osborn acknowledged if Ammonite's request for the pooled units were granted, the ownership in each of the three units would be different. He acknowledged Apache would have to obtain Rule 37 exceptions if the Apache Unit were divided into the proposed units.[37] Mr. Osborn agreed if the Apache Unit were divided and pooled as proposed, Apache would be required to have one separator and one set of tanks for each well such that Apache would have to have five separators and five sets of tanks instead of one. The requirement could be waived by the royalty and working interest owners, but currently waivers have not been obtained. These issues were not addressed in Ammonite's voluntary pooling offer.[38]

Mr. Osborn acknowledged there are currently five tracts comprising the one Apache Unit. If the Apache Unit were divided into five units and tracts (different than the

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[31] Applicant Ex. 23-28; Tr. at 50:17 to 55:13.
[32] Tr. at 57:6 to 66:19; Applicant Ex. 31, 32.
[33] Tr. at 70:15 to 71:9.
[34] Tr. at 75:24 to 76:11.
[35] Tr. at 85:18 to 87:11; Respondent Ex. 1.
[36] Tr. at 81:21 to 82:9.
[37] Tr. at 93:1 to 93:14.
[38] Tr. at 78:13 to 79:8.

current five tracts comprising the Apache Unit), the ownership in each well would be different and affect the interest owners.[39]

Mr. Osborn admitted that for the proposed A-1 well, no costs were proposed. While Ammonite proposes that Apache drill and operate it, Mr. Osborn testified that, alternatively, he would propose a consulting firm for the drilling of the well.[40]

On cross-examination, Apache offered exhibits showing that a portion of the riverbed adjacent to the Apache Unit is already pooled with acreage on the other side of the river. Mr. Osborn testified he was not aware of that but acknowledged that a portion of the riverbed adjacent to the Apache Unit is already pooled. [41]

B. Summary of Respondent's Evidence and Argument

Apache asserts there should be no forced pooling in this case. Apache claims the wells currently drilled on the Apache Unit do not produce minerals from Ammonite's riverbed tract. There is no drainage and Ammonite provides no contribution. Apache claims Ammonite's voluntary pooling offer was not fair and reasonable; it provided no benefit to Apache, would cause Apache to incur additional costs for additional equipment, would cause lease line spacing problems, and would unfairly dilute the Apache Unit mineral interest owners' portions. Apache further asserts pooling will not prevent waste or protect correlative rights. Apache claims the wells already drilled do not drain minerals from the Ammonite tract. Pooling will not impact the amount of hydrocarbons produced or lost, so waste is not at issue. Apache also asserts pooling will not protect correlative rights because the Ammonite tract minerals are still in place beneath the Ammonite tract. In fact, Apache asserts, pooling will negatively impact the Apache Unit mineral interest owners' correlative rights by taking minerals produced solely from under the Apache Unit and giving a portion to Ammonite. Apache claims the offer to pool the A-1 well is too vague and indefinite, rendering the offer unfair and unreasonable. Apache also asserts there was no showing as to how the A-1 will prevent waste, protect correlative rights or prevent the drilling of unnecessary wells. Apache argues the boundaries of Ammonite's tract are uncertain and this problem is compounded by the fact that a segment of the Ammonite tract adjacent to the Apache Unit is already pooled in another unit; Ammonite fails to provide any description or plat showing this unavailable segment.

Apache's first witness was Randy Earley. He is employed with Apache as a Regulatory Manager. He has a mechanical engineering degree from Texas A&M University. He worked at the Commission from 1978 to 2005, when he retired as District Director in the Kilgore District Office. He then worked as a consultant before becoming employed by Apache in 2015. At the hearing he was offered, without objection, and designated as an expert witness in regulatory matters.[42]

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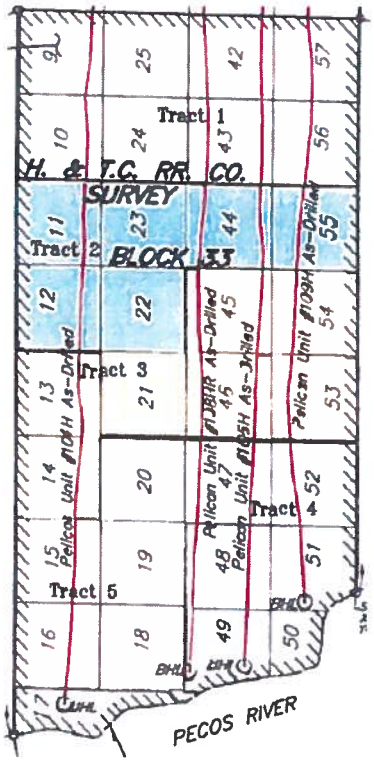
[39] Tr. at 76:12 to 78:12.
[40] Tr. at 88:5 to 88:17.
[41] Respondent Ex. 2, 3; Tr. at 90:7 to 91:21.
[42] Tr. at 105:7 to 108:10.

The Apache Unit is shaped similar to a rectangle—tracing from the northeast to the southwest—with the Pecos River providing a serpentine border on the southwest.[43] Apache provided a series of Commission records. The 104H, 106H, 108HR and 109H were permitted as part of the "Pelican Unit" consisting of 320 acres. The "Pelican Unit" is the Apache Unit in this case. The completion date for the 106H was August 6, 2016. The 106H is the only well in the unit with completion papers filed. All wells have been completed and Apache is in the process of submitting completion papers for the remaining wells. The 108HR had to be moved to a different surface location during drilling. The wells comply with all spacing requirements as to the riverbed. There are five tracts in the Apache Unit, which are combined to form the 320-acre unit.[44] A diagram of the Apache Unit showing the five tracts comprising the current Apache Unit follows.[45]



The field rules for the Sandbar (Bone Spring) Field designate the field as an Unconventional Fracture Treated Field and contain lease line spacing limits of 330 feet with zero between well spacing. There is a first and last take point requirement of 200 feet and perpendicular spacing for all take points of 330 feet. The standard proration unit size for the field is 320 acres. The field rules for the Phantom (Wolfcamp) Field designate the field as an Unconventional Fracture Treated Field and contain lease line spacing limits of 330 feet with zero between well spacing. There is a first and last take point requirement of 200 feet and perpendicular spacing for all take points of 330 feet. The standard proration unit size for the field is 320 acres. These rules are the same for both fields.[46] All

[43] Tr. at 108:19 to 110:2; Respondent Ex. 7, 8.
[44] Tr. at 110:3 to 119:5; Respondent Ex. 10-15.
[45] Respondent Ex. 25.
[46] Tr. at 119:6 to 121:15; Respondent Ex. 16, 17.

of the Wells have last take points over 200 feet from the lease line, including the lease line that is the Pecos River riverbed.[47]

Mr. Earley provided graphical representations of the production from the Apache Unit wells in relation to the Commission's allowable production for each well. He provided both a monthly and daily analysis. According to the analysis and Mr. Earley's testimony, the wells are at full capability and are not meeting their allowable and will not benefit from any additional allowable acreage obtained by pooling Ammonite's tract.[48]

Mr. Earley testified there would be additional burden to Apache due to Statewide Rule 26[49] if the Apache Unit were divided into the three pooled units proposed by Ammonite. He said each well would be in a different unit, and each would require individual separation equipment and standard equipment. If the unit is divided and pooled as proposed instead of the current one pooled unit, five facilities would be needed instead of one, such that Apache would need four additional separators and four additional tank batteries. He estimates the cost for the additional equipment to be between $250,000 and $750,000 per well.[50]

Mr. Earley discussed the risks of drilling wells. He testified there are more risks than just whether the well will be a dry hole. There are risks associated with costs in a drilling operation. He stated even in a well-established field, there are still drilling risks. He discussed risks such as lost circulation zones. For another example, he testified weather-related incidents can occur and increase costs.[51]

Mr. Earley testified pooling acreage into a unit that does not drain the well will not increase the ultimate recovery of that well or protect correlative rights. He recommends Ammonite drill a vertical or horizontal well under the riverbed tract acreage.[52]

Apache's second witness was Casey Cadenhead. He is employed as a landman for Apache. He has a degree from Texas A&M University and has been an independent landman since 2008. He is a registered professional landman and started working for Apache in 2014. Mr. Cadenhead testified as an expert witness.[53]

Mr. Cadenhead discussed Ammonite's offer to voluntarily pool with Apache. He testified he does not have and Ammonite's offer did not contain a survey depicting the metes and bounds description of the riverbed tract Ammonite proposes to pool. He testified that is an important consideration for Apache and that Apache would need a "valid legal description," which was not provided by Ammonite.[54]

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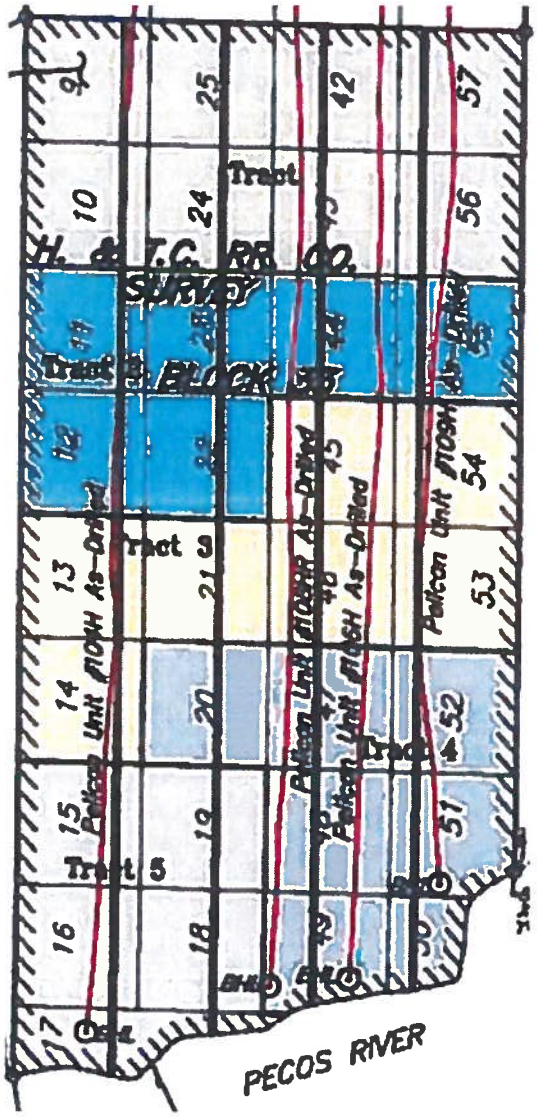
[47] *See, e.g.*, Respondent Ex. 15.
[48] Tr. at 121:16 to 126:4; Respondent Ex. 18-21.
[49] 16 TEX. ADMIN. CODE § 3.26.
[50] Tr. at 126:5 to 127:3.
[51] Tr. at 127:4 to 128:19.
[52] Tr. at 130:2 to 130:24.
[53] Tr. at 131:7 to 132:20.
[54] Tr. at 134:22 to 135:12; Respondent Ex. 22.

In a letter dated June 29, 2017 from Apache to Ammonite, Apache identifies a variety of problems with Ammonite's Offer Letter and states the offer is not fair and reasonable. As of the date of the hearing, Mr. Cadenhead testified that Ammonite has not made any effort to address the issues raised.[55]

Mr. Cadenhead provided graphs and charts showing a breakdown of the different interest types in the Apache Unit and how the interests would be impacted if the Ammonite tract were pooled with the Apache Unit tracts.[56] A diagram of the Apache Unit showing the current tracts interpolated with the five units proposed by Ammonite follows.[57]



Mr. Cadenhead discussed the composition of the Apache Unit and the complications that would arise if the unit were split as proposed. The current five tracts

[55] Tr. at 136:24 to 139:4; Respondent Ex. 23, 24.
[56] Respondent Ex. 25-27.
[57] Respondent Ex. 26.

comprising the Apache Unit do not go uniformly across the unit. He testified this would implicate Statewide Rule 37 spacing limits if the proposed pooling is approved, requiring spacing exceptions to drill additional wells. Apache would also have to build more facilities if the Apache Unit were divided, because there would be facilities needed for each unit as required by Statewide Rule 26. He testified currently the potential problems with Statewide Rules 26 and 37 do not exist because there is one unit encompassing all tracts and wells within the unit. Dividing the Apache Unit would change mineral interest ownership, with some mineral interests not participating in wells they currently participate in.[58]

Mr. Cadenhead testified that there is no benefit to Apache in the Offer Letter or in the proposed pooling. He stated the proposed pooling would cause a dilution of the Apache Unit interest owners' portion and the only beneficiary would be the riverbed interest owners. The pooling would also cause the total acres pooled to be 323, assuming Ammonite's assertion that the riverbed tract is approximately three acres. His calculations were based on the proposal in the Offer Letter and before it became apparent that a segment of the riverbed tract is already pooled. According to Mr. Cadenhead's calculation, if Ammonite's applications are granted, Ammonite would become entitled to approximately one percent (0.93 percent) of the interest in the pooled units, and the current mineral interest owners' percentage would decrease.[59]

Mr. Earley provided a Model Form Operating Agreement that he stated is the joint operating agreement with the other working interest owners in the Apache Unit. He testified it contains a penalty of 400% of the interest owners' portion of the costs, which he claims represents the market rate. He testified that a 10% risk penalty is too low.[60] He provided an example and testified that there are two leases in the Apache Unit that limit pooling authority to 320 acres, which is the current size of the Apache Unit. He opines that for all the reasons mentioned, the offer in the Offer Letter is not fair and reasonable.[61]

Apache's third witness was Lauren Kirik. Ms. Kirik is a geologist employed by Apache. The geological area at issue in this case is an area of focus for her at Apache. She has testified as an expert witness in other Commission proceedings. She testified, without objection, as an expert witness in geology.[62]

Ms. Kirik provided a map of the area at issue. It shows the location of wells used to develop a cross section covering approximately 20 miles.[63] She provided a depositional schematic of the area. She testified the target interval is composed of the organic source rock. The target interval of the Apache Unit wells ranges between 10,000 to 11,000 feet. She testified it is a tight rock and described the drilling as, in essence, a mining operation. The only method to produce hydrocarbons is through hydraulic fracture stimulation. The hydrocarbons are not mobile; it is rock which must be broken to extract the hydrocarbons.

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[58] Tr. at 139:5 to 143:19; Respondent Ex. 25-26.
[59] Tr. at 143:20 to 146:8; Respondent Ex. 27.
[60] Tr. at 146:9 to 148:3; Respondent Ex. 28.
[61] Tr. at 148:4 to 150:21; Respondent Ex. 29.
[62] Tr. at 151:7 to 151:24; Respondent Ex. 6 at 161:1 to 162:10.
[63] Respondent Ex. 6 at 162:14 to 164:4; Respondent Ex. 30.

Apache provided pictures of core samples from a well drilled in a similar depositional environment. The core sample is solid and consistent with Ms. Kirik's explanation.[64]

Ms. Kirik provided well logs of vertical wells. The vertical well logs are used to identify target intervals. The target interval for Apache Unit wells is within a 30-foot interval. Within the 30-foot target interval, the rock itself is heterogeneous.[65]

Ms. Kirik provided cross sections showing the nearest type logs used to evaluate the correlative intervals for each of the 104H, 106H, 108HR and 109H wells. She testified that in her experience, Ammonite could drill a vertical well in its riverbed tract; she provided an example of another vertical well in the area.[66]

To demonstrate possible risks involved in drilling, Ms. Kirik explained that when drilling the 109H, Apache experienced unexpected directional drilling issues, which added $1.5 million in additional costs to the drilling of that well.[67] She provided other examples of risks associated with drilling. By way of further example, she testified that originally the surface casing of the 108HR collapsed due to geological issues and the surface location had to be moved.[68]

Apache's fourth witness was Mazher Ibrahim. He is an expert in reservoir engineering for Apache. He has a bachelor's and master's degree in petroleum engineering. He has been working in this industry for 26 years, including teaching more than 10 years. He testified, without objection, as an expert witness in reservoir engineering.[69]

Mr. Ibrahim provided diagrams of both conventional and unconventional reservoirs.[70] This case involves an unconventional shale reservoir developed with horizontal wells. The only technique in industry to extract the hydrocarbons from this kind of deposit is by a hydraulic fracture of the shale to liberate the hydrocarbon from the shale. He testified it is a type of mining. A conventional reservoir is a continuous accumulation, and hydrocarbons are communicating with each other. But in the type of reservoir at issue in this case, the communication occurs through the hydraulic fracture stimulation.[71]

Mr. Ibrahim described the process of hydraulic fracturing as the process of using hydraulic pressure to create an artificial fracture in a reservoir. The fracture grows in length, height and width by pumping a mixture of fluid and proppant at high pressure.[72] Mr. Ibrahim testified Apache orients its horizontal wells in such a manner to provide

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[64] Respondent Ex. 6 at 164:5 to 165:14; Respondent Ex. 31, 68, 69.
[65] Respondent Ex. 6 at 166:3 to 167:25; Respondent Ex. 32.
[66] Tr. at 154:7 to 156:15; Respondent Ex. 33.
[67] Tr. at 156:16 to 158:10; Respondent Ex. 34.
[68] Tr. at 158:12 to 160:23; Respondent Ex. 35.
[69] Tr. at 161:1 to 161:23; Respondent Ex. 36, 6 at 173:2 to 174:8.
[70] Respondent Ex. 6 at 174:12 to 182:2; Respondent Ex. 37-41.
[71] Respondent Ex. 6 at 182:3 to 185:5; Respondent Ex. 42-50.
[72] Respondent Ex. 6 at 191:7 to 192:5, 194:6 to 195:16; *see, e.g.,* Respondent Ex. 51.

minimum stress perpendicular to the wellbore. This way, the fractures will efficiently propagate perpendicular to the wellbore.[73]

He testified in industry there are three models to evaluate hydraulic fractures currently being used. He provided examples of the mathematical equations used. The parameter inputs utilized in these models are non-proprietary information.[74]

He provided examples of one technique used by industry to record hydraulic fracture stimulation events, by using microseismic data. The fractures in the examples are perpendicular to the wellbore.[75]

Mr. Ibrahim provided testimony stating the fractures for the Apache Unit wells and the area of production or drainage are perpendicular to the well wellbores and cannot and will not drain or produce from Ammonite's tract.[76]

V. Examiners' Analysis

Ammonite requests its State riverbed tract be pooled into four units, one unit for each of the Wells.[77] The Examiners recommend the Commission dismiss and deny the Applications.

A. The Examiners find Ammonite did not provide Apache a fair and reasonable offer to pool, which is a prerequisite to filing a MIPA application.

For the Commission to force pool under the MIPA, the applicant must make a "fair and reasonable offer to pool voluntarily."[78] If no such offer has been made, the MIPA application should be dismissed.[79]

The only offer Ammonite made to Apache is in the Offer Letter in conjunction with its earlier offer based on only the 106H. The Offer Letter contains a proposal to split the Apache Unit into five units, one for each of the Wells and one for the 104H, to include the Ammonite riverbed tract and to provide Ammonite compensation.

For an offer to be fair and reasonable, the Examiners believe the offeree would need to get some benefit as part of the agreement. A problem with this offer is Ammonite provides nothing of benefit to Apache, including not contributing any of the minerals produced by the Apache Unit wells—as demonstrated by a lack of drainage. Yet Ammonite requests to share an interest in those minerals. It is a challenge for the Examiners to see how this is fair and reasonable. In Ammonite's offer, Ammonite gets

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[73] Respondent Ex. 6 at 192:9 to 193:24, 216:10 to 217:17.
[74] Respondent Ex. 6 at 195:17 to 198:8; *see* Respondent Ex. 52-56.
[75] Respondent Ex. 6 at 198:9 to 218:11; *see, e.g.,* Respondent Ex. 36.
[76] Respondent Ex. 7; Tr. at 162:8 to 183:14; Respondent Ex. 57-67.
[77] *Ammonite Closing* at 1.
[78] TEX. NAT. RES. CODE § 102.013.
[79] *Id.*

something, Apache gets nothing. If there were evidence of drainage by the Wells, then Ammonite would be contributing minerals and Apache would be getting a benefit from Ammonite. In this case, Ammonite provided no evidence of drainage (or other benefit to Apache), and Apache provided evidence drainage was not occurring. Ammonite does not dispute drainage is not occurring and claims it is not necessary. The Examiners find the offer in the Offer Letter, in which Ammonite provides no consideration or contribution and Apache obtains no benefit, is not fair and reasonable.

The assertion that there is no benefit to Apache is consistent with the scientific evidence and expert testimony in the record. Ammonite provided no scientific evidence or expert testimony showing that its tract was being drained or that Ammonite was providing any benefit to Apache or otherwise contributing. In contrast, Apache provided evidence the Apache Unit wells are not and cannot drain from Ammonite's tract and Ammonite would not be contributing production. The reservoir at issue is an unconventional shale reservoir commonly developed with horizontal wells. They are tight formations with low permeability; production is achieved only through hydraulic fracture stimulation. Apache's experts testified it was analogous to mining. According to Ammonite's offer, the interest of the Apache Unit owners would be diluted and a portion provided to Ammonite, since Ammonite contributes none of the minerals produced. The evidence in the record also shows Apache would not benefit from any additional allowable to be gained from the additional acreage provided by Ammonite since the Wells, producing at maximum capability, are producing below the current allowable.

The offer must be one which takes into consideration those relevant facts, existing at the time of the offer, which would be considered important by a reasonable person in entering into a voluntary agreement concerning oil and gas properties.[80] A fair and reasonable offer must be fair and reasonable from the standpoint of the party being force pooled.[81]

In addition to providing no benefit to Apache, Apache asserts, and Ammonite acknowledges the offer in the Offer Letter would subject Apache to additional burdens and costs. According to Apache and acknowledged by Ammonite, Statewide Rule 26(a)(2)[82] would require each of the proposed pooled units to have a separate tank battery and separator. Currently, since there is one Apache Unit, there is only one tank battery and separator for the entire unit. If the Apache Unit were to be split into four units and a fifth tract, Apache would have to bear the cost of four additional tank batteries and separators, unless it obtained an exception to the rule requirement. According to Apache and acknowledged by Ammonite, splitting the Apache Unit into four or five units would cause problems with the lease line spacing limits in Statewide Rule 37.[83] Splitting the Apache Unit into four or five units would create lease lines between the units; Apache

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[80] *R.R. Comm'n of Texas v. Pend Oreille Oil & Gas Co.*, 817 S.W.2d 36, 41 (Tex. 1991); *Carson v. R.R. Comm'n of Texas*, 669 S.W.2d 315, 318 (Tex. 1984).

[81] *See, e.g., Windsor Gas Corp. v. R.R. Comm'n of Tex.*, 529 S.W.2d 834, 837 (Tex. Civ. App.—Austin 1975, writ dism'd); *see also R.R. Comm'n of Tex. v. Pend Oreille Oil & Gas Co.*, 817 S.W.2d 36, 41 (Tex. 1991); *Carson v. R.R. Comm'n of Tex.*, 669 S.W.2d 315, 318 (Tex. 1984); Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* § 12.3(B) (2d. ed. 2016).

[82] 16 TEX. ADMIN. CODE § 3.26(a)(2).

[83] 16 TEX. ADMIN. CODE § 3.37.

would have to comply with the lease line spacing 330 feet minimum or obtain an exception to this rule when drilling future wells. Having one unit encompassing all wells in the unit minimizes lease lines, allowing Apache the greatest flexibility in determining well placement to most effectively produce the Apache Unit tracts. None of these problems, which are relevant facts in considering a fair and reasonable offer, were addressed by Ammonite's offer. These problems created by Ammonite's proposed units in its voluntary offer further demonstrate it is unfair and unreasonable. The Examiners did not find compelling Ammonite's assertion it was Apache's responsibility to address these problems.

Ammonite describes the Offer Letter as a form letter it uses as its voluntary pooling offer in all instances, no matter what the specific facts. Ammonite's reasoning is the format and terms in its form have worked before the Commission in the past. It does not appear Ammonite's offer considered the facts relevant to this particular offer.

Ammonite's assertion that Apache failed to negotiate is inconsequential. It is unclear Ammonite's submission of a form offer to Apache amounts to anything more than a *de minimis* effort to negotiate on its part. It is Ammonite's burden to provide a fair and reasonable offer even if Apache fails to negotiate. Ammonite's only offer was not fair and reasonable, and the Examiners do not agree Apache had an obligation to negotiate in such instance. Ammonite's willingness to negotiate further, without providing a fair and reasonable offer, is equally inconsequential.

Ammonite failed to provide survey data. Apache provided expert testimony from a landman that the description of the proposed units and Ammonite's acreage to be included is insufficient. While Mr. Osborn said he thought the information provided was sufficient, Ammonite did not provide expert testimony about the sufficiency of the description.

In the offer, Ammonite offers to lease the entire riverbed tract adjacent to the Apache Unit. At hearing, Ammonite discovered that a western segment of that riverbed tract is already pooled with property on the other side of the river. While Ammonite has withdrawn its application regarding its westernmost proposed unit including the 104H, that does not change the fact that the offer improperly offered to lease riverbed interest that was not available or that to this date, no revised plat or description has been provided, and it is unclear what the remaining available segment is in relation to the proposed units. For example, Ammonite's offer and application regarding the unit for the 104H provides that Ammonite will contribute approximately six-tenths of an acre of the riverbed tract, but it is unclear that the leased portion is equivalent to six-tenths of an acre, making it unclear what the remaining portion of the riverbed tract is and how it affects Ammonite's proposed apportionment of it to the remaining four applications.

Regarding the proposed well A-1, Ammonite's offer is vague and indefinite. For example, it contains no specifics as to the terms, what Apache would be responsible for, how the well would be drilled, what the cost would be, what the production would be and

no information as to why it would be economical. The inclusion of the A-1 does not make the offer fair and reasonable. The offer regarding the A-1 itself is not fair and reasonable.

Recent Commission orders support a finding Ammonite's offer was not fair and reasonable. Recently, the Commission has issued three orders in similar cases involving Ammonite riverbed tracts ("Recent Orders"), concluding Ammonite's voluntary offer was not fair and reasonable.[84]

For all reasons discussed, the Examiners find Ammonite's voluntary pooling offer was not fair and reasonable.

B. The Examiners find there is insufficient evidence pooling the proposed units will prevent waste, protect correlative rights or prevent the drilling of unnecessary wells.

Ammonite alleges the requested pooling will prevent waste and protect correlative rights.

In recent decisions by the Commission with a similar fact pattern and evidence, the Commission found Ammonite did not prove its case and Ammonite failed to provide any scientific expert testimony regarding how pooling will prevent waste, protect correlative rights or prevent unnecessary drilling.[85] In this case, Ammonite also provided no expert testimony from a geologist or engineer, or other scientific evidence.

For this reason and the reasons discussed below, the Examiners find Ammonite failed to prove its case.

i. There is insufficient evidence forced pooling will prevent waste.

The term "waste" generally means the ultimate loss of oil.[86] Prevention of waste occurs if hydrocarbons are produced that otherwise would be lost.[87] Ammonite failed to provide evidence the requested pooling will prevent waste.

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[84] *See* Tex. R.R. Comm'n, *Application of Ammonite Oil & Gas Corp Pursuant to the Mineral Interest Pooling Act for the Apache Blue Jay Unit, Well No. 101H, Phantom (Wolfcamp) Field, Loving County, Texas et al.*, Oil and Gas Docket No. 08-0302160 et al. (Final Order dated January 23, 2018 adopting findings and conclusions in the proposal for decision) (*Proposal for Decision* at Conclusion of Law 2) ("January 23, 2018 Order");Tex. R.R. Comm'n, *Application of Ammonite Oil & Gas Corp Pursuant to the Mineral Interest Pooling Act for the State Lease M-117248 for the Naylor Jones Unit 11, Well No. 1 H, Eagleville (Eagle Ford-1) Field, McMullen County, Texas et al.*, Oil and Gas Docket No. 01-0302640 et al. at 2 (Consolidated Final Order dated Nov. 7, 2017) (Conclusion of Law 2) ("November 7, 2017 Order"); Tex. R.R. Comm'n, *Application of Ammonite Oil and Gas Corporation Pursuant to the Mineral Interest Pooling Act for the Formation of a Pooled Unit for the Butterfly Dim (16437) Lease, Well No. J 4H, Briscoe Ranch (Eagleford) Field, Dimmit County, Texas et al.*, Oil and Gas Docket No. 01-0290024 et al. at 3 (Final Order dated September 19, 2017) (Conclusion of Law 2) ("September 19, 2017 Order").

[85] January 23, 2018 Order (Finding of Fact 12 of *Proposal for Decision*); Nov. 7, 2017 Order at 4 (Finding of Fact 10).

[86] *See, e.g.*, TEX. NAT. RES. CODE § 85.046; *Gulf Land Co. v. Atl. Ref. Co.*, 131 S.W.2d 73, 80 (Tex. 1939).

[87] *Id.*

Ammonite provided no evidence—scientific, expert testimony or otherwise—that pooling Ammonite's tract will prevent waste.[88] There was no evidence as to any amount of hydrocarbons that would be wasted if the Applications are not granted. For example, Ammonite had no geologic study, no drainage analysis, no engineering expert testimony, no fracture stimulation evidence and no volumetric calculations, such as of hydrocarbons in place under Ammonite's tract. Ammonite's only witness was a fact witness. Ammonite failed to provide any waste analysis regarding the pooling of the Wells.

The wells currently drilled in the Apache Unit are already drilled and do not produce from Ammonite's tract. Pooling Ammonite's tract with these wells will have no impact on the amount of hydrocarbons produced. Regarding the proposed A-1 well, like the other proposed units, there was no waste analysis or scientific evidence that creating a unit for the proposed A-1 will prevent waste. For example, there was no evidence that any additional hydrocarbons would be produced that will not already be produced by the current Apache Unit wells on each side of the A-1. Moreover, there are insufficient specifics regarding the A-1 to perform a waste analysis. For example, the length of the wellbore is not provided, the cost of drilling is not provided, the estimated hydrocarbons that would be produced is not provided; it is unclear that such a well would even be economical.

Further, Apache did provide evidence pooling will not prevent waste. Apache provided the testimony of an expert geologist and expert reservoir engineer that pooling will not enable recovery of any hydrocarbons under Ammonite's tract. According to the evidence in the record, the wells drilled on the Apache Unit cannot drain or otherwise produce the minerals under Ammonite's tract. The wells will only produce hydrocarbons under the Apache Unit tracts.

The Recent Orders support a finding Ammonite's proposed pooling will not prevent waste. In them, the Commission concludes there is insufficient evidence the pooling will prevent waste.[89]

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[88] Ammonite's suggestion that it did not present scientific evidence in part because Apache was not required to disclose fracture stimulation trade secret information is without merit. In discovery, Ammonite requested Apache stimulation data regarding the Wells. Apache asserted it was trade secret information and provided expert testimony establishing so. Apache also provided expert testimony that, according to the current state of the science of well fracture stimulation, it would be impossible for the fractures to result in production from Ammonite's riverbed tract. For example, the fractures result in production from acreage perpendicular to the wellbore, and the riverbed tract is not located perpendicular to the wellbore. Thus, Apache argued that providing Ammonite (a competitor operator) trade secret fracture stimulation procedures or recipes that Apache uses is unnecessary. Apache also provided testimony that the data it has about its fracture stimulation for the Wells would be useless to assess the drainage area of the Wells without additional highly expensive analysis of that data. In contrast, Ammonite provided no testimony, so there was no testimony that in fact it is scientifically possible for the Wells to drain the Ammonite tracts, such that data specific to the Wells might be pertinent. Ammonite also acknowledged it did not know what it would do with the data if it were provided the data. It had not hired an expert and was unable to provide any explanation as to how the fracture stimulation data would be used to calculate or otherwise indicate a drainage area of the Wells. Consequently, Ammonite's request for the information was denied with the caveat that if it did provide evidence that such drainage was even possible and information as to how the requested data would be utilized to provide relevant information, its request could be reconsidered. Ammonite consistently has taken the position in this case that evidence of drainage and expert testimony is not required. *See, e.g.,* April 28, 2017 Transcript of Prehearing Conference at 84:1 to 85:2.

[89] January 23, 2018 Order (Findings of Fact 23-28, Conclusion of Law 4 in *Proposal for Decision*); November 7, 2017 Order at 4-5 (Finding of Fact 11, Conclusions of Law 3, 5); September 19, 2017 Order at 2-3 (Finding of Fact 12, Conclusions of Law 3, 5).

For these reasons, the Examiners find there is insufficient evidence the requested pooling will prevent waste.

ii. There is insufficient evidence forced pooling will protect correlative rights.

According to Texas law, every owner or lessee of land is entitled to a fair chance to recover the oil and gas in or under his land, or their equivalents in kind.[90] As the Texas Supreme Court stated in *Elliff v. Texon Drilling Co.*:

> In our state the landowner is regarded as having absolute title in severalty to the oil and gas in place beneath his land. ... The only qualification of that rule of ownership is that it must be considered in connection with the law of capture and is subject to police regulations. ... The oil and gas beneath the soil are considered a part of the realty. [91]

Generally, protection of this right in relation to other mineral interest owners with interest in a common reservoir is protection of an owner's correlative rights. As the Texas Supreme Court further stated:

> Thus it is seen that, notwithstanding the fact that oil and gas beneath the surface are subject both to capture and administrative regulation, the fundamental rule of absolute ownership of the minerals in place is not affected in our state. In recognition of such ownership, our courts, in decisions involving well-spacing regulations of our Railroad Commission, have frequently announced the sound view that each landowner should be afforded the opportunity to produce his fair share of the recoverable oil and gas beneath his land, which is but another way of recognizing the existence of correlative rights between the various landowners over a common reservoir of oil or gas. ... This reasonable opportunity to produce his fair share of the oil and gas is the landowner's common law right under our theory of absolute ownership of the minerals in place.[92]

Notably, the discussion is in the context of a continuous reservoir in which hydrocarbons flow and have a fugitive nature. The evidence in this case is there is no real flow of hydrocarbons due to low permeability of the tight shale reservoir and the only way to move the hydrocarbons is via fracture stimulation.

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[90] *Gulf Land Co. v. Atl. Ref. Co.*, 131 S.W.2d 73, 80 (Tex. 1939); *R.R. Comm'n v. De Bardeleben*, 305 S.W.2d 141, 143 (Tex. 1957).

[91] 210 S.W.2d 558, 561 (Tex. 1948).

[92] *Elliff v. Texon Drilling Co.*, 210 S.W.2d 558, 562 (Tex. 1948); *see also Coyote Lake Ranch, LLC v. City of Lubbock*, 498 S.W.3d 53, 63–64 (Tex. 2016); *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 830 (Tex. 2012); *Coastal Oil & Gas Corp. v. Garza Energy Tr.*, 268 S.W.3d 1, 15 (Tex. 2008); *Gregg v. Delhi-Taylor Oil Corp.*, 344 S.W.2d 411, 418 (Tex. 1961).

Since Apache produces only minerals under its Apache Unit, it cannot be said that it is taking an undue proportion of the minerals in a common reservoir such that the Ammonite tract mineral interest owners' correlative rights need protection or are at risk. Moreover, due to the nature of the reservoir, Apache is only going to capture hydrocarbons under its unit from Apache Unit wells. According to the evidence, the minerals in place under Ammonite's tract are still in place and will not be produced by the Apache Unit. Pooling will not protect Ammonite's correlative rights. However, if the requested pooling were ordered, Ammonite would get a portion of the proceeds from minerals produced solely from beneath the Apache Unit tracts; such pooling would not protect the Apache Unit mineral interest owners and their rights and ownership of the minerals under their tracts. The MIPA requires any forced pooling offer to protect all interest owners and afford each the opportunity to produce or receive his fair share.[93] Taking production from the Apache Unit mineral interest owners and giving a portion to Ammonite would prevent the Apache Unit mineral interest owners from receiving their fair share.

Ammonite argues that since the area around the riverbed is productive, the area under the riverbed is productive. Yet, Ammonite provides no evidence, such as drainage, that the Ammonite acreage is contributing to the production from the current Apache Unit wells. Apache provides evidence to the contrary—fracture stimulation is required for production, production occurs only from the fractured area, the fractures are perpendicular to wellbore, and cannot reach the riverbed.

Ammonite asserts drainage is not required for approval of the Applications because it is not a word in the statute. The word "drainage" does not have to be in the statute to be a relevant factor. For example, drainage is a method to show the tract to be pooled is contributing or an offer is fair and reasonable because the offeror is contributing value. A case on this issue is *Broussard*,[94] in which the court found the offer unfair and unreasonable because the offeree was being asked to share the proceeds of production with a tract that could not be drained by the well in question. This is similar to the situation in this case.

Regarding the proposed A-1 well, Ammonite failed to show that pooling a unit with the proposed A-1 will protect correlative rights. The evidence regarding the A-1 is indefinite and no analysis was provided. It is unclear that the A-1 would be an economical well. No analysis of how the A-1 will protect correlative rights was provided.

The Recent Orders support a finding that Ammonite's proposed pooling will not protect correlative rights. In them, the Commission concludes there is insufficient evidence the pooling will protect correlative rights.[95]

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[93] TEX. NAT. RES. CODE § 102.017(a).

[94] *R.R. Comm'n of Tex. v. Broussard*, 755 S.W.2d 951, 954 (Tex. App.—Austin 1988, writ denied).

[95] January 23, 2018 Order (Findings of Fact 29-31, Conclusion of Law 4 in *Proposal for Decision*); November 7, 2017 Order at 4-5 (Finding of Fact 11, Conclusions of Law 3, 5); September 19, 2017 Order at 2-3 (Finding of Fact 12, Conclusions of Law 3, 5).

For these reasons, the Examiners find there is insufficient evidence the requested pooling will protect correlative rights.

iii. There is insufficient evidence pooling will prevent the drilling of unnecessary wells.

While Ammonite asserts pooling will prevent waste and protect correlative rights, Ammonite makes no assertion or argument that pooling will prevent unnecessary drilling. According to the evidence, the minerals under Ammonite's tract are still in place and unaffected by the Apache Unit wells. To produce the minerals under Ammonite's tract, additional wells will need to be drilled. The Examiners find insufficient evidence pooling will prevent the drilling of unnecessary wells.

The Recent Orders support a finding that Ammonite's proposed pooling will not prevent drilling of unnecessary wells. In them, the Commission concludes there is insufficient evidence the pooling will prevent drilling of unnecessary wells.[96]

For these reasons, the Examiners find there is insufficient evidence the requested pooling will prevent drilling of unnecessary wells.

C. Ammonite failed to provide survey data or a metes and bounds description of its tracts to establish the acreage to be pooled; the record contains no sufficient description of the land to be pooled in Ammonite's proposed units.

The information provided by Ammonite as to the boundaries of the four proposed pooled units and the boundaries and acreage of Ammonite's riverbed tract is imprecise. Ammonite relies on the description and graphic of the proposed units and the Ammonite tract that it provided in its voluntary offer. In the offer, Ammonite provided a hand-marked version of Apache's Apache Unit plat—basically the plat with Mr. Osborn's hand-marking showing an approximation of the proposed units. The size of the riverbed tract is not to scale and based on the thickness of the marker, and there is no precise identification of the new boundaries created, including the riverbed boundaries and the boundary lines dividing the Apache Unit.

This problem is compounded and there is additional confusion since the only plat provided in the offer and as evidence is the Apache Unit divided into five units (one for Well 104H). At the hearing, the application regarding the 104H was withdrawn because it became apparent that part of Ammonite's riverbed tract in the offer was already pooled with acreage on the other side of the river. It is unclear in the plat what portion of Ammonite's tract is no longer available; in Ammonite's closing briefing, Ammonite still requests that the Commission "issue an order under the MIPA creating the units set out on Ammonite's Exhibit 2 [which includes the entire riverbed tract and a unit for 104H] in

[96] January 23, 2018 Order (Findings of Fact 32-36, Conclusion of Law 4 in *Proposal for Decision*); November 7, 2017 Order at 4-5 (Finding of Fact 11, Conclusions of Law 3, 5); September 19, 2017 Order at 2-3 (Finding of Fact 12, Conclusions of Law 3, 5).

this docket, or in some other manner as discussed herein.[97] Ammonite fails to provide any description or plat showing the unavailable segment of its tract.

While Ammonite has withdrawn its application regarding its westernmost proposed unit including the 104H, that does not change the fact that to this date, no revised plat or description has been provided, and it is unclear what the remaining available segment is in relation to the proposed units. For example, Ammonite's offer and application regarding the unit for the 104H provides that Ammonite will contribute approximately six-tenths of an acre of the riverbed tract, but it is unclear that the already pooled portion is equivalent to six-tenths of an acre, making it unclear what the remaining portion of the riverbed tract is and how it affects Ammonite's proposed apportionment of it to the remaining four applications.

The description in the offer provides a general description and provides that the riverbed portion of each unit is to be approximately six-tenths of an acre, more or less. No survey data, no metes and bounds description of the riverbed tract, or other evidence as to any relatively recent measurement of the acreage was provided. Ammonite failed to show how this information translates into a sufficient description for its voluntary offer or provides information to include a sufficient description of the proposed units as required by the MIPA.[98]

While Ammonite only provided lay testimony from a fact witness, Apache provided expert witness testimony from a petroleum landman that the description provided by Ammonite is not a valid legal description because no survey data or metes and bounds description was provided.

The Recent Orders support a finding that Ammonite did not provide survey data or a metes and bounds description of the riverbed tract to establish the precise acreage to be force pooled.[99]

For these reasons, the Examiners find the record does not contain a sufficient description of the land to be included in Ammonite's proposed units.

D. Because Ammonite has failed to establish some of the requirements for MIPA pooling, the issue as to whether Ammonite satisfies the remaining requirements is moot.

There are other requirements that must be satisfied before forced pooling under the MIPA can occur. Because Ammonite failed to satisfy some requirements, the issue of whether it met other requirements is immaterial and moot. The Examiners decline to opine as to the remaining elements, since doing so would be merely advisory or hypothetical.

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[97] *Ammonite Closing* at 12-13; *see also Ammonite Oil & Gas Corporation's Reply Closing Argument in Support of its MIPA Applications* at 2 (January 2, 2018) ("*Ammonite Reply*").

[98] TEX. NAT. RES. CODE § 102.017(b)(1).

[99] January 23, 2018 Order (Finding of Fact 21 in *Proposal for Decision*); November 7, 2017 Order at 4-5 (Finding of Fact 6); September 19, 2017 Order at 2-3 (Finding of Fact 7).

VI. Recommendation, Proposed Findings of Fact and Proposed Conclusions of Law

Based on the record in this case and evidence presented, the Examiners find Ammonite failed to provide Apache a fair and reasonable voluntary offer to pool, which is required under the MIPA. The Examiners find insufficient evidence pooling the proposed units will prevent the drilling of unnecessary wells, protect correlative rights or prevent waste. The Examiners find there is no sufficient description of the proposed units. The Examiners recommend the Commission dismiss and deny the Applications, and adopt the following findings of fact and conclusions of law.

Findings of Fact

1. Ammonite Oil & Gas Corporation ("Applicant" or "Ammonite") filed four applications ("Applications") under the Mineral Interest Pooling Act ("MIPA"), three requesting the Railroad Commission ("Commission") to pool its leased acreage into a unit for an already drilled horizontal well on Apache Corporation's ("Apache" or "Respondent's") Apache Pelican Unit ("Apache Unit") in Loving County. Ammonite's fourth application is for a proposed well in the Apache Unit. The four wells at issue are Well Nos. 106H, 108HR, 109H and proposed well A-1 (referred to as "106H," "108HR," "109H," "A-1" and collectively as "Wells"). Apache requests the Applications be denied.

2. On September 21, 2017, the Hearings Division of the Commission sent a Notice of Hearing on the Applications via first-class mail to all interested parties setting a hearing date of October 23, 2017. The notice contained (1) a statement of the time, place and nature of the hearing; (2) a statement of the legal authority and jurisdiction under which the hearing is to be held; (3) a reference to the particular sections of the statutes and rules involved; and (4) a short and plain statement of the matters asserted. The hearing was held on October 23, 2017, as noticed. Consequently, all parties received more than 30 days' notice. Applicant and Respondent appeared at the hearing on October 23 and presented evidence and argument.

3. Ammonite has a contractual lease ("Contractual Lease") conveying an interest in the mineral estate of the tract Ammonite proposes to pool ("Riverbed Tract"), in which the General Land Office ("GLO") is the lessor and Ammonite is the lessee.

4. In a memorandum issued by the GLO on January 4, 2017, the GLO agrees to suspend the primary term to allow Ammonite to pursue these MIPA Applications.

5. Ammonite is a mineral interest owner as contemplated by the MIPA.

6. The voluntary pooling offer Ammonite made to Apache is in a letter dated May 23, 2017 ("Offer Letter") in conjunction with an earlier offer letter regarding only the 106H dated May 9, 2016. The Offer Letter contains a proposal to split the Apache

Unit into five units, one for each of the Wells and one for the 104H, to include the Ammonite Riverbed Tract, and to provide Ammonite compensation.

7. Ammonite offers nothing of benefit to Apache, including not contributing any of the minerals produced by the wells drilled on the Apache Unit.

8. Ammonite provided no scientific evidence or expert testimony showing its tract was being drained by the wells currently on the Apache Unit or that Ammonite was providing any benefit to Apache or otherwise contributing.

9. Apache provided evidence the wells drilled on the Apache Unit are not and cannot drain from Ammonite's Riverbed Tract and Ammonite would not be contributing production as to those wells. The reservoir at issue is an unconventional shale reservoir commonly developed with horizontal wells. They are tight formations with low permeability, and production is achieved only through hydraulic fracture stimulation. The wellbores are oriented such that the fractures are perpendicular to the wellbore. Ammonite's Riverbed Tract is not perpendicular to the Apache Unit wellbores.

10. The wells drilled on the Apache Unit are drilled with take points in compliance with lease line spacing, with a last take point more than 200 feet from the Riverbed Tract.

11. In the Offer Letter, Ammonite offers to lease the entire riverbed segment adjacent to the Apache Unit. However, the western portion of that segment was already pooled with a unit on the other side of the river from the Apache Unit.

12. Ammonite describes the Offer Letter as a form letter that it uses as its voluntary pooling offer.

13. Ammonite acknowledges its offer in the Offer Letter would subject Apache to additional burdens and costs. These additional burdens and costs were not addressed in the offer.

14. Unless an exception were granted, Statewide Rule 26(a)(2)[100] would require each of the proposed pooled units to have a separate tank battery and separator. Currently only one tank battery and separator are used on the Apache Unit. If the Apache Unit were divided into four units, three additional tank batteries and separators would be required. Well No. 104H would also require a separate tank battery and separator, requiring a total of five separators and tank batteries. This additional cost to Apache was not addressed in Ammonite's offer.

15. Splitting the Apache Unit into four units and a fifth tract would cause problems with the lease line spacing limits in Statewide Rule 37.[101] Splitting the Apache Unit into

[100] 16 TEX. ADMIN. CODE § 3.26(a)(2).
[101] 16 TEX. ADMIN. CODE § 3.37.

smaller units and segments would create lease lines between the units; Apache would have to comply with the lease line spacing 330 feet minimum or obtain an exception to this rule when drilling future wells. Having one Unit encompassing all wells on the Apache Unit minimizes lease lines, allowing Apache the greatest flexibility in determining well placement to most effectively produce the Apache Unit tracts. Ammonite's offer did not address these spacing problems caused by dividing the Apache Unit into smaller units as proposed in the offer.

16. Ammonite's offer did not take into consideration those relevant facts, existing at the time of the offer, which would be considered important by a reasonable person in entering into a voluntary agreement concerning oil and gas properties.

17. In its voluntary offer and in the Applications, Ammonite did not provide survey data or a metes and bounds description of the riverbed tract to establish the precise acreage to be pooled.

18. Regarding the proposed well A-1, Ammonite's offer is vague and indefinite. For example, it contains no specifics as to the terms, what Apache would be responsible for, how the well would be drilled, what the cost would be, what the production would be and no information as to whether it would be economical.

19. The inclusion of the A-1 does not make the offer fair and reasonable.

20. The offer regarding the A-1 itself is not fair and reasonable.

21. Ammonite's voluntary pooling offer was not fair and reasonable.

22. Ammonite failed to provide any scientific expert testimony regarding how pooling will prevent waste, protect correlative rights or prevent unnecessary drilling.

23. Ammonite provided no expert witnesses or evidence of drainage areas for the Wells.

24. Ammonite provided no evidence—scientific, expert testimony or otherwise—that pooling Ammonite's tract will prevent waste. There was no evidence as to any amount of hydrocarbons that would be wasted if the Applications are not granted.

25. The wells currently on the Apache Unit are already drilled and do not produce from Ammonite's tract.

26. Apache provided evidence establishing pooling will not enable recovery of any hydrocarbons under Ammonite's tract. The Apache Unit wells cannot drain or otherwise produce the minerals under Ammonite's tract. The wells on the Apache Unit will only produce hydrocarbons under the Apache Unit tracts.

27. Regarding the proposed A-1 well, like the other proposed units, there was no waste analysis or scientific evidence that creating a unit for the proposed A-1 will prevent waste. For example, there was no evidence that any additional hydrocarbons would be produced that will not already be produced by the current Apache Unit wells on each side of the A-1. Moreover, there are insufficient specifics regarding the A-1 to perform a waste analysis. For example, the length of the wellbore is not provided, the cost of drilling is not provided, the estimated hydrocarbons that would be produced is not provided; it is unclear that such a well would even be economical.

28. Pooling will not prevent waste.

29. The minerals in place under Ammonite's tract are still in place and will not be produced by the wells drilled on the Apache Unit. Pooling is not necessary to protect Ammonite's correlative rights.

30. If the requested pooling were ordered, Ammonite would get a portion of the proceeds from minerals produced solely from beneath the Apache Unit tracts; such pooling would not protect the Apache Unit mineral interest owners' correlative rights.

31. Regarding the proposed A-1 well, Ammonite failed to show that pooling a unit with the proposed A-1 will protect correlative rights. The evidence regarding the A-1 is indefinite and no analysis was provided. It is unclear that the A-1 would be an economical well. No analysis of how the A-1 will protect correlative rights was provided.

32. Pooling will not protect correlative rights.

33. Ammonite provided no evidence or assertion that pooling will prevent the drilling of unnecessary wells.

34. The minerals under Ammonite's tract are still in place and unaffected by the wells on the Apache Unit.

35. To produce the minerals under Ammonite's tract, additional wells will need to be drilled.

36. Pooling will not prevent the drilling of unnecessary wells.

37. At hearing, Ammonite discovered that a western segment of that riverbed tract is already pooled with property on the other side of the river.

38. While Ammonite has withdrawn its application regarding its westernmost proposed unit including the 104H, no revised plat or description has been provided regarding

the Applications and it is unclear what the remaining available segment is in relation to the proposed units.

39. Ammonite's offer and application regarding the unit for the 104H provides that Ammonite will contribute approximately six-tenths of an acre of the riverbed tract, but it is unclear that the already pooled portion of the riverbed tract is equivalent to six-tenths of an acre, making it unclear what the remaining portion of the riverbed tract is and how it affects Ammonite's proposed apportionment of it to the remaining four applications.

40. Ammonite failed to provide a sufficient land description for each of the proposed units in the Applications.

Conclusions of Law

1. Proper notice of hearing was timely issued to appropriate persons entitled to notice. *See, e.g.,* TEX. GOV'T CODE §§ 2001.051, .052, TEX. NAT. RES. CODE § 102.016, 16 TEX. ADMIN. CODE §§ 1.41, 1.42, 1.45.

2. Ammonite failed to make a fair and reasonable offer to voluntarily pool as required by the MIPA. TEX. NAT. RES. CODE § 102.013.

3. Because Ammonite failed to make a fair and reasonable offer to voluntarily pool, the Applications should be dismissed.

4. Force pooling will not prevent waste, protect correlative rights or avoid the drilling of unnecessary wells as required by the MIPA. TEX. NAT. RES. CODE § 102.011.

5. Because force pooling will not prevent waste, protect correlative rights or avoid the drilling of unnecessary wells, the Applications should be denied.

41. There is no sufficient description of the land to be included in Ammonite's proposed units. TEX. NAT. RES. CODE § 102.017(a).

42. Because there is no sufficient description of the land to be included in Ammonite's proposed unites, the Applications should be denied.

Recommendations

The Examiners find Ammonite failed to provide Apache a fair and reasonable voluntary offer to pool, which is required under the MIPA. The Examiners find insufficient evidence pooling the proposed units will prevent the drilling of unnecessary wells, protect correlative rights or prevent waste. The Examiners find there is no sufficient description of the proposed units such that the Applications should be denied. The Examiners recommend the Commission dismiss and deny the Applications.

Respectfully,

Jennifer Cook
Administrative Law Judge

Richard Eyster, P. G.
Technical Examiner