

No. 120,121

IN THE COURT OF APPEALS OF THE STATE OF KANSAS

LARIO OIL & GAS COMPANY,
Appellant,

v.

KANSAS CORPORATION COMMISSION,
Appellee,

and

CHOLLA PRODUCTION, LLC,
Intervenor/Appellee.

SYLLABUS BY THE COURT

1.

The Kansas Unitization Act, K.S.A. 55-1301 et seq., gives the Kansas Corporation Commission the jurisdiction to permit the grouping of oil and gas leases into a single unit.

2.

The legislative purpose of the Kansas Unitization Act is to prevent waste, to further the conservation of oil and gas, and to protect the correlative rights of persons entitled to share in the production of oil and gas.

3.

There are four factors which the Kansas Corporation Commission must consider before it can order unit operations: (1) The primary production from a pool or a part thereof sought to be unitized has reached a low economic level and, without introduction

of artificial energy, abandonment of oil or gas wells is imminent; or (2) the unitized management, operation, and further development of the pool or the part thereof sought to be unitized is economically feasible and reasonably necessary to prevent waste within the reservoir and thereby increase substantially the ultimate recovery of oil or gas; (3) that the value of the estimated additional recovery of oil or gas substantially exceeds the estimated additional cost incident to conducting such operations; and (4) that the proposed operation is fair and equitable to all interest owners.

4.

Waste is defined as both economic and physical waste resulting from the development and operation separately of tracts that can best be operated as a unit. K.S.A. 55-1302(d).

5.

Pool is defined as an underground accumulation of oil and gas in one or more natural reservoirs in communication so as to constitute a single pressure system so that production from one part of the pool affects the pressure throughout its extent. K.S.A. 55-1302(b).

6.

According to K.S.A. 2018 Supp. 77-621(d), in reviewing the evidence in light of the record as a whole, a court shall not reweigh the evidence or engage in de novo review.

Appeal from Scott District Court; RICKLIN PIERCE, judge. Opinion filed August 23, 2019.
Affirmed.

Amy Fellows Cline and Timothy E. McKee, of Triplett Woolf Garretson LLC, of Wichita, for appellant.

Michael J. Duenes, assistant general counsel, of Kansas Corporation Commission, for appellee.

Diana Edmiston, of Edmiston Law Office, LLC , of Wichita, for intervenor.

Before HILL, P.J., STANDRIDGE, J., and NEIL B. FOTH, District Judge, assigned.

HILL, J: This case deals with the unitization of oil and gas wells. Sometimes described as "unit operation," unitization means the joint operation of all or some part of a producing reservoir. Unitization is often desirable in secondary recovery operations where the location of input wells, the freedom to flood out parts of the reservoir, and the sharing of costs are vital to the success of the program. See 6 Williams & Meyers, Oil and Gas Law, § 901 (2018). In Kansas, unitization is regulated by the Kansas Corporation Commission.

The Commission refused to allow Lario Oil & Gas Company to unitize several oil and gas leases and operate them as a single unit. Lario appealed to the district court. The court, in a thorough and thoughtful opinion, affirmed the Commission's ruling. The company turns now to this court. Having examined the three points raised by Lario, we decline the invitation to reweigh the evidence and because we see no legal errors by the Commission, we affirm.

Using the Kansas Judicial Review Act, K.S.A. 77-601 et seq., Lario makes three claims:

- The Commission misinterpreted the Kansas Unitization Act by using a too narrow definition of the term "pool," which improperly increased what it had to prove in order to show that the leases can be operated as a common unit;
- the Commission's orders were unsupported by substantial competent evidence; and

- the Commission acted unreasonably, arbitrarily, and capriciously.

The controlling statute and some legal definitions provide context.

Enacted in 1967, the Unitization Act, K.S.A. 55-1301 et seq., sometimes called the Compulsory Unitization Act, gives the Commission the jurisdiction to permit the grouping of oil and gas leases into a single unit. The legislative purpose of the Act is to prevent waste, to further the conservation of oil and gas, and to protect the correlative rights of persons entitled to share in the production of oil and gas. See K.S.A. 55-1301.

There are four factors which the Commission must consider before it can order unit operations. Under K.S.A. 55-1304, the Commission must look at production, feasibility, costs, and fairness to all:

"(a)(1) The primary production from a pool or a part thereof sought to be unitized has reached a low economic level and, without introduction of artificial energy, abandonment of oil or gas wells is imminent; or (2) the unitized management, operation and further development of the pool or the part thereof sought to be unitized is economically feasible and reasonably necessary to prevent waste within the reservoir and thereby increase substantially the ultimate recovery of oil or gas;

"(b) the value of the estimated additional recovery of oil or gas substantially exceeds the estimated additional cost incident to conducting such operations; and

"(c) the proposed operation is fair and equitable to all interest owners."

Addressing one of the purposes of the Act, "waste" is defined in K.S.A. 55-1302(d) as "both economic and physical waste resulting from the development and operation separately of tracts that can best be operated as a unit."

Finally, an important term here—"pool"—is defined in K.S.A. 55-1302(b) as "an underground accumulation of oil and gas in one or more natural reservoirs in

communication so as to constitute a single pressure system so that production from one part of the pool affects the pressure throughout its extent." Communication is at the heart of this appeal. The Commission was unpersuaded that this pool was a single pressure system and therefore denied the application.

General background shows production and planning for the future.

Lario owns and operates the working interests in several wells producing oil from the Shawnee, Lansing, Kansas City, Marmaton, Cherokee, Morrow, Basal Penn, and Mississippian formations in the Feiertag Unit in Scott County. Lario applied for unitization and unit operations for the Feiertag Unit "to enhance the ultimate recovery of liquid hydrocarbons therefrom."

In its application, Lario described the reservoir it sought to operate as "the interval between the top of the unitized substances in the Topeka Formation at 3,570 feet through the Oread, Lansing-Kansas City, Marmaton, Millrich, Morrow and St. Louis formations at 4,700 feet." It also alleged that the unitized management, operation, and further development of the Feiertag Unit was "economically feasible and reasonably necessary to prevent waste within the reservoir and thereby increasing substantially the ultimate recovery of oil and gas." It estimated the value of the additional recovery of oil and gas substantially exceeded the estimated additional costs of conducting the unitized operations. Lario noted that the proposed plan had been approved in writing by 92.64 percent of the working interest holders and by 95.53 percent of the royalty owners. But not everyone approved.

Cholla Production, LLC, an oil and gas exploration and production company, owned and operated oil-and-gas-producing properties both within and next to Lario's proposed unit boundary. Cholla filed a protest to Lario's application and asked to intervene. Cholla alleged that Lario's proposed plan would cut through Cholla's

contiguous producing acreage and would take over two of Cholla's wells. It further asserted that Lario's proposed plan did not meet the requirements of K.S.A. 55-1304 because

- the plan was flawed geologically;
- the allocations to property owners were unfair and inequitable;
- the plan would substantially and irreparably harm Cholla's correlative rights;
- the plan would cause waste in violation of K.S.A. 55-601; and
- the plan would unduly violate Cholla's property rights contrary to the Kansas and United States Constitutions.

Lario denied those allegations but did not object to Cholla's intervention. The Commission allowed Cholla to intervene and scheduled an evidentiary hearing on Lario's application.

The Commission proceeding.

Because Lario claims that the Commission's findings are unsupported by substantial evidence, we must review extensive portions of the record on appeal. We note that it is a common practice in these technical proceedings before the Commission for the parties to file testimony of some witnesses before the actual hearing. This case was no exception.

Before the hearing, the parties submitted prefiled testimony from several witnesses.

Lario's witnesses	Commission Staff witness	Cholla's witnesses
Brenten E. Birk John P. Hastings	Jim Hemmen	William T. Goff Emily M. Hundley-Goff

We begin with Lario's witnesses—Birk and Hastings. Both spoke in favor of granting the application. Brenten E. Birk, an operations engineer with Lario, testified that he had been employed as a petroleum engineer for 11 years after obtaining a Bachelor of Science degree in mechanical engineering. Birk testified that Lario's proposed unitization plan would create a pretax net income of nearly \$42 million after the payout of capital investment; that the proposed operations were economically feasible and necessary to prevent waste and protect correlative rights; and that unitization would substantially increase the ultimate recovery of oil from the proposed unit. Birk advised that the proposed unit area had produced 1.4 million barrels of oil under primary production. Birk believed that the proposed unit could produce another 1.5 million barrels of oil over 37 years that would otherwise be abandoned if the unit was not approved. Birk stated that the proposed unit agreements were fair and equitable to all working interest and royalty interest owners.

Birk testified that the proposed unit would cover the Topeka, Oread, Lansing-Kansas City, Marmaton, Cherokee, Morrow, Millrich, and St. Louis intervals. Birk stated that these formations were in pressure communication and acted as a single-pressure system or one common pool. That means that production from one part of the pool affected pressures throughout. Birk said that the proposed unit would have 15 producing formations, and Lario proposed to waterflood 11 of the formations. He described a five-stage waterflood process by which Lario would waterflood two or three formations at each stage.

Birk gave his estimates because he wanted to show that the value of the estimated additional recovery of oil or gas substantially exceeded the estimated additional cost incident to conducting the operations. In Birk's opinion, the total cost for all five stages would be \$4.185 million. For the life of the waterflood, the total cumulative net cash flow for working interest owners he estimated at \$26,986,900 and \$14,930,440 for royalty interest owners. Birk recommended that the Commission grant Lario's application for unitization.

Next for Lario, John P. Hastings, a petroleum geologist, testified that he had worked as a petroleum geologist for 36 years after obtaining a Bachelor of Science degree in geology and math. Hastings stated that Cholla operated two oil wells and one SWD well, collectively known as the Metzger Lease. Hastings said that the oil wells were separate and distinct from each other by proximity to and distance between two distinct oil accumulations. Hastings testified that the Metzger 2-16 well was in Lario's proposed Feiertag Unit, while the Metzger 1-16 oil well was not. Hastings believed that Lario's application for unitization was economically feasible and necessary to prevent waste of oil within the reservoir and to increase the ultimate recovery of oil.

We turn now to the testimony of the Commission staff witness, Jim Hemmen. He expressed some doubts about the application. He is a research analyst with the production department of the conservation division of the Commission. He had worked for the Commission since 1982. Hemmen stated that he had concerns about whether Lario's proposed unit constituted a "pool," or a single-pressure system, as defined in K.S.A. 55-1302(b). Hemmen did not see any indications of natural or artificially induced pressure communication, and stated that he would like to see more evidence from Lario containing bottom-hole reservoir pressure data from all 11 formations at issue before he would be comfortable affirming that the formations comprised part of a pool.

Hemmen testified that he had additional concerns about

- the estimated duration of the project;
- whether the costs associated with start-up of each stage of the project would be billed all at once or immediately preceding implementation of each stage; and
- the tract participation factors based partly on combining the remaining primary reserves in all 11 formations, rather than calculating a separate set of factors for each combination of formations to be flooded during the five stages.

We now summarize the evidence from Cholla's two witnesses. Both testified against granting the application. First, William T. Goff, a petroleum geologist with Cholla, testified that he had over 40 years of experience as a petroleum geologist after receiving a Bachelor of Science degree and a Master's degree in geology. Goff testified that there was pressure communication between Cholla's Metzger 1-16 and 2-16 wells, and Cholla had discussed waterflooding the Marmaton C reservoir but was reluctant to proceed until it could buy out one of its working interest owners. Goff believed that Cholla could recover 40,000 to 90,000 barrels of oil by converting the Metzger 2-16 to an injection well, and the project would take 10 years. Goff concluded that if Lario's proposal was approved, Cholla and its landowners would lose this economic opportunity, causing economic waste and loss of correlative rights. And Goff testified about his belief that Lario's proposed unit constituted multiple pools rather than a single pool. Goff stated that the multiple waterflood stages in Lario's plan suggested that the proposed unit did not comprise a single pool. Goff agreed with Hemmen's concerns about Lario's proposal and stated that bottom-hole pressure data was needed to prove Lario's contention that the unit constituted a single pool.

Second, Emily M. Hundley-Goff, a petroleum geologist with Cholla, testified that she had a Master's degree in Geology and had 40 years of experience as a petroleum geologist. Hundley-Goff testified that the Metzger 1-16 well was in pressure

communication with the Metzger 2-16 well, and Cholla intended to waterflood on its leasehold. Hundley-Goff testified that Lario's plan would force Cholla to drill an injection well at a cost of \$284,844, and the project was not economically beneficial to Cholla.

The parties then prefiled some rebuttal testimony.

Lario presented rebuttal testimony from Birk, who offered Exhibits 14 and 15.1 through 15.11 as evidence of pressure communication throughout the proposed unit. Birk testified that oil field operations helped create communication here:

"As stated in my direct testimony, not all of the 11 producing formations were perforated and put on production in the initial stage of development of the [Millrich Southeast Oilfield]. Also, none of the wells inside the proposed Unit boundary have produced oil from all 11 waterflood formations. However, all of the 11 formations are productive in commingled wellbores and, as a whole, have been artificially communicated into a single pressure system (pool)."

Birk testified that "even though Lario is isolating the 11 formations in the injection wells, the producing wells will continue to produce from all 11 commingled formations and operate as a single pressure system." Birk also provided an estimate of how many barrels of oil were expected to be recovered at the close of each stage, and claimed that waterflooding a multi-zone field over a long period could recover 275 percent more secondary reserves than a traditional multi-zone waterflood process. Birk explained that the entire cost of the plan would not be billed up front but could be billed as costs were incurred. Birk disagreed that Cholla's waterflood plan would be more efficient in recovering oil, claiming that Cholla had overestimated its possible secondary recovery, and information in support of Cholla's claims was inconsistent or lacking.

Lario also provided rebuttal testimony from Hastings, who talked about Cholla's evidence. He concluded that Cholla's primary oil recovery from the Metzger 1-16 and the

Vulgamore 1-21 wells was 35,070 barrels. According to Hastings, both leases were uneconomic and near the end of their productive lives. Hastings testified that the Metzger 2-16 well would not be a good injector well for Cholla but would be good for Lario because it could be used as an injector well for 8 of the proposed 11 zones in the Feiertag Unit.

Commission Staff submitted rebuttal testimony from Hemmen. Hemmen did not believe that Cholla's concerns should cause the Commission to deny Lario's application. But Hemmen stated that the Commission had not yet seen empirical evidence that Lario's proposed unit constituted a single-pressure system. Hemmen concluded that although there were some favorable points about the application, the Staff still had doubts:

"The plan appears to be an economically feasible, reasonably necessary project designed to create valuable additional recovery in a fair and equitable manner, but Staff does not believe it can be approved under K.S.A. 55-1301 *et seq.* because the formations proposed to be unitized do not appear to constitute a single pressure system. If Applicant can convince the Commission otherwise, that would be great, and I would encourage the Commission to think closely about this issue, but Staff cannot recommend approval at this time."

The Commission received additional evidence at its hearing.

Birk testified that in response to Hemmen's concerns, he obtained bottom-hole pressures for Lario's wells by shutting the wells down for at least 24 hours. Birk offered into evidence Exhibit 20, which showed that the average current bottom-hole pressure was 231 pounds. According to Birk, this showed that the wells had been artificially communicated into a single-pressure system. Birk emphasized that several wells had been bored in this field which helped to create communication:

"[W]e don't have one single well bore that is open in all 11 formations. We do have one well bore that is open in ten of the 11 formations; but each one of the well bores throughout the field, multiple sets of those well bores have multiple formations that are completed in them. And that is, in essence, created this pressure communication system throughout the entire field that is allowing this entire field to come in to a single pressure system."

Hundley-Goff testified that Cholla had pressure communication in three wells—the Metzger 1-16, the Metzger 2-16, and the Vulgamore. Hundley-Goff stated that Cholla had wanted to implement a waterflood plan for several years and it would take 8 to 10 years to complete recovery under this plan. Hundley-Goff said that the data for the project was still in the preliminary stages and had not yet been fully developed.

Goff testified that Exhibit 20 showed a large difference between the bottom-hole pressure data from some wells. Goff stated that if the Metzger 2-16 well was absorbed into the Feiertag Unit, the Marmaton C may never be flooded or fully developed, which would cause the loss of those reserves and would not protect the rights of those landowners.

Hemmen testified that the bottom-hole pressures in Exhibit 20 showed "a pretty good spread, and which seem to kind of argue against a lot of communication, and especially on that west side of the unit." Hemmen recommended that Lario's application be denied given Lario's failure "to show real pressure communication existing on that side of the field." On cross-examination, Lario's counsel asked if Lario could artificially cure the problem by perforating the well. Hemmen responded that while Lario could perforate each of the 11 zones to create pressure equalization, doing so would constitute waste. Hemmen also noted that Lario had not perforated the wells at the time of its application. Hemmen was concerned not only about the pressure communication between the 11 formations, but also the pressure communication across the entire proposed unit.

The Commission denied the application.

In its order denying the application to unitize, the Commission stressed three points. First, the Commission noted that it could approve Lario's request for unitization of the Feiertag Unit only upon a showing that the unit constituted a single-pressure system and the unit would contribute to the prevention of waste and the protection of correlative rights.

Second, after considering the testimony and the exhibits, the Commission found that although there was some evidence in support of both sides of the single-pressure system argument, Lario had not met its burden to show that its proposed unit constituted a single-pressure system. The Commission was persuaded by Staff's and Cholla's contention that the varied bottom-hole pressures shown in Exhibit 20 showed the lack of a single-pressure system. The Commission held that Exhibit 14 similarly showed a significant variety of bottom-hole pressures.

Third, the Commission found that Lario's cross-examination of Hemmen about whether Lario could artificially cure "the problem" implied that there was a problem and if Lario tried to perforate all the formations to create a single-pressure system, it would constitute waste in violation of the Act.

Lario comes to court.

Lario sought judicial review of the agency action. The district court affirmed the Commission's denial of Lario's application for unitization in a well-reasoned 43-page decision.

In doing so, the district court held that the Commission had correctly interpreted and applied the Act. The court also found substantial competent evidence in the record

supported the Commission's finding that Lario had failed to establish the existence of a pool with a single-pressure system.

The court relied on:

- Hemmen's testimony that Lario had never presented sufficient empirical evidence to prove the existence of a pool with a single-pressure system;
- Goff's testimony emphasizing the significant difference in bottom-hole pressures;
- Exhibit 20, which supported and confirmed Hemmen's and Goff's expert opinions that Lario had not proven the existence of a pool with a single-pressure system; and
- Lario's cross-examination of Hemmen, which suggested that the entire unit was not in pressure communication.

The court also held that Birk's testimony was unsupported by sufficient empirical evidence and was therefore conclusory and unconvincing. Given the Commission's proper application of the relevant law and the substantial competent evidence supporting its decision, the district court held that the Commission's denial of Lario's application was not unreasonable, arbitrary, or capricious.

Lario makes no new arguments to this court.

Lario asserts, as it did before the district court, that it is entitled to relief under three subsections of K.S.A. 2018 Supp. 77-621(c) because:

- The Commission "erroneously interpreted or applied the law"—K.S.A. 2018 Supp. 77-621(c)(4)—by misapplying the Act;
- the Commission's orders denying its application for unitization are unsupported by substantial evidence—K.S.A. 2018 Supp. 77-621(c)(7); and

- the Commission's orders are arbitrary, capricious, or "otherwise unreasonable"—K.S.A. 2018 Supp. 77-621(c)(8).

We will examine those claims in that order.

The Commission did not misinterpret the law.

Lario argues that it presented evidence of pressure communication throughout the extent of the proposed unit, required by K.S.A. 55-1302(b). Noting that the statute does not require a particular degree or extent of communication, Lario asserts that the Commission erroneously interpreted K.S.A. 55-1302(b) to require "full" or "total" pressure communication throughout the proposed area of unitization. Lario claims that this ruling created an arbitrary standard for the pressure communication required for unitization approval and suggests that the standard should instead involve a practical test that focuses on why the operator would want to include the land in its proposed unit. Lario contends that the use of such a restrictive test creates physical and economic waste rather than preventing it. Lario alleges that the Commission's ruling ignores the fundamental concept behind unitization and waterflooding, and if allowed to stand, it will have a chilling effect on future applications for unitization that will cause more waste.

But we cannot see where the Commission inserted the words "full" or "total" into the statutory phrase "in communication" in K.S.A. 55-1302(b). The Commission made no finding that K.S.A. 55-1302(b) required any specific degree of pressure communication throughout the pool and did not otherwise place a restrictive definition on "pool" that heightened the standard for, or put additional criteria or limitations upon, unitization applications in Kansas.

It is true that in denying the application for unitization, the Commission did refer to Hemmen's testimony at the evidentiary hearing where he used the term "full":

"[W]e have to judge whether the unit operation being proposed can meet the standards of the statute. . . . So if you have some part of the pool, or unit that is not in *full pressure communication* then I think the staff has an obligation to say, well, it doesn't meet the statutory requirements." (Emphasis added.)

And later in the order, the Commission also refers to Goff's testimony that the significant difference in pressure between the Feiertag 8-15 and Feiertag 9-15 wells "doesn't suggest . . . that this reservoir is *in total communication*." (Emphasis added.)

But Lario's argument about the order misrepresents the Commission's and the witnesses' understanding of statutory requirements in K.S.A. 55-1302(b). Throughout Hemmen's direct testimony he referred to the statute's provision that a pool must "constitute a single pressure system so that production from one part of the pool affects the pressure throughout its extent." He later stated that

". . . any named oilfield can have multiple but distinct producing formations which stack on top of each other but do not necessarily constitute a single-pressure system.

"Pressure communication can be artificially induced through certain completion and production practices commonly performed, but I do not see indications of such induced pressure-communication having been triggered in this particular instance, or of any natural pressure communication."

Then, in later testimony, Hemmen gave an extensive discussion of what he believed would provide evidence of a single-pressure system and never used the words "full" or "total." Hemmen showed his understanding of the statutory requirement: "I believe the measured pressures should have less variance if the formations are indeed in communication." Hemmen also used the phrases "in pressure communication" and "the existence of pressure communication."

While testifying at the hearing before the Commission, Hemmen only used the phrase "full pressure communication" once and used the phrases "pressure communication" or "real pressure communication" during the remainder of his testimony. The Commission's order quoted Hemmen's testimony: "I just don't see how you can make an argument that pressure communication is existing there without some kind of empirical evidence," and "[Lario] has failed to show real pressure communication existing on [the west] side of the field."

Similarly, Goff used the phrase "total communication" once during his testimony. The remainder of Goff's testimony suggests a belief that part of the proposed pool was not in pressure communication with the remaining part of the proposed pool, not that a "total" or certain level of communication was required.

Our reading of the record leads us to conclude that Hemmen and Goff used the words "full" or "total" as a way of explaining that the reservoirs at issue had to be "in communication" to conform to the statutory requirement that production from one part of the pool affects pressure throughout its extent. See K.S.A. 55-1302(b). Thus, the Commission's reference to their testimony does not support Lario's assertion that the Commission created a heightened degree of pressure communication or otherwise changed the meaning of K.S.A. 55-1302(b). While also acknowledging its obligation to prevent waste, foster economic development, and protect correlative rights, the Commission simply required Lario to show that its proposed unit constituted a single-pressure system. Requiring Lario to prove this conforms to K.S.A. 55-1302(b) and is not more restrictive than the law requires.

Lario also suggests that a different standard for pressure communication should apply to pools that are near the end of their economic life under K.S.A. 55-1304(a)(1) and pools that are not near the end of their economic life under K.S.A. 55-1304(a)(2). From

there, Lario argues that the order "erroneously conflated these two distinct pathways to unitization" and rendered entire portions of the Act meaningless.

Lario's argument reads something into the statute that is not there. Nothing in the law requires a different standard to be applied to a pool or part of it based on whether it is near the end of its economic life. All units, regardless of their economic conditions, must be single-pressure systems according to K.S.A. 55-1302(b). The district court got it right when it characterized Lario's argument as "a distinction without a difference," for indeed it is.

We turn now to Lario's argument that the Commission's order departed from Supreme Court precedent in *Trees Oil Co. v. Kansas Corporation Comm'n*, 279 Kan. 209, 105 P.3d 1269 (2005).

In *Trees Oil Co.*, owners of some oil and gas wells that produced oil out of two commingled formations sought to produce additional oil production by waterflooding one of the formations. Trees Oil Company, who owned and operated a single oil and gas well within the boundary of the proposed water flood project, objected. At that time, the Legislature defined the term "pool" as "an underground accumulation of oil and gas in a single and separate natural reservoir characterized by a single pressure system so that production from one part of the pool affects the reservoir pressure throughout its extent." K.S.A. 55-1302 (Ensley 1983). Trees argued that the unitization application should be denied because the commingled formations did not constitute "'a single and separate natural reservoir.'" 279 Kan. at 227-28. The Commission rejected Trees' argument and approved the application for unitization and the district court affirmed the ruling.

On appeal, the Supreme Court affirmed the Commission and the district court, holding that a series of vertically separated reservoirs brought into pressure communication through multiple-completion drilling and production techniques would

qualify as a "pool" under K.S.A. 55-1302 and could be developed as a single unit under the Act. 279 Kan. at 230.

But we do not see how *Trees Oil Co.* helps Lario. In that case, the Supreme Court addressed the meaning of the word "natural" in K.S.A. 55-1302 and whether the definition of "pool" in effect at the time included formations commingled by drilling operations. That is not disputed here. The issue here—whether the proposed unit constitutes a single-pressure system—was not in real dispute in *Trees Oil Co.* In fact, one of Trees' own witnesses "conceded there was pressure communication between the Trees' Josephine 1-15 well and the balance of the Unit." 279 Kan. at 236. *Trees Oil Co.* simply is not on point. The Commission here properly held that the burden was upon Lario, as the petitioner, to show that this is a single-pressure unit. The Commission was not convinced by the evidence that it is.

To sum up, the Commission properly interpreted and applied the Act in denying Lario's application. In turn, the district court did not err in affirming the Commission's ruling.

There is sufficient evidence to support the Commission's decision.

Lario contends that the Commission and the district court erroneously relied on Hemmen's and Goff's testimony. Lario implies that they were not qualified to interpret the evidence presented by Birk because they are not petroleum engineers.

We note that Lario did not challenge Hemmen's or Goff's qualifications before the evidentiary hearing or otherwise object to their testimony at the hearing. Lario first argued against Hemmen's and Goff's testimony in its petition for reconsideration. Generally, a party may not raise a new argument in a motion for reconsideration. Although some courts recognize an exception when the arguments could not have been

presented earlier, there is no indication here that Lario could not have raised this argument to the Commission before or during the evidentiary hearing. See *Sierra Club v. Mosier*, 305 Kan. 1090, 1122, 391 P.3d 667 (2017).

Lario's challenge to Hemmen's and Goff's qualifications ignores the experience and expertise of each witness. Hemmen, a research analyst with the Commission's conservation division, testified that he had worked at the Commission for more than 30 years and had testified as an expert witness often. Hemmen testified about his job duties with the Commission:

"I provide technical input concerning various applications, including those involving unitizations, horizontal wells, well-location exceptions, alternate tract units, flaring, and vacuum or high volume pumps. I enforce the Commission's gas gathering regulations, review gas well test reports for accuracy, monitor monthly production from Hugoton/Panoma gas wells, and generally present Staff recommendations before the Commission where appropriate.

....

"As part of my responsibilities, I provide technical input concerning applications for unitization for secondary recovery of oil. My job is to analyze the application and provide Staff's opinion regarding whether it meets all statutory requirements and should be granted. In situations such as these, where a unitization application is protested, I review the application and all pertinent information."

Goff testified that he was a petroleum geologist with 40 years of experience and more than 20 years of experience in oil and gas exploration and production in Kansas. As Goff explained,

"The primary focus throughout my career has been on the discovery and acquisition of new petroleum reserves or enhancing existing production combining the engineering

skills gained at Shell with my geologic background that includes subsurface mapping, log analysis, sample evaluation, 3D seismic evaluation and integration with geology and engineering data, drill stem test and productions data analysis. These activities have been located in Colorado, Kansas, Oklahoma, Arkansas, Louisiana, New Mexico and Texas as well as the Gulf of Mexico."

Lario provides no support for its assertion that a witness must be a petroleum engineer to interpret the evidence presented by Lario. Failure to support a point with pertinent authority or show why it is sound despite a lack of supporting authority or in the face of contrary authority is like failing to brief an issue. *University of Kan. Hosp. Auth. v. Board of Comm'rs of Unified Gov't*, 301 Kan. 993, 1001, 348 P.3d 602 (2015). The district court properly found that Hemmen and Goff had the necessary qualifications to provide the Commission with expert testimony.

Lario alleges that the Commission and the district court improperly evaluated the evidence in denying its application for unitization. Lario contends that the Commission and the district court (1) ignored or misinterpreted evidence that supported a finding that the proposed unit is a single-pressure system and (2) failed to give Birk's testimony the weight and credit it deserved. Lario also faults the Commission for not presenting any of its own evidence of pressure communication and simply relying on Staff's and Cholla's interpretation of Lario's evidence.

In making this analysis, we are mindful of the restraints placed upon us by law. We are tasked with determining whether the Commission's findings are supported by substantial evidence given the record as a whole. In reviewing the evidence in light of the record as a whole, the court shall not reweigh the evidence or engage in de novo review. K.S.A. 2018 Supp. 77-621(d). Lario's arguments essentially invite us to reweigh the evidence, which we cannot do. Lario, as the party seeking unitization, bore the burden of presenting evidence of a single-pressure system, not the Commission.

In denying Lario's application for unitization, the Commission's doubts about this application arose from:

- Hemmen's testimony;
- Goff's testimony;
- Exhibit 20; and
- Lario's cross-examination of Hemmen.

In addition, the Commission also evaluated and made findings relating to Birk's testimony and Exhibits 14 and 15.1 through 15.11.

Birk first testified about his belief that the proposed unit constituted a single-pressure system:

"These intervals have been produced commingled in wellbores within the proposed Unit and, due to multiple completion production techniques, these formations act as one common pool. These intervals act as a single pressure system so that production from one part of the pool affects pressures throughout its extent."

Birk's testimony mainly related to the engineering aspects of the project, and he provided no data to support his assertion that the unit constituted a single-pressure system.

Hemmen testified about his early concerns with Lario's application:

"Applicant has asserted in their pre-filed testimony that the interval, containing various geologically distinct formations, constitutes part of a pool possessing an official Nomenclature Committee-awarded name of Millrich Southeast. However, any named oilfield can have multiple but distinct producing formations which stack on top of each other but do not necessarily constitute a single-pressure system.

"Pressure communication can be artificially induced through certain completion and production practices commonly performed, but I do not see indications of such

induced pressure-communication having been triggered in this particular instance, or of any natural pressure communication. I would like to see Applicant provide some rebuttal testimony with exhibits containing bottom-hole reservoir pressure data obtained from all eleven formations at issue before I would be comfortable affirming that the formations do in fact comprise part of a pool."

After learning of Hemmen's concerns, Birk presented Exhibits 14 and 15.1 through 15.11 to support his belief that the pool in the proposed unit constituted a single-pressure system. But Birk did not explain the significance of the data in these exhibits as it related to proving the existence of a pool with a single-pressure system. Birk stated that over about 25 years, the 11 proposed waterflood formations had been artificially communicated through multi-zone completions and production techniques throughout the unit area. Birk testified in a conclusory fashion,

"To further demonstrate the pressure communication in the 11 waterflood formations throughout the proposed Unit boundary, I have attached Exhibit #15.1 through #15.11 (Bottom-hole Reservoir Pressure Graphs) to graphically display the declining bottom-hole reservoir pressure of all 11 waterflood formations. These graphs show depletion in the zones from the time the first bottom-hole reservoir pressure was tested until the last DST, or shut-in fluid level, was taken in each zone. All eleven graphs show the initial bottom-hole reservoir pressure and the decline of the reservoir pressure over time, due to production of formation fluids in those zones. A marker for the date of first production has been placed on each graph to identify when the reservoir initiated pressure depletion. In addition, Lario has added calculated current bottom-hole reservoir pressures, based on shut-in fluid level measurements, to select graphs in Exhibit #15 to demonstrate the continued artificial pressure communication through multi-zone comingled [*sic*] production in the producing wellbores."

After reviewing Exhibits 14 and 15.1 through 15.11, Hemmen provided the following rebuttal testimony showing how the exhibits were not really persuasive:

"Applicant has attempted to provide [data establishing a single pressure

system], but I am not convinced it demonstrates a single pressure system. For example, although Applicant's Exhibit 14 provides some pressure data, the provided pressures are quite a way apart in terms of magnitude and obviously demonstrate the differing degrees of depletion within the different formations. While differing degrees of depletion would be expected because of the chronology of development in the formations, I believe the measured pressures should have less variance if the formations are indeed in communication. I would note that Exhibit 14 has each pressure entry shown under just one formation header, and appears to only provide initial pressures identified during drilling, but not current bottom-hole pressures, which is not ideal from the perspective of demonstrating a single pressure system. While Applicant's Exhibits 15.1 through 15.11 also provide bottom-hole pressure versus time graphs for each formation, there are few data points from which to plot pressure declines of the individual formations. So I do not believe any meaningful comparison of the pressure declines of the individual formations can be derived from a study of these graphs."

Hemmen concluded that there was not "enough data to make the leap of faith needed to conclude all eleven formations are in communication."

Adding to those doubts, Goff testified in rebuttal that he agreed with Hemmen's concerns about the proposed unit:

"Cholla agrees with Mr. Hemmen's concerns that the proposed unit constitutes a 'pool' as defined in K.S.A. 55-1302(b). We believe that the proposed unit comprises multiple pools and agree with his conclusion that the bottom hole pressure data be obtained to prove Lario's contention that the formations comprise part of a pool."

Goff also believed that the project's need for multiple stages suggested that the proposed unit did not comprise a single pool.

In response to Hemmen's concerns, Birk obtained the bottom-hole pressures of 16 of Lario's wells. This process involved leaving the wells shut-in for at least 24 hours and then shooting fluid into the wells. At the evidentiary hearing, Birk presented Exhibit 20,

which showed that the average initial bottom-hole pressure of these wells was around 1100 pounds per square inch (PSI), and after the test, the average bottom-hole pressure was 231 PSI. Birk testified that this evidence showed that the wells were all part of a single-pressure system. Birk further noted that the Feiertag 1-15 well had a pressure of around 180 PSI while the Feiertag 10-15 well about three quarters of a mile away had a pressure of 129 PSI.

Lario's counsel then introduced Exhibit 21—a diagram showing three different well bores. Birk explained its significance in creating a single-pressure system, stating that although not all 11 wells were perforated, there was still pressure communication between the wells. Birk believed that tract 7 (Hutchins), tract 8 (Metzger), and tract 9 (Vulgamore) showed signs that they were in pressure communication with the Feiertag area. Birk stated that Phi-H maps, which take hydrocarbons into account, supported this position.

Goff testified that the Feiertag 8-15 and Feiertag 9-15 wells were roughly 900 feet apart. Goff noted that according to Exhibit 20, the Feiertag 8-15 well had a bottom-hole pressure reading of 80 PSI, while the Feiertag 9-15 well had a bottom-hole pressure reading of 100. Goff stated that "the 400 percent difference in pressure doesn't suggest to me that this reservoir is in total communication." But either Goff's testimony or the transcript was wrong; according to Exhibit 20, the Feiertag 8-15 well had a bottom-hole pressure reading of 380 PSI. Thus, the Feiertag 8-15 well had a 280 percent increase in pressure over the Feiertag 9-15 well.

Hemmen testified that he had concerns about whether the formations under tract 1 (Hansen) were in pressure communication with the rest of the unit, based on the bottom-hole pressure evidence in Exhibit 20. Hemmen stated,

"There does seem to be a pretty good spread, and which seem to kind of argue against a lot of communication, and especially on that west side of the unit. I guess because the Hansen well has such a low bottom-hole pressure. And then you add in to the fact that they don't have one zone opened up in that well and also in the Hutchins.

"So I just don't see how you would have a pathway for that communication, the pressure communication to occur between the one zone they have open and the rest of the other zones."

Hemmen also expressed concern about whether the formations under tract 7 (Hutchins) were in pressure communication with the rest of the unit:

"We don't have a bottom-hole pressure on that well, and it's not even completed in one of the zones that they want to unitize; but I still feel that without having other zones open in the well, I don't see, I just don't see how there could be pressure communication."

When asked about tract 9 (Vulgamore), Hemmen testified:

"Tract 9 you don't even have a well. I know that the applicant has some contour lines on their Phi-H maps going over parts of that tract, and that's a matter of interpretive geology, I guess. Again, I just don't see how you can make an argument that pressure communication is existing there without some kind of empirical evidence."

Hemmen recommended that Lario's application for unitization be denied because it had failed to show "real pressure communication" on the west side of the field.

On cross-examination, Hemmen agreed that the difference between the initial bottom-hole pressure average of 1,092 PSI and the current bottom-hole pressure average of 231 PSI was significant. But Hemmen stated that it was hard to know how much of that difference was due to "just plain old reservoir depletion as opposed to pressure communication and movement of oil."

Based on the evidence outlined above and a review of the record as a whole, there was substantial competent evidence to support the Commission's finding that Lario had failed to establish that its proposed unit constituted a single-pressure system, as K.S.A. 55-1302(b) requires.

In making this finding, the Commission did not improperly discount, ignore, or reject Lario's evidence. When the Commission focused on Lario's Exhibit 20, it pointed out that the exhibit shows seven wells that are roughly equalized in bottom-hole pressure; it also shows nine wells that are not. Further, the exhibit shows five wells that have roughly 150 pounds more bottom-hole pressure than the seven wells that are roughly equalized in pressure, and a spread of 310 pounds between the lowest pressure well in the unit (Hansen 1-9) and the highest pressure well (Feiertag A 3-15). Obviously, the Commission looked at all of the wells—not just the wells with the lower pressures.

The Commission found evidence supporting both sides of the single-pressure system argument and weighed and considered the evidence on each side. Weighing this evidence is for the Commission to do, and is not a task for this court.

Lario's arguments are simply not persuasive based on the evidence submitted to the Commission through expert testimony. And the district court did not err in determining that the Commission's order is supported by substantial competent evidence. We see no reason to grant Lario relief on this point.

We hold the Commission's orders were not unreasonable, arbitrary, or capricious.

In reviewing Lario's final issue, we point out some fundamental legal principles. When an agency possesses discretion, a court must presume the validity of an agency action and cannot substitute its judgment for that of the administrative agency unless the action is unlawful, unreasonable, arbitrary, or capricious. *Sierra Club*, 305 Kan. at 1113.

The Commission had the discretion to grant or deny this application for unitization. We must then presume the validity of this action and will not substitute our own judgment unless the Commission acted in an unlawful, unreasonable, arbitrary, or capricious way. The arbitrary and capricious test of K.S.A. 2018 Supp. 77-621(c)(8) relates to whether a particular action should have been taken or is justified, such as the reasonableness of an agency's exercise of discretion in reaching the determination, or whether the agency's action is without foundation in fact. *Kansas Dept. of Revenue v. Powell*, 290 Kan. 564, 569, 232 P.3d 856 (2010).

Lario claims that the Commission's orders denying its application for unitization were unreasonable, arbitrary, and capricious because

- the Commission created a heightened standard for the pressure communication required to establish a single-pressure system;
- the Commission relied on an unreasonable reading of the Act;
- the Commission arbitrarily disregarded evidence in support of a single-pressure system; and
- the Commission disregarded the potential of harm to Lario's correlative rights.

Because we are convinced that the Commission properly interpreted and applied the Act and did not create a heightened standard for the pressure communication required to establish a single-pressure system, we reject Lario's claim that it is unreasonable, arbitrary, and capricious. Going further along this line, we hold that there is substantial competent evidence to support the Commission's determination that Lario had failed to meet its burden. Finally, Lario's argument that the Commission disregarded the potential of harm to Lario's correlative rights is speculative and irrelevant given Lario's failure to establish that its proposed unit constituted a single-pressure system as K.S.A. 55-1302(b) requires. For these reasons, the Commission's orders were not unreasonable, arbitrary, or capricious. The district court did not err in so finding.

The district court and the Commission are affirmed.