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Brine Recovery: Has Eike v. Amoco Ended the Confusion in Oklahoma

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RECENT DEVELOPMENTS

BRINE RECOVERY: HAS *EIKE v. AMOCO* ENDED THE CONFUSION IN OKLAHOMA?*

I. INTRODUCTION

In this era of resource shortages and conservation, what was once merely waste for disposal is now being examined for possible value. It has become economically feasible to extract minerals found in brine and drilling waste, and some companies are eager to explore opportunities to do so. Technological advances have made it profitable to extract iodine, manganese, sodium, potassium, and other minerals from the brine water of sludge pits and the salt water in underground reservoirs.¹ Brine has been put to use in waterflood operations to increase oil production.² There is also interest in desalinization of brine to supplement water needs of cities and agriculture.³

There are currently few legal guidelines concerning brine recovery. Confusion surrounds even basic considerations such as whether brine is a mineral and whether it is part of the surface estate or the mineral estate. In November 1980, the Oklahoma Supreme Court attempted to clarify these issues in the controversial opinion of *Eike v. Amoco Production Co. (Eike I)*.⁴ However, two years later, the

* The author wishes to express her appreciation for the gracious assistance of Craig A. Stokes and Charles A. Grissom, Jr. in preparing this Recent Development.

1. Case law provides examples of mineral extraction from brine. See, e.g., *Eike v. Amoco Prod. Co.*, 51 OKLA. B.J. 2686 (Nov. 12, 1980) (extraction of iodine); *Deseret Livestock Co. v. State*, 110 Utah 239, 171 P.2d 401 (1946) (extraction of salt); see also Davison, *Determination of Whether a Mineral is Locatable or Leaseable*, 21 ROCKY MTN. MIN. L. INST. 565, 582-83 (1975) (commercial brine operations produced sodium and potassium compounds).

2. See *Holt v. Southwest Antioch Sand Unit, Fifth Enlarged*, 292 P.2d 998, 999 (Okla. 1955) (large quantities of salt water were forced into the producing oil pool, thus increasing production of oil and gas through repressuring processes); *Ambassador Oil Corp. v. Robertson*, 384 S.W.2d 752, 754, 758 (Tex. Civ. App. 1964) (salt water was used for water flooding operations within the unit).

3. Desalinization plants remove salt and chemicals from brine water providing pure water for use by cities and for irrigation of farm land. See Hudson, *Salt Water is a Mineral: Ownership of a Natural Resource of Increasing Importance in Oil-Producing States*, 50 TEX. L. REV. 448, 448 (1972).

4. *Eike v. Amoco Prod. Co.*, 51 OKLA. B.J. 2686 (Nov. 12, 1980) [hereinafter cited as *Eike I*], *rev'g* No. C-76-286, slip op. (Okla. Dist. Ct. Woodward Cty. June 21, 1978), *withdrawn*, 53 OKLA.

Oklahoma Supreme Court granted a petition for rehearing and, in *Eike v. Amoco Production Co. (Eike II)*,⁵ withdrew the *Eike I* opinion and affirmed the trial court's decision.⁶ That lower court's opinion contained fact findings and legal holdings which directly contradicted *Eike I*. The ramifications of the court's vacillation between *Eike I* and *Eike II* are far-reaching and have only served to compound the confusion. This Recent Development will examine the problems created and the questions left unanswered by the *Eike* decisions. These uncertainties include the issues of brine ownership and its status as a mineral, as well as the ancillary issues of trespass, capture, and royalty payments.

II. THE *EIKE* DECISIONS

A. *Statement of the Case*

Amoco Production Company (Amoco) had acquired brine water leases from surface owners over a 4766-acre tract known as Woodward Trench.⁷ Some of the acreage in the Woodward Trench area had already been leased for oil and gas development by several companies, including Sabine Production Company (Sabine), Texas Oil and Gas Company (Texas), and Colonial Royalties Company (Colonial).⁸ Amoco produced the brine by water flood methods, piped it to a plant where iodine was extracted, and returned the residue to the same formation through injection wells.⁹ Although this area had previously been unsuccessfully explored for oil and gas, Amoco began finding gas in the brine, both in solution form and in free form. Amoco used some of the gas to operate the iodine extraction plant, flared some, and sold the rest to a pipeline company.¹⁰ As the amount of gas in the brine increased, Amoco began including the right to solution gas in its brine leases and obtained separate oil and gas leases over much of Wood-

B.J. 2602 (Oct. 21, 1982) (The District Court's decision was subsequently affirmed by the Oklahoma Supreme Court in *Eike v. Amoco Prod. Co.*, No. 52,511 (Okla. Sup. Ct. filed Feb. 8, 1983) (disposition noted at 54 OKLA. B.J. 414 (1983)).

5. *Eike v. Amoco Prod. Co.*, No. 52,511 (Okla. Sup. Ct. filed Feb. 8, 1983) (mem., per curiam) (disposition noted at 54 OKLA. B.J. 414 (1983)) [hereinafter cited as *Eike II*]. The *Eike II* opinion included the district court's "Findings of Fact and Conclusions of Law," designated as "Exhibit A," and the district court's "Journal Entry [of Judgment]," designated as "Exhibit B." Thus, all further discussion pertaining to *Eike II* will deal with the trial court's findings of fact and conclusions of law, which were found by the Oklahoma Supreme Court to be "supported by competent evidence and . . . not contrary to law." *Id.* at 1-2.

6. *Id.*

7. *Eike I*, *supra* note 4, at 2686.

8. *Id.* at 2688.

9. *Id.* at 2686.

10. *Id.* at 2687.

ward Trench.¹¹

In those situations where Amoco was producing gas from brine wells under surface leases on acreage leased for oil and gas development by Texas, Sabine, and Colonial, those companies contended that they had a right to Amoco's gas.¹² They argued that Amoco's leases did not grant the right to produce natural gas through a brine water well.¹³ These companies also alleged that Amoco was a trespasser and bad faith converter of their property.¹⁴ Amoco maintained that its recovery of gas was unexpected and in good faith. The large amounts of gas eventually discovered had not been anticipated¹⁵ and Amoco had never attempted to conceal the extent of its gas discoveries.¹⁶

B. *The Oklahoma Supreme Court's Initial Decision—Eike I*

The Oklahoma Supreme Court initially considered the *Eike* controversy in November of 1980. The court noted that "[o]wnership of brine water has never been established in Oklahoma,"¹⁷ possibly because it had never been considered to be of value. Various approaches were used to reach the determination that "brine water and its components is a mineral,"¹⁸ thus belonging to the mineral estate owner.¹⁹

11. *Id.*

12. *Id.* at 2688.

13. *Id.* Texas, Sabine, and Colonial used the analogy that a gas producer was not entitled to casinghead gas when the lease specified only gas to support their argument that Amoco was not entitled to gas when its leases specified brine water. "Amoco's leases include the phrase 'gas well' as the method of producing the gas and to Texas, Sabine and Colonial a brine well is not a gas well. We must disagree." *Id.* The *Eike I* court determined that any well that produced gas was a "gas well" for lease purposes. *Id.*

14. *Id.* at 2689.

15. *Id.* Amoco expected the iodine project to produce \$8 million worth of natural gas. *Id.* at 2687.

16. *Id.* at 2689.

17. *Id.* at 2687.

18. *Id.* at 2688. The court applied Kuntz' "manner of enjoyment" theory as well as the doctrine of *ejusdem generis*. *Id.* The manner of enjoyment theory holds that fresh water should belong to the surface estate since it is necessary for the enjoyment of that estate. Salt water should belong to the mineral estate because it serves no useful purpose to the surface estate. See I E. KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS § 13.3, at 305-06 (1962).

Ejusdem generis is a rule of construction that limits the meaning of general words that follow enumerations of specific terms. The general words will be construed as being of the same kind or class as the things previously specified. See *id.* at 304. The *Eike I* court used this rule to include brine water within the general words "and other minerals" following the specific terms "oil and gas." See *Eike I*, *supra* note 4, at 2688.

The court also relied on authority from Arkansas and Texas in reaching its decision. *Id.* at 2687. Arkansas declared statutorily that salt water is a mineral. "The word 'mineral' as used herein shall include oil, gas, asphalt, coal, iron, zinc, lead, cinnabar, bauxite, and salt water whose naturally dissolved components (solute) are used as a source of raw materials for bromine and other products derived therefrom in bromine production." ARK. STAT. ANN. § 52-201 (Supp.

Although the Oklahoma Supreme Court reversed the trial court's decision, it agreed that Sabine, Texas, and Colonial had no right to the gas and gas proceeds from Amoco's brine wells.²⁰ The court noted that an oil and gas lease in Oklahoma historically has not been considered a grant of possessory ownership of the minerals.²¹ Rather, a lease merely conveys the right to drill and capture the minerals, and only when captured do the minerals become the property of the lessee.²² The court reasoned that since Sabine, Texas, and Colonial had not been prevented from drilling their own wells, they should not be entitled to gas produced by Amoco under its lease.²³ Regarding the alleged trespass, the court agreed with the trial court that Amoco was a trespasser,²⁴ but held that Amoco was allowed to deduct production costs because of its good faith.²⁵ Finally, addressing the conversion allegation, the Oklahoma court held that conversion had in fact occurred in certain

1981). The *Eike I* court also relied on the Texas decision of *Ambassador Oil Corp. v. Robertson*, 384 S.W.2d 752, 763 (Tex. Civ. App. 1964). However, that decision appears to be based on little authority. For a discussion of this decision, see Hudson, *supra* note 3, at 448 n.1.

19. *Eike I*, *supra* note 4, at 2688.

20. *Id.*

21. *Id.*

22. *Id.* In *Wright v. Carter Oil Co.*, 97 Okla. 46, 223 P. 835 (1923), the Oklahoma Supreme Court held:

[O]il and gas belong to the owner of the land and are a part of it so long as they are on it or in it, or subject to his control; but when they escape and go into other land, or come under another's control, the title of the former owner is gone. In other words, property in the oil and gas does not become absolute until they are reduced to actual possession by being brought to the surface and then controlled. . . . The right to reduce oil or gas to possession is a valuable property right.

Id. at 47, 223 P. at 836. This is what is meant by "capture"—title by actual possession and control. The Oklahoma Supreme Court also applied this concept to salt water in *West Edmond Salt Water Disposal Ass'n v. Rosecrans*, 204 Okla. 9, 14, 226 P.2d 965, 970 (1950), *appeal dismissed*, 340 U.S. 924 (1951):

In this respect water resembles oil, gas, or any other mineral fluid in nature, or of such character that by a well drilled on one tract of land it may be drawn from adjoining lands and become the property of the owner of the well when reduced to his possession.

Id.

23. *Eike I*, *supra* note 4, at 2688. Sabine, Texas, and Colonial were found to be entitled to a lessee's interest in gas produced by Amoco's brine water wells on those tracts on which they held valid leases. *Id.*

24. *Id.* at 2689. Amoco did not attempt to conceal the large gas discoveries. It also sought gas leases from mineral owners and added a gas clause to later brine water leases. Although Amoco did trespass on the brine water holdings when its leases had been obtained only from surface owners, this brine trespass was held to be in good faith because of the uncertainty of brine ownership under Oklahoma law at that time. *Id.*

25. *Id.* The distinction between a good faith trespasser and a bad faith trespasser is that the former may deduct his cost of production whereas the latter may not. In Oklahoma, it is necessary to prove some element of fraud, malice, oppression, evil intent, or gross negligence in order to prove that a trespasser has acted in bad faith. *See Edwards v. Lachman*, 534 P.2d 670, 673 (Okla. 1974); *Dilworth v. Fortier*, 405 P.2d 38, 45 (Okla. 1964); *Sapulpa Petroleum Co. v. McCray*, 136 Okla. 269, 270, 277 P. 589, 590 (1929).

instances,²⁶ and reversed the trial court's decision.²⁷

C. *The Oklahoma Supreme Court's Second Decision*—Eike II

In October 1982, the Oklahoma Supreme Court withdrew *Eike I* and granted a rehearing. After examination of the record, transcript, and briefs and after hearing oral argument, the court issued a memorandum opinion affirming the trial court's decision.²⁸ The supreme court held that the trial court's findings of fact and conclusions of law were "supported by competent evidence and are not contrary to law."²⁹

Despite their opposite results, *Eike I* and *Eike II* did agree that Amoco was a good faith trespasser as to the gas recovered from the brine³⁰ and was entitled to recover gas production costs.³¹ Moreover, the decisions also agreed that the gas and gas proceeds from Amoco's brine wells should be divided between Amoco and the mineral owners,³² but that other parties with oil and gas leases in the reservoir area, such as Sabine, Texas, and Colonial, were not entitled to share in the proceeds.³³

As discussed in the following section, the crucial differences between *Eike I* and *Eike II* lie in their respective resolutions of the two major issues: 1) whether brine is a mineral and 2) whether brine is part of the surface estate. *Eike II* held that brine water is owned by the surface owner; therefore, mineral deeds which convey "oil, gas and other minerals" do not convey an interest in brine, except for the amount necessary for oil and gas extraction.³⁴ In addition, the court determined that the surface estate includes iodine released from rocks

26. *Eike I*, *supra* note 4, at 2690. Amoco was held accountable for any gas it used in its plant and for any gas flared. This ruling only applied to those areas of the Woodward Trench that Amoco did not have leased and for gas it used prior to obtaining gas leases. *Id.* at 2689.

27. *Id.* at 2690. The Oklahoma Supreme Court reversed and remanded the trial court's decision with instructions to grant the statutorily approved interest rate from the date of conversion. *Id.*

28. *Eike II*, *supra* note 5, at 2.

29. *Id.* at 1-2.

30. See *Eike II*, *supra* note 5, exhibit A, at 6; *Eike I*, *supra* note 4, at 2689. In *Sapulpa Petroleum Co. v. McCray*, 136 Okla. 269, 277 P. 589 (1929), the Oklahoma Supreme Court noted, "The fact that a purchaser may err in judgment is not enough to impeach his good faith, but it exists where the purchase is made with an honest purpose, though the real title is not acquired." *Id.* at 269, 277 P. at 590; see *Dilworth v. Fortier*, 405 P.2d 38, 46 (Okla. 1964).

31. *Eike II*, *supra* note 5, exhibit A, at 6; *Eike I*, *supra* note 4, at 2689; see *supra* note 25.

32. *Eike II*, *supra* note 5, exhibit A, at 5; *Eike I*, *supra* note 4, at 2688. Gas proceeds would be distributed on a pro rata basis according to the acreage held by each of the lessees.

33. *Eike II*, *supra* note 5, exhibit A, at 5; *Eike I*, *supra* note 4, at 2688. The court applied the rule of capture to preclude recovery. See *supra* notes 20-22 and accompanying text.

34. *Eike II*, *supra* note 5, exhibit A, at 5.

by brine water,³⁵ and thus a conveyance of "oil, gas and other minerals" does not convey an interest in iodine.³⁶ Consequently, *Eike II* found that Amoco's brine water leases, obtained from the surface owners, conveyed the right to produce brine water and extract iodine and other constituents.³⁷ Therefore, Amoco was not a trespasser as to the brine water.³⁸

III. RAMIFICATIONS OF *EIKE I* AND *EIKE II* ON THE LEGAL STATUS OF BRINE

A. *Is Brine a Mineral?*

The controversy begins with the initial determination of whether brine is a mineral.³⁹ In *Eike I*, the Oklahoma Supreme Court determined brine to be a mineral,⁴⁰ two years later, the court withdrew this decision and determined that brine was not a mineral.⁴¹ The determination of whether a given substance is a mineral presents questions of both fact and policy which vary greatly with jurisdiction and circumstances.⁴² The scientific or technical definition of the term "mineral" is "so broad as to embrace not only metallic minerals, oil, gas, stone, sand, gravel and many other substances, but even the soil itself."⁴³ It is rare, however, that "mineral" is intended in the scientific sense when used in ordinary transactions.⁴⁴ The scientific definition is certainly too expansive to be of practical use and the law has made the term "mineral" more workable by limiting the meaning. In *Horse Creek Land & Mining Co. v. Midkiff*,⁴⁵ "mineral" was limited by defining it as including "every inorganic substance which can be extracted from the earth

35. *Id.* It is unclear whether the court was attempting to distinguish between an element and a mineral by classifying iodine as a "chemical element."

36. *Id.*

37. *Id.*, exhibit B, at 3.

38. *Id.*, exhibit A, at 5.

39. A recent article discussed the brine ownership issue raised in *Eike I*, emphasizing the issue of whether brine was a mineral. See Snyder, *Salt Water Ownership*, 53 OKLA. B.J. 1006 (1982).

40. *Eike I*, *supra* note 4, at 2686.

41. *Eike II*, *supra* note 5, exhibit A, at 5.

42. *Fleming Found. v. Texaco, Inc.*, 337 S.W.2d 846, 851 (Tex. Civ. App. 1960) ("whether a given substance is or is not a mineral within the meaning of the deeds in which the reservations are made is a question of fact to be decided according to the circumstances"); see Comment, *Ownership of Unspecified Minerals in Texas and Oklahoma After Reed v. Wylie II*, 16 TULSA L.J. 511, 511 n.3 (1981).

43. *Heinatz v. Allen*, 147 Tex. 512, 527, 217 S.W.2d 994, 997 (1949).

44. *Id.*

45. 81 W. Va. 616, 95 S.E. 26 (1918).

for profit, whether it be solid, . . . liquid, . . . or gaseous.”⁴⁶ Although the *Horse Creek* court narrowed the definition of “mineral,” that definition was still so expansive as to include “salt and other mineral waters.”⁴⁷

A second way of limiting the term “mineral” was introduced in 1960 by the Texas Court of Civil Appeals which held that “mineral rights are to be interpreted according to their ordinary and natural meaning where there is no manifestation of an intention expressed in the deed to use them in a scientific or technical sense.”⁴⁸ This proposition has also gained acceptance in Oklahoma.⁴⁹ The ordinary and natural meaning of “mineral” can vary considerably. Some courts go so far as to consider brine and all other waters to be minerals;⁵⁰ however, other courts suggest that all water should be excluded from the mineral classification.⁵¹ Various tests have been used to determine whether water is a mineral. One test distinguishes surface water from groundwater,⁵² while another test finds that the appropriate distinction is between fresh water and salt water.⁵³

46. *Id.* at 618, 95 S.E. at 27. The West Virginia court qualified its broad definition of “mineral” by stating that the definition would be used “unless there are words qualifying or limiting its meaning, or unless from the deed, read and construed as a whole, it appears that the intention was to give the word a more limited application.” *Id.* This qualification has been applied in Texas and Oklahoma where mineral rights are interpreted according to their ordinary meaning when no intention is expressed to use them in a technical or scientific sense. *See Holland v. Dolese Co.*, 540 P.2d 549, 550 (Okla. 1975); *Fleming Found. v. Texaco, Inc.*, 337 S.W.2d 846, 851-52 (Tex. Civ. App. 1960).

47. 81 W. Va. 616, 618, 95 S.E. 26, 27 (1918).

48. *Fleming Found. v. Texaco, Inc.*, 337 S.W.2d 846, 852 (Tex. Civ. App. 1960) (citing *Heinatz v. Allen*, 147 Tex. 512, 217 S.W.2d 994 (1949)).

49. “‘Mineral rights are to be interpreted according to their ordinary and natural meaning where there is no manifestation of an intention expressed in the deed to use them in a scientific or technical sense.’” *Holland v. Dolese Co.*, 540 P.2d 549, 550 (Okla. 1975) (quoting *Mack Oil Co. v. Laurence*, 389 P.2d 955, 961 (Okla. 1964)).

50. *Gulf Prod. Co. v. Continental Oil Co.*, 139 Tex. 183, —, 132 S.W.2d 553, 565 (1939). In finding that an easement to take water constituted an encumbrance, the court deemed water to be a mineral. *Id.*

51. *Vogel v. Cobb*, 193 Okla. 64, 67, 141 P.2d 276, 280 (1943). “While it may be conceded that water, in a technical sense, is a mineral, it does not follow that it will pass under ordinary mineral deeds . . .” *Id.*

52. *Hathorn v. Natural Carbonic Gas Co.*, 194 N.Y. 326, 338, 87 N.E. 504, 508 (1909) (“[S]ubterranean waters have always been treated as a mineral in the decisions relating to their use and enjoyment . . .”). *Contra Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 867 (Tex. 1973) (“[W]ater is part of the surface estate according to the ordinary and normal use of the words conveying or reserving minerals.”).

53. *Ambassador Oil Corp. v. Robertson*, 384 S.W.2d 752, 763 (Tex. Civ. App. 1964) (“[S]alt water is a mineral within the meaning of the phrase ‘oil, gas and other minerals.’”). *Contra Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 867 (Tex. 1973) (“[T]he water itself is an incident of surface ownership in the absence of specific conveyancing language to the contrary. And in our case the saline content has no consequence upon ownership.”).

A third and perhaps more practical way of determining whether a substance is a mineral was set forth by the Supreme Court of Utah in *Deseret Livestock Co. v. State*.⁵⁴ In *Deseret*, the Utah court defined "mineral" as "any natural substance having sufficient value to be mined, quarried, or extracted for its own sake or its own specific use."⁵⁵ Several Oklahoma cases have applied a similar theory requiring that a substance be exceptional in order to be considered a mineral for purposes of a mineral conveyance.⁵⁶ The Texas Supreme Court has also adopted this approach in *Heinatz v. Allen*⁵⁷ and there stated the circumstances under which a substance would be considered a mineral. The *Heinatz* court illustrated the exceptional substance theory with the example of sand of value for glassmaking and limestone of such quality that it could be profitably manufactured into cement.⁵⁸ Such substances, when useful only for building and roadmaking, were not regarded as minerals in the ordinary meaning of the word.⁵⁹ If brine is to be considered a mineral under this theory, it must possess a peculiar property giving it special or exceptional value.

It is not clear which of the preceding tests was used by the Oklahoma Supreme Court in *Eike I*.⁶⁰ The court stated, "[W]e hereby hold that brine water *and its components* is a mineral within the phrase, ' . . . oil, gas and other minerals,' and as such belongs to the mineral estate owner" ⁶¹ This suggested that the minerals in solution in the brine may in fact give the brine its exceptional value. However, the court did not consider brine water and its components separately, but as one substance. This may have been based on the inability to separate the components or minerals from the brine at the well-site.⁶²

54. 110 Utah 239, 171 P.2d 401 (1946).

55. *Id.* at —, 171 P.2d at 403 (quoting 36 AM. JUR. *Mines and Minerals* § 4 (1941)).

56. In *Mack Oil Co. v. Laurence*, 389 P.2d 955 (Okla. 1964), the court set forth the exceptional substance theory by stating:

[D]etermination of whether exceptional substances are to be considered as minerals in a particular case, must turn upon what the word denoting the substance ordinarily is understood to mean in the meaning and intention (vernacular) of the particular industry, the commercial world and the landowners themselves at the time of the conveyance.

Id. at 961; *accord* *Holland v. Dolese Co.*, 540 P.2d 549, 550 (Okla. 1975); *Fleming Found. v. Texaco, Inc.*, 337 S.W.2d 846, 852 (Tex. Civ. App. 1960); *see* *Snyder, supra* note 40, at 1009.

57. 147 Tex. 512, 217 S.W.2d 994 (1949).

58. *Id.* at 527, 217 S.W.2d at 997.

59. *Id.*

60. *Eike I, supra* note 4, at 2688.

61. *Id.* (emphasis added).

62. *See* *Northern Natural Gas Co. v. Grounds*, 441 F.2d 704, 715 (10th Cir. 1971). The court held that absent specific reservations, a grant of gas by lease covered all components of the gas, including helium. The gas was produced as a whole because wellhead separation of helium was

B. *Who Owns Brine?*

In *Eike II*, the court avoided the mineral classification issue and instead focused on the ownership issue.⁶³ The court found that “the brine water and iodine contained therein is owned by the surface owners.”⁶⁴ In Oklahoma and other states where the courts often avoid the issue of minerality, the issue of ownership becomes crucial. In determining whether a particular substance is included within the terms of a lease which grants or reserves “other minerals,” the difficulty lies in attempting to determine the original parties’ intention as to that substance.⁶⁵ There are several tests and doctrines used by the courts in dealing with such problems of construction.

The language of a contract as a whole governs its interpretation and the intention of the parties must be ascertained from the writing itself, if possible.⁶⁶ However, where the intention cannot be determined from the document, Oklahoma courts have historically relied upon the doctrine of *ejusdem generis* to limit the substances included in the mineral estate to those of the same general nature as the enumerated substances.⁶⁷ Professor Kuntz explained this doctrine, stating, “[W]here specific minerals are enumerated along with a general mineral grant or reservation, the court may conclude that the parties had in mind only those minerals which have characteristics in common with

impractical. *Id.* at 714. This court’s treatment of helium can be applied to brine in *Eike* since iodine extraction could not take place at the well-site.

63. See *Eike II*, *supra* note 5, exhibit A, at 5. The Oklahoma Supreme Court also avoided the mineral classification issue in *Holt v. Southwest Antioch Sand Unit, Fifth Enlarged*, 292 P.2d 998 (Okla. 1956). The *Holt* court allowed the mineral owner use of the salt water as needed in the repressuring process for mining and removal of minerals. *Id.* at 1000. This appears to indicate that the Oklahoma Supreme Court is basing minerality on the intended use and commercial value of the brine. If so, for brine water to be considered a mineral, it must contain valuable components that set it apart from brine which has no components worth extracting.

64. *Eike II*, *supra* note 5, exhibit A, at 5.

65. 1 E. KUNTZ, *supra* note 18, § 13.3, at 305.

66. OKLA. STAT. tit. 15, § 157 (1981) requires taking the contract as a whole to give effect to every part and using each clause to help interpret the others. *Id.* § 155 is the related rule of interpretation that the intention of the parties is to be ascertained from the writing alone, if possible. See *Panhandle Coop. Royalty Co. v. Cunningham*, 495 P.2d 108, 113 (Okla. 1971); *Mack Oil Co. v. Laurence*, 389 P.2d 955, 960 (Okla. 1964); *Cronkhite v. Falkenstein*, 352 P.2d 396, 398 (Okla. 1960); *Wolf v. Blackwell Oil & Gas Co.*, 77 Okla. 81, 82, 186 P. 484, 484 (1920).

67. See *Panhandle Coop. Royalty Co. v. Cunningham*, 495 P.2d 108, 113 (Okla. 1971) (“oil, gas and other minerals” did not grant copper, silver, gold, or any other types of metallic ores or metallic minerals); *Cronkhite v. Falkenstein*, 352 P.2d 396, 399 (Okla. 1960) (“oil, gas and other minerals” did not include gypsum rock); *Vogel v. Cobb*, 193 Okla. 64, 68, 141 P.2d 276, 280 (1943) (“oil, petroleum, gas, coal, asphalt and all other minerals of every kind” did not include water); *Wolf v. Blackwell Oil & Gas Co.*, 77 Okla. 81, 82, 186 P. 484, 484 (1920) (“oil or other minerals” did not include gas); R. HEMINGWAY, *THE LAW OF OIL AND GAS* § 1.1, at 4 (1971); 1 E. KUNTZ, *supra* note 18, § 13.3, at 304.

the enumerated minerals.”⁶⁸ The Oklahoma decision of *Vogel v. Cobb*⁶⁹ is often cited to demonstrate the application of the *ejusdem generis* doctrine.⁷⁰ In *Vogel*, it was argued that water is a mineral and thus would be included in the term “other minerals.”⁷¹ One conveyance in *Vogel* granted “ ‘oil, petroleum, gas, coal, asphalt and all other minerals of every kind or character in and under and that may be produced from’ ” the land.⁷² A second conveyance granted “ ‘oil, gas and other minerals in and under and that may be produced from’ ” the land.⁷³ The *Vogel* court reasoned that “[w]hile it may be conceded that water, in a technical sense, is a mineral, it does not follow that it will pass under ordinary mineral deeds such as those here involved.”⁷⁴ Although *Vogel* did not distinguish between salt water and fresh or domestic water, the opinion seems to indicate that under *ejusdem generis*, water in general is of a different class than oil and gas and, therefore, would remain with the surface estate unless specifically conveyed.⁷⁵

In *Eike I*, the Oklahoma Supreme Court cited *Vogel* for the rule that fresh or domestic water belongs to the surface owner under the *ejusdem generis* theory.⁷⁶ However, *Eike I* distinguished fresh water from salt water, suggesting that brine is more appropriately grouped with oil and gas.⁷⁷ Using the theory of *ejusdem generis*, the court stated that “oil, gas and brine are produced through the identical borehole and even share a common heritage.”⁷⁸ This reasoning has been criti-

68. 1 E. KUNTZ, *supra* note 18, § 13.3, at 304.

69. 193 Okla. 64, 141 P.2d 276 (1943).

70. See *Mack Oil Co. v. Laurence*, 389 P.2d 955, 958-59 (Okla. 1964); *Cronkhite v. Falkenstein*, 352 P.2d 396, 399 (Okla. 1960); *Holt v. Southwest Antioch Sand Unit, Fifth Enlarged*, 292 P.2d 998, 999 (Okla. 1956); see also 1 H. WILLIAMS & C. MEYERS, OIL AND GAS LAW § 219.6, at 290 n.4 (1980) (summary and explanation of the *Vogel* decision).

71. 193 Okla. at 67, 141 P.2d at 280.

72. *Id.*

73. *Id.*

74. *Id.* After applying the rule of *ejusdem generis*, the court determined that the specifically named minerals were of a species or class which did not include water:

The former are valuable minerals of a somewhat similar chemical composition, existing in limited amounts, which are ordinarily extracted from the earth and sold for profit, but which serve no useful function in connection with the use and enjoyment of the surface. Water, on the other hand, is of quite a different chemical composition, is not ordinarily thought of as valuable, but is necessary to life and the use and enjoyment of the surface.

Id.

75. *Id.*

76. *Eike I*, *supra* note 4, at 2687 & 2690 n.3.

77. *Id.* at 2687-88.

78. *Id.* at 2688. Uncontradicted testimony by Amoco scientists indicated that the iodine in the brine was formed when algae died, in approximately the same geological time period that oil and gas were formed. *Id.* The *Eike I* court appears to suggest that if the method of extraction is

cized as tenuous at best.⁷⁹ “*Ejusdem generis* literally means ‘of the same kind or species.’ The fact that brine water is often found in association with oil and gas does not necessarily make it ‘of the same kind or species.’”⁸⁰

The *Eike II* court acknowledged the “common heritage” of iodine and oil and gas, but did not deem that to be conclusive proof that iodine is part of the mineral estate.⁸¹ However, the court did not explain its decision that brine and iodine are part of the surface estate.⁸² Nevertheless, it seems likely that the court did consider the doctrine of *ejusdem generis* in reaching its decision. One of Amoco’s briefs traced the history of Oklahoma’s consistent use of the doctrine to limit conveyances of “oil, gas and other minerals.”⁸³ Amoco argued that under the rules of *stare decisis*, the Court had to apply *ejusdem generis* and, if applied to the facts in this case, the holding in *Eike I* could not stand.⁸⁴

If Oklahoma intends to use this doctrine, specific guidelines are needed for determining which substances are of the same class. To achieve consistency under this theory it may be necessary to strictly adhere to limitations based on the chemical composition of a substance.

The court in *Eike I* also relied on Kuntz’ “manner of enjoyment” theory for assistance in solving the problem of construction.⁸⁵ This the-

the same or if the substances were formed in the same geological time period, they are of the same kind or class, regardless of chemical composition.

79. Lowe, *Developments in Nonregulatory Oil and Gas Law*, 32 INST. ON OIL & GAS L. & TAX’N 117, 126-28 (1981).

80. *Id.* at 127-28. Justice Hargrave’s dissent in *Eike I* re-emphasized this, stating that in the context of oil and gas conveyancing, brine is not part of the mineral estate under *ejusdem generis* because it is not the same kind or species as oil and gas. *Eike I*, *supra* note 4, at 2691 (Hargrave, J., dissenting).

81. *Eike II*, *supra* note 5, exhibit A, at 4.

82. *Id.* at 5.

83. Brief of Appellees at 2-17, *Eike II*, *supra* note 5.

84. *Id.* at 12.

85. *Eike I*, *supra* note 4, at 2687-88. Based on the manner of enjoyment theory and the doctrine of *ejusdem generis*, the *Eike I* court held that “brine water and its components is a mineral within the phrase, ‘. . . oil, gas and other minerals,’ and as such belongs to the mineral estate owner, not the surface estate owner.” *Id.* at 2688. However, Kuntz’ manner of enjoyment theory deals with an instrument where “a general grant or reservation is made of *all minerals* without qualifying language.” 1 E. KUNTZ, *supra* note 18, § 13.3, at 305 (emphasis added). This does not provide clear guidelines when the words of conveyance or reservation do not include “all minerals.” Because minerals can be severed piecemeal from the mineral estate, it is necessary to examine the original instrument to determine if the language indicated an intention to exclude or to include a particular substance such as brine water. The intention is to be determined through examination of the entire instrument, since other provisions may provide insight as to scope of the intention. *Id.* at 305-06. The *Eike I* decision expanded the manner of enjoyment theory to cover grants or reservations of “oil, gas and other minerals.” See *Eike I*, *supra* note 4, at 2688. How-

ory suggests that while the parties may have had no specific intention concerning the disputed substance, they generally did intend that the grantee would have whatever rights are necessary to enjoy the estate created.⁸⁶ Applying this theory in *Eike I*, the court said:

[F]resh water should belong to the surface estate owner because fresh water is necessary for the enjoyment of the surface estate, while salt water, serving practically no useful purpose to the surface owner as it is unfit for consumption by man and beast and unfit for irrigation, should belong to the mineral estate.⁸⁷

The *Eike I* decision seemed to be based on the logical conclusion of this theory, that brine is not ordinarily useful to the surface estate and, therefore, the parties to a mineral deed must have intended brine to be part of the mineral estate. On the other hand, since fresh water is necessary and useful to the surface estate, the parties must have intended to include it in that estate.

This broad generalization does not take into account the agricultural utility of treated or diluted brine.⁸⁸ As technological advances are made, brine may become as useful as fresh water to the surface estate. If this occurs, the manner of enjoyment test would be of no use as an

ever, if the mineral estate was severed from the surface estate in a conveyance granting other than "all minerals" or "oil, gas and other minerals," the original grantor may be deemed to have retained the brine rights.

86. 1 E. KUNTZ, *supra* note 18, § 13.3, at 305. Professor Kuntz explained:

When a general grant or reservation is made of all minerals without qualifying language, it should be apparent that the parties intended to sever the entire mineral estate from the surface estate, leaving the respective owners of each estate with an estate which is enjoyable in a special manner. The manner of enjoyment of the mineral estate is through extraction and removal of substances from the earth, whereas the enjoyment of the surface is through retention of such substances as are necessary for the use of the surface, and these respective modes of enjoyment should be taken into account in arriving at the proper subject matter of each estate.

Id. Some courts use modified versions of the manner of enjoyment test proposed by Kuntz. In 1971, Texas used the "surface destruction test" in *Acker v. Guinn*, 464 S.W.2d 348, 352 (Tex. 1971). This test provides that if recovery of the substance in question would substantially destroy the surface estate, then, unless a contrary intention is affirmatively expressed, the substance would belong to the surface estate. *Id.* This test has been criticized, however, because it creates difficulty in ascertaining mineral ownership from the face of the instrument. See Comment, *supra* note 42, at 511-12 (analysis of the surface destruction test). Although Texas courts continue to use the surface destruction test, Oklahoma courts have instead relied on *ejusdem generis* as a means of limiting the mineral estate.

87. *Eike I*, *supra* note 4, at 2687-88.

88. See Hudson, *supra* note 3, at 450. Water containing a substantial amount of salt may have agricultural value if diluted. Hudson referred to an informal amicus curiae brief in *Robertson v. Blackwell Zinc Co.*, 390 S.W.2d 472 (Tex. 1965), to illustrate that when salty well water was mixed with river water, the resulting water was safe for crops. *Id.* at 450 n.12.

aid to construction when brine is the disputed substance, since brine would then be useful to both the surface and the mineral estates.

In a separate opinion, Justice Irwin stated in *Eike I* that when brine water is used for its water characteristics, it should belong to the surface estate.⁸⁹ This proposition would solve the problem of salt water ownership when it can be beneficially used by the surface estate owner, but does not necessarily answer the question of whether he can sell the salt water. Nonetheless, it could be argued that anything that can be sold is "useful" to the surface estate owner and, therefore, should belong to the surface estate.

Although *Eike I* should have clarified the questions of brine ownership, instead it confused Oklahoma's application of the theory of *ejusdem generis* and the manner of enjoyment test.⁹⁰ Nor did *Eike II* clear up the confusion. The *Eike II* court issued a memorandum opinion merely affirming the judgment of the trial court.⁹¹ Without an explanation, one can only speculate as to the reasoning behind the Oklahoma Supreme Court's decision to withdraw *Eike I* after two years.

C. *Ancillary Issues of Eike I & II*

The *Eike* controversy concerned a situation in which brine was considered valuable. However, brine is often acquired not intentionally, but as a by-product of oil and gas operations. Because brine has historically been considered waste, leasehold operators have given it away or even paid to have it hauled away. Since *Eike II* determined that brine is owned by the surface owner, a leasehold operator is faced with the dilemma of what to do with waste brine. If he gives it away, he could be liable to the surface owners for the value of the brine or the extractable minerals.⁹² An interested buyer will have to obtain a lease

89. *Eike I*, *supra* note 4, at 2691 (Irwin, V.C.J., concurring in part and dissenting in part).

90. As technological advances are made, substances previously not useful to the surface estate may become of use or value to the surface estate. It is crucial that the mineral owner know how these advances will be treated under the manner of enjoyment theory, whether surface use of the substance will entail a loss of ownership rights by the mineral estate owner and, if it does, whether the loss will apply retroactively.

91. *Eike II*, *supra* note 5, at 2.

92. The *Eike I* court raised an additional issue by indicating that "[a]ll parties are to share in gas and brine royalties in proportion of their acreage . . ." *Eike I*, *supra* note 4, at 2689. The idea of brine royalties is a new one. In the past, the right to use brine was given by a lease charging a yearly rental for the right to extract brine. In many cases, oil or gas well operators paid to have waste brine hauled away. The *Eike I* court declared brine to be a mineral, however, and many leases contain royalty provisions that not only cover oil and gas, but "other minerals" as well. Problems can arise in determining whether and how royalties should be paid on unrefined brine, because in that state it may not have value. Mineral owners would receive nothing if their

from the surface owner. And yet, the brine may be so worthless that no one will buy it. If he relies on *Eike II*, the mineral owner or operator may have to drill injection wells to return the brine to the formation or negotiate with the surface owner as to disposal.

Eike II has an impact on other methods of brine recovery, such as the re-entry of abandoned oil and gas wells to obtain salt water production. A potential producer must determine ownership of the abandoned borehole as well as of the brine itself. There is authority that an abandoned borehole is owned by the surface owner.⁹³ Therefore, under *Eike I*, a party wishing to obtain brine in this manner would have been required to obtain leases from both the mineral and surface owners. However, *Eike II* indicates that brine is part of the surface estate, thus a producer need only obtain a lease from the surface owner.

An additional problem was created by the manner in which the court withdrew *Eike I* and affirmed the trial court's opinion. If a party had relied upon *Eike I* and obtained brine leases from mineral owners, an overruling of the decision would leave the rights of the parties unchanged.⁹⁴ However, when an opinion is withdrawn as opposed to being overruled, the earlier opinion is treated as if it had never been issued.⁹⁵ Therefore, any party acquiring brine under only a mineral

royalties were paid on worthless unprocessed brine. The language of the royalty clause may be tailored to specify the point at which the brine will be valued for the purpose of computing royalties. See 3 E. KUNTZ, *supra* note 18, § 41.2, at 336.

An analogous situation occurred in *Haynes v. Eagle-Picher Co.*, 295 F.2d 761 (10th Cir. 1961), where mining operations brought crude oil to the surface and extracted zinc and lead concentrates which were further refined to produce zinc, sulphur, lead, cadmium and germanium. Under the terms of the lease, the court determined that royalties were to be paid on all minerals produced and sold. *Id.* at 764. The court noted that although these minerals may not have had value at the place extracted, they had a definite value at the place "produced" after mining and removal. *Id.* Royalty payments are based on market value and "[i]t is common knowledge that minerals are not separated from the earth in pure form and that, except in rare instances, some processing is necessary to render them marketable." *Id.* When minerals are processed and acquire an ascertainable value, they are covered by the terms of the royalty provisions for "other minerals." Thus, royalties will have to be paid on the sale or disposal of brine, based on the value of any extractable minerals in solution. Therefore, under *Eike I*, an operator disposing of the waste brine from a sludge pit would have been liable for royalty payments due the mineral owner. However, since *Eike II* determined that brine water is owned by the surface owner, an operator disposing of waste brine may be liable to the surface owner for damages caused by conversion. The royalty issue only arises when brine water is considered a mineral owned by the mineral estate.

93. *Gutierrez v. Davis*, 618 F.2d 700, 702 (10th Cir. 1980) ("Under Oklahoma law, when the casing is not removed by the lessee within a reasonable time, it becomes property of the landowner." (citation omitted)); *Sunray Oil Co. v. Cortez Oil Co.*, 188 Okla. 690, 694, 112 P.2d 792, 795 (1941) ("[T]he owner of the land, subject only to the oil and gas lease, . . . has the right to so use the surface and substrata of her land as she sees fit, or permit others so to do . . .").

94. See *State ex rel. Comm'rs of Land Office v. Keller*, 264 P.2d 742, 750 (Okla. 1953).

95. *Collins v. Wanner*, 382 P.2d 105, 108 (Okla. 1963).

lease, in reliance upon *Eike I*, will be liable to the surface owners for the value of the brine. An argument may be made that because a petition for rehearing had been filed, any party interested in brine production should have protected himself from liability by obtaining brine leases from both the mineral owner and the surface owner. The question then becomes, how long is it practical to maintain both leases? It took the Oklahoma Supreme Court nearly two years to grant a rehearing. It would have been more equitable to overrule *Eike I*—considering the length of time between opinions—than to pretend *Eike I* never existed.

IV. CONCLUSION

The above discussion presents an indication of the confusion surrounding the brine ownership issue. The Oklahoma Supreme Court could have addressed this matter in greater detail and provided clear guidelines to follow in the production of brine. The summary manner in which the court dealt with *Eike v. Amoco Production Co.* clearly does not foreclose the probability of future judicial determinations of ownership of brine and the minerals derived therefrom. The importance of salt water now and in the future warrants a stable, legal foundation upon which potential brine producers can rely.

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