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MINERAL TITLE UNDER BODIES OF WATER AND ACTUAL BODIES: OWNERSHIP OF
SUBMERGED LANDS AND UNDER CEMETERIES*

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Mineral Title under Submerged Lands and Cemeteries

As a part of oil, gas, and mineral exploration throughout the Rocky Mountain West, landmen and mineral title examiners frequently encounter challenges when examining title to lands under submerged waters and cemeteries. This paper provides an overview of the legal framework relevant to title defects related to these distinct surface features and suggests curative options for key leasing, drilling and division order issues in mineral title examination.¹

As discussed herein, the language in instruments affecting mineral title, including leases and deeds, together with prevailing case and statutory law, can complicate ownership determinations and may result in title defects requiring curative actions. Avoiding the pitfalls set by peculiar surface features requires a title examiner's careful analysis of the particular issue and its legal framework. These defects could result in wrongful leasing, pooling or payment. As a result, the royalty owner could argue trespass or seek payment on a full lease basis, as opposed to diluted payment based upon his or her pro-rata share of the well. Further, the royalty owner may bring an action under the state's royalty payment act for additional interest and attorneys' fees. A rich fabric of resources is available to landmen and mineral title examiners seeking to protect their company or client in resolving uncertain mineral ownership issues, many of which are referenced in this paper and are used in practice.²

I. Navigable Rivers

A. Federal Test for Navigability

The first question in determining ownership of lands riparian to or underlying a river or stream is to ascertain whether the river or stream is "navigable". The United States Supreme Court has determined "navigability" by examining whether a lake or river was "used or susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water" at the time the state in which it is located was admitted to the Union.³ However, courts have been inconsistent in applying the definition of commerce, and navigability case law has required increasingly less trade and

¹ This paper aims to assist oil and gas title examiners in examining the subject surface features. Any concepts arising in the following discussion that reach beyond the scope of basic oil and gas title examination will not be fully explored.

² For an superb overview of federal and state law concerning the ownership of submerged lands, see Robin Kundis Craig, *A Comparative Guide to the Western States' Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust*, 37 *ECOLOGY L.Q.* 53 (2010). For further information, many detailed scholarly articles and treatises are readily available, including the following: Kemp Wilson, "Ownership of Mineral Interests Underlying Inland Bodies of Water and the Effects of Accretion and Erosion," *Annual Institutes*, Ch. 14, (30 Rocky Mtn. Min. L. Inst. 1984); Richard H. Bate, "Strip Searches: Leasing Minerals Underlying Streets, Highways, Ditches, Railroads and Water Bodies," *Annual Institutes*, Chp. 19 (32 Rocky Mtn. Min. L. Inst. 1986); Thomas H. Pacheco, *Indian Bedlands Claims: A Need to Clear the Waters*, 15 *HARV. ENVTL. L. REV.* 1 (1991); Roy H. Andes, *Divvying Atlantis: Who Owns the Land Beneath Navigable Manmade Reservoirs*, *UCLA J. ENVTL. L. & POL'Y*, June 22, 1997; Walter G. Robillard & Lane J. Bouman, *Clark on Surveying and Boundaries*, (Lexis Law Publ'g, 7th ed. 1998); and Roscoe Walker, Jr. and Janet N. Harris, "Genesis and Evolution of Land Mineral Ownership in the Western United States," *Mineral Title Examination II Paper No. 1* Page 14 (Rocky Mt. Min. L. Fdn., 1982).

³ *The Daniel Ball*, 77 U.S. (10 Wall) 557, 1870; *Day v. Armstrong*, 362 P.2d 137, 143 (Wyo. 1961); Wilson, *supra* note 2; and see also *PPL Montana, LLC v. Montana*, 565 U.S. 576 (2012) ("*PPL Montana*").

travel activities necessary for a river to be navigable. For example, the Ninth Circuit found a river to be navigable based solely on the intermittent transportation of logs.⁴ Nonetheless, absent a legislative or judicial determination of navigability, the presumption is in favor of non-navigability.⁵

As the United States expanded in the late nineteenth and early twentieth centuries, navigability determined whether title to lands riparian to or underlying rivers vested in the state government or if ownership remained with the federal government. In 1935, the Court, in *U.S. v. Oregon*, explained that “[s]ince the effect upon such lands is the result of a federal action in admitting a state to the Union, the question whether the waters within the state under which the lands lie are navigable or non-navigable is a federal, not a local, one.”⁶ If the river was “navigable in fact” at the time of admission of the state into the Union, then title passed to the state.⁷ As a general principal, the federal government held lands underlying submerged bodies of water in trust for future states to be granted to those states when they entered the Union and assumed sovereignty on an “equal footing” with the established States.⁸

Under the Equal Footing Doctrine, when territories obtained statehood, they acquired title to lands beneath riverbeds and lakebeds. The Court traditionally relied upon a “navigability in fact” test to determine the navigability of lakes and rivers for title purposes.⁹ Note that the test for title purposes is different from the test used to determine navigability for admiralty and regulatory purposes under the Commerce Clause. Under the “navigability in fact” test, the river or lake does not need to have actually been used for “trade or travel” purposes; it merely must have been “susceptible for use” in its natural condition for commercial navigation at the time of statehood.¹⁰ After admission to the Union, title to lands underlying riverbeds and lakebeds is not affected by subsequent changes in navigability.¹¹ The Court further determined that the navigability of a river at the time of statehood should be considered on a segment-by-segment basis.¹² For example, in *United States v. Utah*, the Court concluded that the Colorado River was navigable for a four-mile stretch, non-navigable for the next roughly 36-mile stretch, and navigable for its remaining 149 miles.¹³ The Court examined the segment-by-segment approach further in *PPL Montana*, as discussed below.

After a state enters the Union, state law governs title to the land underlying navigable waters for title purposes.¹⁴ Many states granted title to lands under navigable waters to private

⁴ *State of Oregon v. Riverfront Protection Ass’n*, 672 F.2d 792 (9th Cir. 1982).

⁵ Wilson, *supra* note 2; see also *PPL Montana, LLC v. Montana*, 450 U.S. 544 (2012).

⁶ *U.S. v. Oregon*, 295 U.S. 1, 14 (1935).

⁷ *Id.* at 6 (citations omitted).

⁸ *Montana v. United States*, 450 U.S. 544, 551 (1981).

⁹ See, e.g., *United States v. Utah*, 283 U.S. 64 (1931); *United States v. Holt State Bank*, 270 U.S. 49 (1926).

¹⁰ *Utah*, 283 U.S. at 82; *Holt State Bank*, 270 U.S. at 56.

¹¹ *Id.* at 57.

¹² *Utah*, 283 U.S. at 75.

¹³ *Id.* at 73-74, 79-81, 89.

¹⁴ *Montana*, 450 U.S. at 551.

adjacent riparian owners.¹⁵ The Court later established that Congress might occasionally convey lands below the high watermark of a navigable river in order to perform international obligations, improve the land for foreign commerce or between States, or to carry out “other public purposes.”¹⁶ As to non-navigable rivers, the Court held that “if the waters [were] not navigable in fact, the title of the United States to land underlying them remains unaffected by the creation of the new State.”¹⁷ As a result, the federal government continued to own rights to lands riparian to or underlying non-navigable rivers until the land was conveyed or patented to a fee owner, as discussed in Section II below.

States can and do flip-flop on their positions of navigability for title purposes.¹⁸ Reliance on an attorney general’s opinion, Interior Board of Land Appeals (“IBLA”) decision, years of industry custom, or dicta does not prohibit a State from later asserting title to riverbeds based on navigability claims.¹⁹ For the most expedient determination of whether or not a river is considered navigable, landmen and mineral examiners should inquire of the state land board as to whether they claim the riverbed lands.²⁰ Conservative landmen or mineral title examiners should also consult with the company or client before deciding to make such contact as there may be a larger business strategy at play. Additionally and as discussed below in greater detail, unless thorough research reveals that the segment of the river under examination at the point it traverses the lands under examination has been judicially determined to be navigable or non-navigable, landmen and mineral title examiners should seek protective leases covering the riverbed and the lands underlying the river.

B. The Segment-by-Segment Approach: *PPL Montana, LLC v. Montana*

In 2012, the United States Supreme Court, in *PPL Montana*, further clarified the navigability rule, unanimously holding that the State of Montana did not own the riverbeds under certain segments of the Missouri, Madison, and Clark Fork rivers, thereby reversing and remanding the Montana Supreme Court.²¹ While the Court agreed that Montana held title to the beds of the segments of these rivers that were navigable in fact at the time of statehood, the Court found that the segments of the rivers that were owned by PPL Montana, a power company, were not navigable and title remained in the company as successor to the United States.²²

PPL Montana operated 10 hydroelectric projects permitted by the Federal Energy Regulatory Commission on five waterfalls on 500 miles of these rivers, some of which have been

¹⁵ These states include, but are not limited to, California, Connecticut, Florida, Illinois, New Jersey, New York, and Oregon. See § 297 *Under-water land titles*, 2 Patton and Palomar on Land Titles § 297 (3d ed., Nov. 2018 Update).

¹⁶ *Id.* at 551 (citing *Shively v. Bowlby*, 152 U.S. 1, 48 (1894)).

¹⁷ *Oregon*, 295 U.S. at 14 (citations omitted).

¹⁸ See *Armstrong*, 362 P.2d at 143 (finding for the Wyoming Attorney General arguing that a portion of the River was non-navigable); Colorado Attorney General’s March 3, 1950 opinion (reasoning that all waters in the state are considered to be non-navigable.); *Amoco Oil Company v. State Highway Department*, 262 N.W.2d 726 (N.D. 1978) (holding that there is a presumption in favor of finding a river to be non-navigable; North Dakota Mineral Title Standard 7- 01.1 (1989, rev. 1998) (recognizing this presumption).

¹⁹ For examples, see *Oregon*, 295 U.S. at 14-15; *Utah*, 283 U.S. at 79-81.

²⁰ *Bate*, *supra* note 2 at § 19.071[1].

²¹ *PPL Montana, LLC*, 565 U.S. at 581.

²² *Id.* at 594.

operating for over a century. In 2003, a Montana citizens group sought rents to these riverbeds and banks as state school lands on behalf of Montana's schools.²³ The State of Montana intervened and the federal suit was dismissed for lack of diversity jurisdiction.²⁴ PPL Montana, among other power companies, sued in state court to bar the State of Montana from seeking rent.²⁵ The trial court granted summary judgment to the State of Montana, holding it had the superior claim, and as a result, PPL Montana owed the state \$42 million in back rent from 2000 to 2007 alone.²⁶ Whether the Montana Board of Land Commissioners would lease the lands to PPL Montana, and others, and on what terms remained an open matter.²⁷ The Montana Supreme Court affirmed.²⁸

In affirming the trial court's judgment, the Montana Supreme Court held that the waters of the Missouri, Madison, and Clark Fork rivers were navigable in fact and title to the lands under the submerged waters vested in the State.²⁹ The Montana court adopted a navigability in fact test similar to the test used by the United States Supreme Court in admiralty and Commerce Clause regulation cases. This navigability in fact test considered whether the entirety of each of the rivers was generally navigable and whether they served as "channels of commerce," regardless if identifiable segments of these rivers were non-navigable.³⁰

The United States Supreme Court, in Justice Kennedy's opinion, rejected this approach. In their arguments, both the State of Montana and PPL Montana cited, in part, the 1805 journals of Lewis and Clark to support or refute navigability on the rivers.³¹ PPL Montana argued that the Lewis and Clark Expedition took "at least 11 days and probably more" to portage around the Great Falls portion of the Missouri River where five of PPL Montana's dams are located.³² Kennedy agreed, concluding that portions of the rivers, including the Great Falls segment of the Missouri River, were non-navigable at statehood.³³ Kennedy distinguished the application of navigability for title under the Equal Footing Doctrine from the application of navigability in fact from the admiralty and Commerce Clause, and rejected the Montana court's "short interruptions" test, instead reasoning that these interruptions for portages, in most cases, were evidence that the portaged segments were non-navigable for title purposes.³⁴ The relevant inquiry for navigability for title is into that particular segment's navigability, not its interstate commerce, in the water's "natural and ordinary condition" at the time of statehood.³⁵ The Court also concluded that present

²³ *Id.* at 586-587.

²⁴ *Id.* at 587.

²⁵ *Id.*

²⁶ *Id.* at 586-587.

²⁷ *Id.* at 588.

²⁸ *Id.*

²⁹ *PPL Montana, LLC v. State*, 229 P.3d 421, 449 (2010), *rev'd and remanded*, 565 U.S. 576 (2012).

³⁰ *Id.* at 446.

³¹ *PPL Montana*, 565 U.S. at 597.

³² *Id.* at 583-586. The Missouri River is the longest river in the United States and the Court explains it was "once described as one of the most 'variable beings in creation,' as 'inconstant [as] the action of the jury.'"

³³ *Id.* at 599.

³⁴ *Id.* at 596. In determining navigability for federal regulatory authority power under the Commerce Clause, *PPL Montana* stated the following test: (1) navigability for regulatory purposes may be determined by analyzing whether the river was navigable in fact at any time, (2) whether the river became suitable for navigation as a result of reasonable improvements, and (3) whether the watercourse may require a next to interstate or foreign commerce.

³⁵ *Id.* at 601 (citations omitted).

day evidence of river recreation, including fishing and canoeing, are only relevant in determining navigability at statehood if, at a minimum, “the party seeking to use present-day evidence regarding river’s use for purposes of establishing riverbed title under the Equal Footing Doctrine must show: (1) the watercraft are meaningfully similar to those in customary use for trade and travel at the time of statehood; and (2) the river’s post statehood condition is not materially different from its physical condition at statehood.”³⁶

In its holding, the Court adopted a test where the submerged lands beneath the rivers would be considered on a tract-by-tract (or segment-by-segment) basis, and ownership of those segments held to be non-navigable would not be considered as transferred to a state upon its admission to the Union.³⁷ The Court reasoned that this segment-by-segment approach reduces potential public and private ownership conflict and is consistent with the manner in which the federal government allocates non-navigable waters.³⁸ The shoring up (no pun intended) of the segment-by-segment approach originally described in *United States v. Utah* opened the door for examining the title to discrete segments of rivers.³⁹ Justice Kennedy’s opinion presents a logical test that contextually limits a determination of navigability by distinct tract, which is preferable to the “all or nothing” approach preferred by the Montana Supreme Court.

The *PPL Montana* opinion did not resolve all of the potential ambiguities involved in determining ownership of lands underlying rivers. The decision is narrow in scope and does not provide answers to potential questions such as where a segment begins and where a segment ends and how river movement affects defined segments and navigability. Further, the decision failed to address which party has the burden of proof in demonstrating navigability at the time of statehood. However, subsequent decisions have relied upon testimony of experts regarding segmentation and navigability.⁴⁰ The dismissal of overland portages and modern methods of navigability in the opinion assists in focusing the factual inquiry. The segment-by-segment approach is potentially significant in that protective leasing or other methods of obtaining the ability to drill through potentially navigable segments of rivers and streams may become part of standard operating procedure.

C. Navigable Rivers on Established Reservations

As discussed above, the federal government held or holds lands underlying submerged bodies of water in trust to be granted to future states when they enter the Union under the Equal Footing Doctrine.⁴¹ When a territory obtains statehood, the state then formed typically acquires

³⁶ *Id.*

³⁷ *Id.* at 594, (citing *United States v. Utah*, 283 U.S. 64 (1931)).

³⁸ *Id.* at 604-605 (citations omitted).

³⁹ *United States v. Utah*, 283 U.S. 64 (1931).

⁴⁰ See, e.g., *N. Carolina by & through N. Carolina Dep't of Admin. v. Alcoa Power Generating, Inc.*, 853 F.3d 140, 152 (4th Cir. 2017), as amended (Apr. 18, 2017), as amended (May 3, 2017), cert. denied sub nom. *North Carolina v. Alcoa Power Generating, Inc.*, 138 S. Ct. 981, 200 L. Ed. 2d 248 (2018); *Montana v. Talen Montana, LLC*, No. CV 16-35-H-DLC, 2018 WL 3649606, at *6 (D. Mont. Aug. 1, 2018).

⁴¹ *Montana*, 450 U.S. at 551.

title to lands beneath riverbeds and lakebeds.⁴² This same rule does not apply to lands reserved to Native Americans.

In 1981, the United States Supreme Court, in its decision in *Montana v. United States*, held that the Equal Footing Doctrine establishes a strong, but rebuttable, presumption against the reservation of riverbed lands to a Native American tribe to the detriment of a state. In its analysis, the Court analyzed whether the riverbeds of navigable rivers are vested in reservations that predate Western states, considering whether title to the riverbed of the Big Horn River remained vested in the federal government, held in trust for the Crow Nation, or passed to the State of Montana upon statehood.⁴³ When determining title to the bed of a navigable river on a reservation, the Court began its analysis with “a strong presumption *against* conveyance by the United States [to a Tribe].”⁴⁴ In holding that the title to the lands underlying the riverbed belonged to Montana, the Court reasoned that the Equal Footing Doctrine, as a general principal, transfers title to the states upon incorporation.⁴⁵ Because the Second Treaty of Fort Laramie establishing the Crow reservation did not explicitly refer to the riverbed, the treaty language did not overcome the presumption that the land passed to the state.⁴⁶

In order to overcome this presumption, courts have typically relied upon Native American dependence on resources found within the areas at issue, as well as on the cannon of interpretation focusing on the perception of the tribal members in the grant.⁴⁷ Congress may also sometimes convey lands below the high watermark in navigable waters (thereby defeating title to the state) “in order to perform international obligations, or to effect the improvement of such lands for the promotion and convenience of commerce with foreign nations and among the several States, or to carry out other public purposes appropriate to the objects for which the United States hold the Territory.”⁴⁸ However, the Court notes that such a conveyance should not be inferred, but instead must be “definitely declared or otherwise made plain.”⁴⁹

For example, in *Idaho v. United States*, the State of Idaho claimed ownership of submerged lands underlying portions of Lake Coeur d’Alene and the St. Joe River under the Equal Footing Doctrine.⁵⁰ Before Idaho’s statehood, the Coeur d’Alene Tribe inhabited the area surrounding the lake and river and traditionally used for both transportation, food, recreation, and cultural activities.⁵¹ In 1873, the Tribe agreed to relinquish its lands to the federal government for compensation, reserving lands including part of the river and most of the reservation.⁵² An 1883

⁴² *Id.*

⁴³ *Id.* at 552 (holding that title to the Big Horn River vested in the State of Montana).

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.* at 556.

⁴⁷ Thomas H. Pacheco, *Indian Bedlands Claims: A Need to Clear the Waters*, 15 HARV. ENV’T L. REV. 1, 26 (1991).

⁴⁸ *Montana*, 450 U.S. at 551 (citing *Shively v. Bowlby*, 152 U.S. 1, 48 (1894)).

⁴⁹ *Id.* at 552, (citing *Hold State Bank*, 270 U.S. at 55).

⁵⁰ *Idaho v. United States*, 533 U.S. 262, 265 (2001).

⁵¹ *Id.*

⁵² *Id.* at 266.

federal government survey indicated that the reservation included submerged lands.⁵³ In addition, an 1888 report by the Secretary of Interior stated that the reservation embraced nearly “all the navigable water of Lake Coeur d’Alene.”⁵⁴

In its analysis, the Court applied a two-step inquiry as to congressional intent: (1) did Congress intend to include lands under navigable waters within the reservation, and (2) did Congress intend to defeat the future state’s title to the submerged lands?⁵⁵ The Court, in defining intent in the context of an Executive Order issued by the President, concluded, “the two-step test of congressional intent is satisfied when an Executive reservation clearly includes submerged lands, and Congress recognizes the reservation in way that demonstrates an intent to defeat state title.”⁵⁶ Idaho had conceded that the reservation by the executive branch had intended to include submerged lands and the Court found that the 1883 survey necessarily included the submerged lands.⁵⁷ As a result, the first part of the test was satisfied. As to the second prong of the test, the Court found that the Secretary of Interior’s 1888 report put Congress on notice that the submerged lands were included in the reservation. In addition, Congress, through negotiations and conflicts with the Tribe throughout the late 1800s, “knew that the reservation included submerged lands,” and Congress’s negotiations with the Tribe regarding the Act of Mar. 2, 1889, ch. 412, § 4, 25 Stat. 1002 contemplated the ownership of submerged lands.⁵⁸ Thus, by a slim 5-4 margin, the majority of the Court held that the submerged lands were to be held in trust for the Coeur d’Alene Tribe.⁵⁹

In his dissent, Justice Rehnquist, however, argued that the evidence provided was too inferential and did not expressly defeat the strong presumption that submerged lands underlying navigable water are vested in the state upon statehood.⁶⁰ Further, he did not agree that Congressional intent could be satisfied by an inferential approval of an Executive Order.⁶¹

Based upon *Idaho v. United States* and its preceding cases, ownership of submerged lands under navigable waters in a reservation may not be easily surmised by instruments typically recorded in the county records. Further inquiry with the relevant state land board or local tribe will likely be necessary to ascertain title.

D. The Missouri River Underlying the Fort Berthoud Reservation in North Dakota

While the United States Supreme Court established a strong presumption against the conveyance of submerged lands under navigable waters to tribes in *Idaho v. United States*, there has been no judicial determination of title to the bed of the Missouri River under the Fort Berthold Indian Reservation (the “Reservation”) in North Dakota. Off the Reservation, the State typically has asserted ownership of the bed of the Missouri River because the river was navigable at the

⁵³ *Id.* at 267.

⁵⁴ *Id.* at 275.

⁵⁵ *Id.* at 273.

⁵⁶ *Id.*

⁵⁷ *Id.* at 274.

⁵⁸ *Id.* at 277.

⁵⁹ *Id.* at 280.

⁶⁰ *Id.* at 287.

⁶¹ *Id.*

time of its admission to the Union, and, under the Equal Footing Doctrine, title to these submerged lands automatically vested in the North Dakota upon statehood on November 2, 1889. However, North Dakota constitutionally disclaimed all right and title to “Indian lands” upon its admission to the Union,⁶² and, prior to North Dakota statehood, the Treaty of Fort Laramie, dated September 17, 1851 and an Executive Order issued by President Grant on April 12, 1870 established the boundaries of the Reservation.⁶³ The legal description used included the width of the river within the Reservation boundaries. Today, the Mandan, Hidatsa, and Arikara Nations, also known as the Three Affiliated Tribes, currently inhabit the Reservation. As described below, a politically motivated analysis of the submerged lands and the increase in drilling revenue in North Dakota had resulted in renewed disputes between the State of North Dakota and Three Affiliated Tribes over the ownership of the riverbed in the Reservation.

While the federal courts have not yet reviewed this issue, a pre-*Idaho* administrative decision and opinion indicated that the Three Affiliated Tribes would have a supported claim. In 1979, Impel Energy Corporation appealed a Bureau of Land Management (“BLM”) decision, which rejected Impel Energy’s application for 15 oil and gas leases covering the Missouri riverbed lands in the Reservation to the IBLA.⁶⁴ The lands covered in the lease applications included riverbed lands described as part of the Reservation in the 1870 Executive Order, which has not been subsequently altered.⁶⁵ Upon appeal, the State of North Dakota intervened, embracing the BLM’s argument that that bed of the river located in the Reservation passed to North Dakota at statehood and was no longer held in trust for the Tribes by the United States.⁶⁶ Citing a 1936 U.S. Department of the Interior Solicitor’s M-Opinion, prior case law, and the “Indian canon,” the IBLA held that the entire bed of the Missouri River was within the boundaries of the Reservation and was therefore held in trust by the United States for the Three Affiliated Tribes.⁶⁷ The IBLA reasoned that the Treaty of Fort Laramie and the 1870 Executive Order properly included the riverbed lands in the legal description and affected the conveyance of the submerged lands underlying the Missouri River to the Tribes to carry out an appropriate public purpose.⁶⁸ As a result, the Department of the Interior had the authority to issue oil and gas leases for the submerged lands as trustee for the benefit of the Tribes.⁶⁹ The State never appealed the decision.⁷⁰

⁶² N.D. Const. art., XVI, § 203 (1889).

⁶³ Treaty of Fort Laramie with Sioux, Etc., Sept. 17, 1851, 11 Stat. 749 and Exec. Order (April 12, 1870).

⁶⁴ *Impel Energy Corp. v. Montana BLM*, 42 IBLA 105 (Aug. 16, 1979).

⁶⁵ *Id.* at 109.

⁶⁶ *Id.* at 107.

⁶⁷ *Id.* at 114 (citing Solicitor Margold, U.S. Dep’t of the Interior, M-28120, *Title to Island in the Missouri River with the Fort Berthold Indian Reservation*, reprinted in 1 DEP’T OF THE INTERIOR, OPINIONS OF THE SOLICITOR OF THE DEPARTMENT OF THE INTERIOR RELATING TO INDIAN AFFAIRS 616 (Mar. 31, 1936)).

⁶⁸ *Id.* at 114 (citing Margold, *supra* note 67). Solicitor Margold was asked whether an island formed in the Missouri River in the Fort Berthold reservation was property of the State of North Dakota. He opined that the bed of the Missouri River, “at the point in question, was part of the Fort Berthold Indian Reservation prior to the admission of North Dakota to statehood.” *Id.* at 620.

⁶⁹ *Id.* at 107.

⁷⁰ See Solicitor Hilary C. Tompkins, U.S. Dep’t of the Interior, M-37044, *Opinion Regarding the Status of Mineral Ownership Underlying the Missouri River within the Boundaries of the Fort Berthold Reservation (North Dakota)*, available at <https://www.doi.gov/sites/doi.gov/files/uploads/m-37044.pdf> (the “2017 Solicitor Opinion”), at p. 27, n. 205. The BLM subsequently issued the leases at issue to Impel Energy. The lands were held by Federal leases until

In January of 2017, former Interior Solicitor Hilary Tompkins, an enrolled member of the Navajo Nation and an Obama appointee, drafted a legal opinion that agreed with the IBLA findings and concluded that the mineral estate underlying the Missouri River in the Reservation belonged to the Three Affiliated Tribes rather than the State of North Dakota.⁷¹ In applying the two-pronged *Idaho* test, Tompkins first found that Congress intended to include the riverbeds in the Reservation.⁷² She based this decision on the fact that (1) the 1870 Executive Order expressly included the relevant segment of the Missouri River in the description of the Reservation, (2) the Indian canons of construction provide added weight in favor of such an interpretation, and (3) the riverbed provided necessary physical and cultural resources for the Tribes.⁷³ Secondly, she determined that Congress intended to defeat North Dakota's claim of title though the language of the 1889 Enabling Act creating the State, and North Dakota relinquished its right to the riverbed through its constitutional disclaimer of any title held by the Tribes.⁷⁴ Thus, Tompkins's opinion concludes that the bed lands underlying the Missouri River in the Reservation are held in trust by the United States for the benefit of the Three Affiliated Tribes.

However, in June of 2018, Daniel H. Jorjani, Principal Deputy Solicitor, acting Interior Solicitor, and a Trump appointee, issued a brief opinion suspending M-37044 insofar as it addresses "ownership of minerals located beneath the original bed of the Missouri River," citing that "the underlying historical record should be reviewed and perhaps expanded upon by a professional historian."⁷⁵ Since that time, there has been no public update on the historical review, and it seems unlikely that the status of this memorandum will change until Congress puts a new Interior Solicitor in place. Given the decade-long development of the Bakken Shale, experts estimate that approximately \$100 million in oil royalties are waiting in escrow to be claimed with more payments to come.⁷⁶

As a result, it is currently unsettled as to whether the United States, as trustee for the Three Affiliated Tribes, or State of North Dakota owns the mineral interests underlying the Missouri River in the Fort Berthold Reservation, and the analysis is dependent upon facts and circumstances not apparent from the land records. Until the Department of the Interior issues a revised opinion or ownership is judicially resolved, the safest action would be to suspend proceeds attributable to lands underlying the river in the Reservation.

E. The Bathtub Ring, Generally

the 184 Mineral Restoration Act restored mineral interests to the Tribes, at which point the BLM transferred the leases to the Bureau of Indian Affairs.

⁷¹ See 2017 Solicitor Opinion.

⁷² *Id.* at 29.

⁷³ *Id.* at 29-30.

⁷⁴ *Id.* at 30-34 (citations omitted).

⁷⁵ Deputy Solicitor Daniel H. Jorjani, U.S. Dep't of the Interior, M-37052, *Partial Suspension and Temporary Withdrawal of Solicitor Opinion M-37044 "Opinion Regarding the Status of Mineral Ownership Underlying the Missouri River within the Boundaries of the Fort Berthold Reservation (North Dakota)"*, available at <https://www.doi.gov/sites/doi.gov/files/uploads/m-37052.pdf> (the "2018 Solicitor Opinion"), at p. 1.

⁷⁶ Koplack, Dave, "North Dakota tribe defends its rights to minerals from state," AP News, June 1, 2019, available at <https://www.apnews.com/034a7798edff4e9db83e7fbaba83ad2d>.

The land and underlying minerals between the high watermark and low watermark of a navigable river or lake is described by some as the “bathtub ring.” Under the Equal Footing Doctrine, the federal government typically grants a state ownership under navigable waters from high watermark on one side to high watermark on the other side, and federal courts generally defer to the states to make such a determination of the location of the high watermarks.⁷⁷ Ownership of the bathtub ring varies by state, but the default rule in most Western states, including California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, South Dakota, Texas, Utah, and Wyoming, is defined statutorily and extends ownership to the high watermark.⁷⁸

F. The North Dakota Bathtub Ring

However, many states have case law that establishes ownership of portions of the bathtub ring in the riparian fee title owner under specific scenarios driven by unique facts and circumstances.⁷⁹ For example, North Dakota has a statutory provision establishing that riparian landowners generally take title to the low watermark.⁸⁰ However, the North Dakota Supreme Court has, in its own words, not decided “[w]hether North Dakota has limited its title to the area below the low watermark.”⁸¹ In *Mills I*, the North Dakota Supreme Court held that no interest in the bathtub ring is absolute and both the riparian owner and the State have correlative interests in the same.⁸² As a result, the court reasoned that these rights should be considered on a case-by-case basis, stating that “[t]he shore zone presents a complex bundle of correlative, and sometimes conflicting, rights and claims which are better suited for determination as they arise.”⁸³ In *Mills II*, the court defined the bathtub ring circumstantially, holding that the existing state of the river determines the high watermark, even in situations where the water level is artificially raised by the release of water from a dam.⁸⁴ Based upon the public trust doctrine and the public’s right of navigation, the court found that the high watermark is “ambulatory” and not determined as of a fixed date.⁸⁵

In *Reep v. State*, the North Dakota Supreme Court ruled that the state owns the shore zone between the high and low watermarks of the Missouri River above the Bakken formation (apart from the Fort Berthold Reservation, as discussed above).⁸⁶ The subject land included approximately 25,000 acres located along the Missouri River’s broad floodplain between the

⁷⁷ See, e.g., *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel*, 429 U.S. 363 (1977).

⁷⁸ For a thorough compilation of state law regarding ownership of submerged lands in the Western states, see Robin Kundis Craig, *A Comparative Guide to the Western States’ Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust*, 37 *ECOLOGY L.Q.* 53 (2010).

⁷⁹ *State v. Superior Court (Lyons)*, 625 P.2d 239, 247-8 (CA 1981); *Gibson v. Kelly*, 39 P. 517, 519-20 (MT 1895); *Flisrand v. Madson*, 152 N.W. 796, 800-1 (S.D. 1915).

⁸⁰ N.D. Cent. Code § 47-01-15 (2018).

⁸¹ N.D.C.C. § 47-01-15 (2011); see *State ex rel. Sprynczynatyk v. Mills (Mills I)*, 523 N.W.2d 537 (N.D. 1994) (holding the State and riparian owner have correlative surface rights), and *State ex rel. Sprynczynatyk v. Mills (Mills II)*, 592 N.W.2d 591, 592 (N.D. 1999).

⁸² *Mills I*, 523 N.W.2d at 544.

⁸³ *Id.*

⁸⁴ *Mills II*, 592 N.W.2d at 592.

⁸⁵ *Id.*

⁸⁶ *Reep v. State*, 841 N.W.2d 644 (N.D. 2013), *rehearing denied*.

Montana border and the town of Williston.⁸⁷ The land was primarily used for farming and cattle grazing until hydraulic fracturing brought about the North Dakota oil boom in the Bakken formation in 2008.⁸⁸ In the first of two consolidated appeals, 11 upland fee owners along navigable segments of the Missouri River appealed a stipulated partial summary judgment in favor of the North Dakota Department of Trust Lands declaring the State owned the minerals underlying the bathtub ring.⁸⁹ The owners also appealed a final judgment delineating the ordinary high watermark.⁹⁰ The North Dakota Supreme Court held that that statute governing interests of grantees in shore zones between high and low watermarks on a navigable lake or stream does not convey the State's interest in minerals under the shore zone obtained under the Equal Footing Doctrine to upland landowners.⁹¹ The court reasoned that while the State could not gift away this interest by a blanket statute in violation of its constitutional anti-gift clause, it could contractually grant or convey ownership of the bathtub ring to a riparian owner in a chain of title.⁹² Thus, the court established the rule for ownership of the bathtub ring as follows:

If the chain of title reflects the State granted its equal footing interests to upland owners, those upland owners take to the low watermark, subject to the public trust doctrine and except where the deed provides otherwise. If the State is not in the chain of title for the upland owner's property, the anti-gift clause precludes construing N.D.C.C. § 47-01-15 as a gift of the State's equal footing interests to upland owners.⁹³

The court then noted that the ruling does not preclude a landowner from challenging the state survey of the high watermark.⁹⁴

When obtaining leases and bonus payments, a title examiner should take the acreage attributable to the bathtub ring under consideration and separately account for any disputed ownership. In North Dakota specifically, title examiners should carefully review the chain of title and look for a grant of the State's "equal footing interest" pursuant to the holding in the *Reep* case.

II. Non-Navigable Rivers

Historically, under public land laws, homesteaders only paid for the surveyed lands, meaning the uplands, and not the submerged lands.⁹⁵ As noted above, however, title to the lands submerged under non-navigable streams and rivers does not vest in the states under the Equal Footing Doctrine. The United States Supreme Court has held that "if the waters [were] not navigable in fact, the title of the United States to land underlying them remains unaffected by the

⁸⁷ Lee, Mike, "Landowners lose in N.D. mineral rights case," E&E News, January 2, 2014, *available at* <https://www.eenews.net/stories/1059992299>.

⁸⁸ *Id.*

⁸⁹ *Reep*, 841 N.W.2d at 667-668.

⁹⁰ *Id.*

⁹¹ *Id.* at 672.

⁹² *Id.* at 675.

⁹³ *Id.* at 667.

⁹⁴ *Id.* at 667. Note that the State has already surveyed the high watermark along roughly 180 miles of the river from Williston to the eastern shore of Lake Sakakawea.

⁹⁵ *Bate*, *supra* note 2 at § 19.07[1].

creation of the new State.”⁹⁶ As a result, the federal government continued to own rights to lands riparian to or underlying non-navigable rivers until the land was conveyed or patented to a fee owner. Upon patent, the riparian landowner on either side of a non-navigable river would own to the thread, or centerline of the river.⁹⁷ Courts have held that the patent does not need to specifically grant the minerals under the riverbed, or to describe the river, in order to pass title to the minerals under the river to the patentee.⁹⁸ Nevertheless, when it comes to obtaining a fee oil and gas lease covering minerals beneath the non-navigable river, the lessee should specify the description of the river and acreage attributed to the meander lines. A federal lease will also not cover bed lands unless the bed lands are specifically described.⁹⁹

A. Movement by Accretion and Reliction or Avulsion

A common challenge in analyzing mineral title is ensuring that submerged lands are adequately described in the lease and, based upon the same, subsequently determining the allocation of river acreage among lessors when calculating bonus, rentals, and royalties. The BLM’s Legal Land Description Acreage Report is a great source for determining acreage in the section distinguishing among the acreage attributable to surveyed lands and river lots and unsurveyed lands between the BLM meander lines.¹⁰⁰ A landman, abstractor, lease broker or mineral title examiner (hereinafter referred to collectively as a “title examiner”) should exercise caution when analyzing the non-surveyed meander lines depicted on a plat. As discussed in *Clark on Surveying*:

Meander lines are not boundaries and are not run along a national park, a reservation, reserve or other tract of land. They do not limit the extent of land adjacent thereto, and should the stream or body of water dry up or recede, the riparian owner’s property would follow the ever-changing shore-line and he would own the land left dry by the recession.¹⁰¹

Therefore, the lessor’s ownership may or may not shift with the river.

When a non-navigable river forms the boundary between lots on either side of a river, the boundary between the lots is the center or thread of the stream and changes as the center or thread of the stream gradually changes over time. The Wyoming Supreme Court has adopted this rule, citing a Washington Supreme Court holding that states “. . . the thread or channel of a non-navigable stream is the boundary line between two parcels of real property. When the course of the stream changes, the boundary line may or may not shift with the stream. If the change is slow and imperceptible so that it may be classified as accretion or reliction, the boundary line shifts. If,

⁹⁶ *Oregon*, 295 U.S. at 14 (citations omitted).

⁹⁷ *St. Paul & P.R.R. Co. v. Schurmeier*, 72 U.S. 272, 287-89 (1868).

⁹⁸ *Jourdan v. Abbott Construction Co.*, 464 P.2d 311, ¶¶ 12-13 (Wyo. 1970); *Coumas v. Transcontinental Garage, Inc.*, 230 P.2d 748 (Wyo. 1951).

⁹⁹ *1 Law of Federal Oil and Gas Leases*, Chapter 6 § 6.02 [Rocky Mt. Min. L. Fdn. 2001].

¹⁰⁰ BLM Legal Land Description Acreage Report is available at <https://reports.blm.gov/reports.cfm?application=LR2000>, last visited August 21, 2019.

¹⁰¹ *Clark*, *supra* note 2 § 199, p. 208.

however, the change of the stream is avulsive, the original boundary line remains. . . .”¹⁰² According to *Clark on Surveying*, avulsion is “the rapid perceptible unusual catastrophic change in the course of a body of water originally moving as a stream or a river.”¹⁰³

In order for all parties to describe specifically what submerged lands the lease covers, the lease should include legal description language that expressly describes the submerged lands. For example, the language may describe the lease lands as “including those portions of Lot 1 to the center, or thread, of the river, as the center or thread may move over time,” as well as a Mother Hubbard clause including all lands underlying rivers. In federal leases, a metes and bounds description is advised.¹⁰⁴ Above all, a landman needs to pay the lessor for the river acreage in order to ensure the lease includes the same.

An abstracting company or lease broker often will provide a transcript of title labeled as “Lot 1 to the center of the river.” Nevertheless, this does not settle any navigability or boundary issues and should not be accepted at face value as evidence of the lands leased. A review of the county assessor’s surface plat, shape files, or even Google Earth can be a helpful guide in determining movement of a river. Typically, however, the forces causing the river to move are facts and circumstances outside of the scope of the land records. Landmen and mineral title examiners should require a survey to most accurately determine the river’s movement.

B. Effect of Movement by Accretion and Reliction or Avulsion on Severed Minerals

While the rules establishing surface ownership for riparian owners due to accretion and reliction of a riverbed are fairly well established, whether that jurisprudence applies to mineral ownership, and to severed mineral ownership, is less settled. The Oklahoma Supreme Court issued the often-cited *Nilsen* decision in 1980 holding that these surface principles do apply to severed minerals because to hold otherwise would result in “gross inequities,” wherein a “non-severed mineral estate would be subject to loss by virtue of accretion or erosion, while a severed mineral estate would not be subject to such loss.”¹⁰⁵ The Montana Supreme Court adopted the Oklahoma decision in *Jackson v. Burlington Northern Inc.*,¹⁰⁶ a Texas court has applied the same rule in *Siegert v. Seneca Resources Corp.*,¹⁰⁷ and the IBLA has followed suit.¹⁰⁸ As a result, industry commentators have held this rule to be the standard since the 1970s.¹⁰⁹ Even so, the conservative approach in the absence of a judicial determination is probably to pay proceeds of production in accordance with one of the boundary dispute instruments discussed hereinafter.

C. Case Study: Royalty Rates on the Arkansas River

¹⁰² *Jourdan v. Abbott Const. Co.*, 464 P.2d 311, 314 (Wyo. 1970), quoting *Parker v. Farrell*, 554 P.2d 620, 622 (Wash. 1968).

¹⁰³ *Clark*, *supra* note 1 § 199, p. 208.

¹⁰⁴ 1 *Law of Federal Oil and Gas Leases* Chapter § 2.04(4)(b), 3.06.

¹⁰⁵ *Nilsen v. Tenneco Oil Company*, 614 P.2d 36,42 (Okla. 1980).

¹⁰⁶ *Jackson v. Burlington Northern Inc.*, 667 P.2d 406 (Mont. 1983).

¹⁰⁷ *Siegert v. Seneca Resources Corp.*, 28 S.W.3d 680 (Tex. App.—Corpus Christi 2000).

¹⁰⁸ *David A. Provinse*, 35 IBLA 22, GFS (O&G) 91 (1978).

¹⁰⁹ *Ownership of Mineral Interests Underlying Inland Bodies of Water and the Effects of Accretion and Erosion*, 19 RMMLI 483 (1974), Chapter 18.

A 2004 Arkansas case, *Swaim v. Stephens Production Co.*, provides a good illustration of how riverbed movement can affect title. In *Swaim*, the Arkansas Supreme Court closely analyzed the effect of accretion on dueling royalty rates.¹¹⁰ In 1957 and 1966, the then-owners of two tracts adjacent to the Arkansas River leased their mineral interests to Stephens Production Company (“Stephens”).¹¹¹ The Swain family was the successor-in-interest to these tracts. In 1964, the State of Arkansas leased its interest in the riverbed underlying the Arkansas River to Gulf Oil Company.¹¹² All three of the leases were executed with a traditional 1/8 royalty, and the fee leases included provisions stating that accreted land would be subject to the individual leases.¹¹³

In 1967, the lessees in the tract executed a declaration of pooling and unitization whereby the two fee leases and the State lease covering the riverbed lands were pooled and the development and production of natural gas under the tracts commenced and continued for the next four decades.¹¹⁴ In 1990, the fee lessees amended their two leases with Stephens increasing the royalty rate to 3/16 from 1/8.¹¹⁵ Meanwhile, over the course of many years, the eastward shifting of the Arkansas River resulted in accretion onto the riparian lands of the fee tracts.¹¹⁶ In 2000, the Swaim family obtained quitclaim deeds from the State of Arkansas of the additional accreted acreage.¹¹⁷ Meanwhile, Stephens continued to pay production in accordance with the prior ownership and leasehold at the lower royalty rate.¹¹⁸

In 2001, the Swaim family brought suit asking the court to require Stephens to pay the higher royalty rate.¹¹⁹ The Swain family argued that under the common law doctrine of accretion, the original riparian tracts increased in size and, therefore, were subject to the higher royalty.¹²⁰ The common law doctrine holds that “when accretion land is formed by gradual and imperceptible alteration in the land, the ownership of the land vests in the in the riparian owner ‘from whose shore or bank the water receded.’”¹²¹ Stephens argued that by virtue of the declaration of pooling, a leasehold working interest in a producing unit should be treated as an exception to the doctrine of accretion, and it should only be required to pay the 1/8 royalty rate.¹²² The trial court agreed, granting summary judgement to Stephens, ruling that the 1/8 royalty rate remained in effect for the accreted lands. The Swaim family appealed.¹²³

The Arkansas Supreme Court rejected Stephens’s contention and upheld the common law doctrine of accretion, holding that when the land accreted, ownership of the land vested

¹¹⁰ *Swaim v. Stephens Production Co.*, 196 S.W.3d 5 (Ark. 2004). The common law doctrine of accretion has also been codified at Ark. Code Ann. § 22-5-404 (2004).

¹¹¹ *Id.* at 6.

¹¹² *Id.*

¹¹³ *Id.* at 7.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ *Id.* at 8.

¹²¹ *Id.* at 8, quoting *Warren v. Chambers*, 25 Ark. 120 (1867).

¹²² *Id.* at 11.

¹²³ *Id.* at 7.

automatically in the riparian owner, and the subsequent issuance of the quitclaim deeds merely confirmed title.¹²⁴ In addition, the court cited the language in the fee leases, which expressly stated that the leases extended to any accretions.¹²⁵ In ruling for the Swain family, the court held that the accreted lands were subject to the fee lease royalty of 3/16 and not the State lease royalty of 1/8.¹²⁶

Of note to title examiners, the Arkansas River continued to move over forty years of oil and gas production. Even though all lands were leased, the Swaim family and the State of Arkansas executed and recorded corrective quit claim deeds to resolve the boundary line dispute and the operator obtained and recorded a proper declaration of pooling, the court relied upon the lease language upholding the doctrine of accretion. Thus, if evidence of accretion is apparent in the chain of title, title examiners should advise their company or client to obtain promptly updated surveys of the riverbed lands. Based upon the same, curative instruments detailing the ownership of the accreted lands and lease amendments covering the same, executed by all necessary parties, should be properly recorded or filed in the necessary state or federal records.

III. Lakes

The ownership of navigable and non-navigable lakes for all practical purposes follows the same case law as navigable and non-navigable rivers.¹²⁷ If a lake is non-navigable, adjacent landowners own to the center of the non-navigable body of water. A conveyance by the federal government of upland adjacent to a non-navigable lake will “be construed and given effect in this particular according to the laws of the state in which the land resides.”¹²⁸ For example, North Dakota law states that a patent from the federal government of riparian upland conveys title “to the center of the adjacent non-navigable body of water.”¹²⁹ Ownership of federally created reservoirs from water diverted from a navigable river upon private lands is beyond the scope of this paper.¹³⁰

While determining the center or thread of a non-navigable river may seem to be simple, defining the “pie wedges” creating the boundaries of a non-navigable lake can be quite complex.¹³¹ In North Dakota, for example, boundary lines of the patented lands “are to be fixed by extending, from the meander line on each side of the tract, lines converging to a point in the center of the lake.”¹³² The sufficient bonus payment, legal description, and Mother Hubbard clause should aid in obtaining a lease satisfactory for drilling, and the land board of the state where the lake is located might have a survey or map that can help in defining the tracts and acreage underlying the non-

¹²⁴ *Id.* at 10.

¹²⁵ *Id.* at 12.

¹²⁶ *Id.*

¹²⁷ Wilson, *supra* note 2 § 14.02[1].

¹²⁸ *Oklahoma v. Texas*, 258 U.S. 574, 577 (1926).

¹²⁹ *State v. Brace*, 26 N.W.2d 330, 332 (N.D. 1949).

¹³⁰ See Roy H. Andes, *Divvying Atlantis: Who Owns the Land Beneath Navigable Manmade Reservoirs*, UCLA J. ENVTL. L. & POL’Y (June 22, 1997).

¹³¹ For a thorough discussion of lakes and other surveying matters, see Bjella, Brian R. and Smith, Craig C, “Riparian Rights – Ownership of Minerals Under Rivers and Lakes, Advanced Mineral Title Examination – Oil, Gas and Mining,” Paper 18, p. 18-1 (Rocky Mt. Min. L. Fdn. 2014).

¹³² *Brignall v. Hannah*, 157 N.W. 1042, 1045 (N.D. 1916).

navigable lake. As a practical matter, boundary lines of tracts underlying lakes must be settled prior to paying proceeds of production or the disputed funds should be held in suspense.

IV. Islands

The key consideration in determining title to islands is the manner in which they appeared. “Islands in navigable streams which were in existence at the date of statehood of the state in which they are located remain the property of the United States, subject to disposition and leasing under the public land laws.”¹³³ By contrast (and to oversimplify), if the island was unsurveyed and submerged at statehood, then later appears in the navigable or non-navigable water body, it is of no legal effect.¹³⁴ For example, regarding an island that appeared in the North Platte River, the court in *Wilson* held that “[r]iparian owners are entitled to possession and ownership of an island formerly under waters of the stream as far as the thread of the stream.”¹³⁵ The difficulty that can arise is the facts and circumstances analysis regarding how an island came into being.¹³⁶ Landmen and mineral title examiners should rely on a surveyor to aid in such a determination.

V. Cemeteries

As oil and gas development and horizontal drilling moves closer to towns, subdivisions, and other population centers, planned extraction under or near cemeteries and burial plots can create unique title problems. Historically, lands deeded for cemetery purposes have included language conveying a fee simple interest in land without a mineral reservation or a statement of use for a particular purpose. If a deed limits the use of lands for “cemetery purposes only,” most states take the position that an easement for that purpose is created, and the mineral rights under the cemetery property are retained by the dedicator or grantee, as discussed below. However, in some context, some deeds may transfer the mineral interest thereunder even if the deed states that the land is to be used for “cemetery purposes only.”¹³⁷ As to individual burial plots, most states follow a general rule that the plot owner has an interest similar to an easement or license for a perpetual right of use for internment purposes,¹³⁸ and states have statutes in place codifying the same.¹³⁹ The plot owner, however, would typically not acquire any title or exploratory right to the minerals underlying the gravesite.¹⁴⁰ In most cases, title would remain in the entity that dedicated

¹³³ *Wilson*, *supra* note 2 at § 1402[2]. (citing *David A. Provinse*, 78 IBLA 85 (1983), GFS (O&G) 44 (1984)).

¹³⁴ *Wilson*, *supra* note 2 at § 1402[2]. (citations omitted), *Bate*, *supra* note 2 § 19.07.

¹³⁵ *Wilson v. Lucerne*, 150 P.3d, 653, 665 (Wyo. 2007)(citing *Monument Farms v. Daggett*, 520 N.W.2d 556, 562 (Neb. App. 1994)), *see also* N.D.C.C. § 47-06-09.

¹³⁶ *Wilson*, *supra* note 1 at § 14.02[2].

¹³⁷ *See, e.g., Choctaw & Chickasaw Nations v. Board of County Comm’rs*, 361 F.2d 932 (10th Cir. 1966) (grant of lands to a Native American tribe “for cemetery purposes only” did not limit estate granted and grantee held mineral leasing rights so long as cemetery use continued).

¹³⁸ Josh G. Van Maele, “Examination of Tracts within Townsites,” Ch. 16, *Advanced Mineral Title Examination Institute* (Jan 2014), p. 16-17 (citing 2 Eugene Kuntz, *A Treatise on the Law of Oil and Gas* § 20.10(f) (Matthew Bender, Rev. Ed.) (citing cases from various jurisdictions in support of this general proposition)).

¹³⁹ *See, e.g., Wyo. Stat. Ann. § 38-8-102* (West 2019) (stating title is “a right in fee simple to such lot or block for the sole purpose of internment . . .”); *Colo. Rev. Stat. Ann. § 6-24-112* (West 2019) (“[O]n and after August 7, 2006, a cemetery authority shall not convey title to the real property surveyed as a lot in a cemetery for use as a burial space. A cemetery authority may grant interment rights to a lot, grave space, niche, or crypt in a cemetery.”).

¹⁴⁰ Van Maele, *supra* note 138, at 16-17.

or conveyed the lands for cemetery or burial plot purposes (e.g., a municipality, church, or fee owner).

Cemeteries, graveyards, and burial plots are usually created by dedication by public or private entities, including towns, churches, subdivision developers and families or other fee estate holders. In many oil and gas producing states, dedication of lands, including a cemetery or burial plat, creates an easement interest in the cemetery or burial plat owner, while the dedicator (e.g., a town) retains title to the minerals, even if the dedication does not expressly reserve the same.¹⁴¹ When land has been dedicated for burial purposes, title to the fee simple estate is burdened with the purpose for which it has been appropriated, and, barring abandonment, the owner must prevent interference with the use of the property for that purpose.¹⁴² Thus, the owner of the minerals underlying the cemetery cannot extract those minerals if extraction would interfere with the surface use as a cemetery. The responsibility of the fee owner is similar to that of a trustee, where the operator of the cemetery holds title to the gravesites in trust for the interned, those entitled to be interned, and the public in general.¹⁴³ Ultimately, states courts have routinely held that the public policy of protecting gravesites from desecration outweighs any economic benefits that might arise from disturbing graves and burial plots. All jurisdictions follow the rule that the desecration of graves of the dead will be enjoined in suits brought by their surviving relatives.¹⁴⁴

As a result, courts have generally prohibited surface development for oil and gas purposes within a cemetery. In the early twentieth century, courts ruled that it is permissible to explore and develop the mineral estate underlying a cemetery as long as the operations do not desecrate existing gravesites or interfere with the public use of the cemetery, although drilling within the cemetery grounds is typically prohibited.¹⁴⁵ In cases where an unused portion of a cemetery is subsequently abandoned or removed from the dedication, those “undedicated” lands may be used for other purposes, including oil and gas development.¹⁴⁶ Today, most oil and gas producing states have a regulatory authority in place that has promulgated setbacks rules that would prohibit drilling on or near sensitive areas near buildings and recreations, with specific restrictions that could apply to cemeteries.¹⁴⁷

Modern horizontal drilling technology allows operators to drill thousands of feet below the surface, and operators have taken the position that because the drilling activity is so deep, the

¹⁴¹ See, e.g., *Heiligman*, 338 P.2d at 148, *Town of Moorcroft v. Lang*, 761 P.2d 96, 98 (Wyo. 1988), *on reh'g*, 779 P.2d 1180 (Wyo. 1989), *Beth Medrosh Hagodol v. City of Aurora*, 248 P.2d 732, 735 (Colo. 1952), and *Humble Oil & Ref. Co. v. Blankenburg*, 235 S.W.2d 891, 893 (Tex. 1951).

¹⁴² See *Heiligman v. Chambers*, 338 P.2d 144, 145 (Okla. 1959); *Houston Oil Co. v. Williams*, 57 S.W.2d 380 (Tex. App. – Texarkana 1933).

¹⁴³ Van Maele, *supra* note 122, at 16-17.

¹⁴⁴ § 11:39. Power to lease limited interests in lands for oil and gas—Cemeteries, 2 Summers Oil and Gas § 11:39 (3d ed.).

¹⁴⁵ See, e.g., *White v. Williams*, 57 S.W.2d 385 (Tex. Civ. App. Texarkana 1933), *Chas E. Knox Oil Co. v. McKee*, 223 P. 880 (Okla. 1924) and *Chochran v. Hill*, 255 S.W. 768 (Tex. Civ. App. Fort Worth 1923)

¹⁴⁶ See *Andrus v. Remmert*, 146 S.W.2d 728 (Tex. 1941). Note that some states, such as Louisiana, require a court order for a cemetery to be abandoned or “undedicated”. See La. R.S. 8:306.

¹⁴⁷ For example, see Colorado Oil and Gas Conservation Commission Rule 318 (May 1, 2018) regarding oil and gas development setbacks. Rule 318 does not directly apply to cemeteries, but applies to building units or outdoor areas that are likely part of a cemetery.

gravesites are not disturbed in a legally actionable manner.¹⁴⁸ For example, Chesapeake Energy has worked with more than a dozen cemeteries in the Fort Worth, Texas area in order to lease and to drill directly below many of them.¹⁴⁹ While no formal lawsuit has been brought to enjoin the operators from drilling underneath cemeteries, some anti-industry groups claim the practice is immoral, reasoning that the vibrations from drilling and hydraulic fracturing may potentially disturb the dead.¹⁵⁰

When examining mineral title underlying a cemetery or burial plot, a landman or title attorney should pay close attention to the language used in deeding the cemetery or individual burial plots and examine the specific state law surrounding burial sites. The title examiner should ensure that the operator is aware of the location of the cemetery in the proposed unit and should advise that drilling operations be conducted in such a manner to avoid disturbing or desecrating the remains. The operator should locate its drillsite in accordance with any state setback regulations.

VI. Managing Competing Claims

A. Navigable Rivers

As title examiners, it is important to inform the company or the client any time an issue has not been settled squarely by the laws of the relevant jurisdiction. In the case of competing claims to navigable rivers, an examiner should inform the client that a court might disagree with the interpretation of the available case law or with the understanding of industry standard, even if it seems like stating the obvious. For example, the question presented by PPL Montana, LLC to the United States Supreme Court in its appellate brief frames the effect of taking industry practice at face value in building ten (10) hydroelectric projects: “[The Montana Supreme Court’s decision that the State owned the riverbeds] came as quite a shock, because for more than a century the riverbeds beneath those facilities have been treated as owned by private parties or the federal government.”¹⁵¹

As was the case in the Montana Supreme Court’s decision discussed in *PPL Montana*, if a court later disagrees with available case law or an often-followed industry standard, then any leases drilled upon the lands by the losing litigant would be void and the lands may be considered unleased. Alternatively, a prevailing litigant may have leased the same lands to a third-party operator whose leases would then control. For these reasons, title examiners should consider providing leasehold tabulations and analysis for protective or top leases.

In analyzing competing protective leases, title examiners may find that such leases carry different landowner’s royalty rates. When disbursing proceeds of production, the conservative

¹⁴⁸ See Christina Nunez, *Fracking Next to a Cemetery? 10 Unlikely Sites Targeted for Drilling*, National Geographic, March 13, 2015, available at <https://www.nationalgeographic.com/news/energy/2015/03/150313-oil-gas-drilling-fracking-cemetery-unlikely-drilling-sites-report/>.

¹⁴⁹ Manny Fernandez, *Drilling for Gas Under Cemeteries Raises Concerns*, N.Y. Times, July 8, 2012, available at <https://www.nytimes.com/2012/07/09/us/drilling-for-natural-gas-under-cemeteries-raises-concerns.html>.

¹⁵⁰ *Id.*

¹⁵¹ *PPL Montana, LLC v. State of Montana*, 2011 WL 3894396, i (Appellate Brief for Petitioner)(U.S., 2011).

approach is to suspend the royalties, preferably at the higher rate, until an instrument curing the boundary dispute is properly executed and recorded or filed in the county or federal real property records as necessary. Protective leases with differing landowner royalty rates held by the same lessee create a question as to the applicable overriding royalty assigned or reserved for net revenue dependent overriding royalties (e.g., an overriding royalty equal to 20% less existing lease burdens). Title examiners should consider requiring the company or client to obtain a written agreement (that is more than a division order form) between the overriding royalty interest owner and the lessees detailing how any payments of the overriding royalty under the leases will be paid.

B. Non-Navigable Rivers and Lakes

In many instances, the BLM mater title plats will detail the location of a river or lake within a township and range. However, the BLM meander lines are typically unreliable, as they are out of date and do not represent the location of the water today. Additionally, many non-navigable bodies of water are not depicted on the plats at all. Should the course of the non-navigable river move “into” the tract, by virtue of receding or otherwise moving, and away from the boundary of the section, such movement may drag with it the ownership of minerals of other sections. Similarly, the shoreline of a non-navigable lake will often change by accretion, reliction, or avulsion. Title examiners should ensure that any such “new” mineral owners dragged into the tract by movement of the non-navigable riverbed or lakebed are (1) leased, (2) properly spaced and pooled or communitized, or (3) fully committed to the unit as legally necessary. To that end, Title examiners should consider both requiring their company or client to obtain title opinions based upon an updated survey covering the lands in these adjoining sections, as well as providing leasehold tabulations and analysis for protective leases to account for any potential new owners.

C. A Red Herring: The Right to Float Upon the Water Itself

Many a good title examiner have found themselves chasing case law and statutes regarding who owns rights upon the water itself. Do not be fooled. For purposes of this paper, and without going into the nuances of portages or scraping the bottom, the right to float down the river is a public right owned by the state regardless of who holds mineral title to the beds and banks.¹⁵²

D. Cemeteries

As discussed above, cemeteries and burial plots are created through a variety of conveyances, reservations, and dedications. Title examiners should always closely examine any instruments that indicate the creation or abandonment of cemeteries and burial plots, along with any surveys, maps or plats evidencing the same. If these instruments indicate that the burial plots are conveyed as fee simple tracts of land without stating a specific use for internment or as a burial plot, a title examiner should inform the client and require the it acquires protective leases on the individual plots. If necessary, an operator may need to suspend the proceeds of production until

¹⁵² N.D. Const. art., XI, § 3 (1889); Art. 1, § 31, and Art. 8, § 1, Constitution of Wyoming (1890); *Economy Light & Power v. United States*, 256 U.S. 113 (1924) (navigable right); *Conaster v. Johnson Supreme Court of Utah*, July 18, 2008, 2008 WL 2776716 (Utah 2008) (non-navigable right); *Montana Coalition for Stream Access v. Curran*, 282 P.2d 163 (Mont. 1984) (non-navigable right); *Day v. Armstrong*, 263 P.2d 137,143 (Wyo. 1961) (non-navigable right).

ownership of the burial plot is determined between the plot and cemetery owners. If a lease covers lands upon which a cemetery is located, a title examiner should confirm whether the lease contains surface use restrictions, and, if so, highlight the same for the client. If no surface use restrictions are in place, a title examiner should advise the client to obtain a surface use agreement that considers the location of the cemetery which satisfies all regulatory setback requirements and the prohibition on disrupting the remains of the dead.

In due course, a title examiner should always require a surface inspection of the property where the well is to be drilled. It is not rare for developers and construction crews laying pipelines to encounter human remains in marked and unmarked graves during operations.¹⁵³ Typically, this will cause work to stop immediately, and the developer is required to contact the authorities, which may include local law enforcement, the coroner, and even an archeologist.¹⁵⁴ While it is not always possible to locate and identify human remains before a project begins, the failure to do so likely will result in project delays and loss of revenue.

VII. Curative Requirements for Boundary Line Disputes

Typically, when a boundary line dispute arises or becomes evident through the course of title examination, a title examiner should require the client to obtain an updated survey setting forth the current location of any disputed lands, lakes or rivers when it is temporally or financially appropriate. The operator should be made aware that the survey may not necessarily settle any ownership questions, and might instead create new ones. Often times, a mineral developer may be reluctant to initiate a boundary line dispute between two private parties, and the size of the interest might not be worth the cost of pursuing such a claim. A title examiner should always consider the business ramifications and weigh the cost of the risk against the benefit of the reward when suggesting title curative options. However, at the end of the day, the decision as to what action to take is ultimately one to be made by the client or corporation.

Further, a title examiner should always provide practical and efficient curative recommendations that will protect the client. These options may include title curative, contractual pooling agreements, protective leases, statutory pooling procedures, and, usually as a last resort, quiet title actions. Today, state royalty payment acts provide for the suspension of proceeds of production attributable to disputed ownership.¹⁵⁵ Prior to passage of these acts, mineral developers could interplead the funds into court. That option is still available and, in some cases, may be the proper (or only) tool for the client to cure title in a satisfactory way.¹⁵⁶ In order to avoid wrongful payment, a title examiner should recommend that a mineral developer suspend the proceeds of production to disputed tracts in accordance with state law until receiving proper curative instruments, which might include a recorded quiet title decree, recorded deeds, or, as a less

¹⁵³ Ryan M. Seidemann, *Curious Corners of Louisiana Mineral Law: Cemeteries, School Lands, Erosion, Accretion, and Other Oddities*, 23 TUL. ENVTL. L.J. 93, 99 (2009).

¹⁵⁴ *Id.*

¹⁵⁵ Colo. Rev. Stat. § 34-60-118.5(3)(a)(2011); Wyo Stat. Ann. 30-5-301 to 30-5-305 (2011); N.D.C.C. §47-16-39.1 and §47-16-39 (2011).

¹⁵⁶ See, e.g., *Brigham Oil & Gas, L.P. v. Lario Oil & Gas Co.*, 801 N.W.2d 677 (N.D. 2011) (regarding disputed production payments between the high watermark and low watermark in North Dakota).

desirable alternative, an adequate written agreement of the parties in dispute or an indemnifying division order. Note that most division orders are revocable.

VIII. **Curative Options between Contractual Parties**

Given the pace at which development can occur, an operator may only discover one of the above title issues after obtaining a drilling or division order title opinion. As a result, an operator may have already committed the leases to an approved federal exploratory unit or already obtained adequate spacing and pooling orders from the necessary state oil and gas conservation commission. Title examiners should remind and require operators to amend and supplement such existing agreements to reflect additional leases, lands and royalty owners to account for all protectively leased parties. When necessary and temporally or financially practical, operators should err on the side of obtaining an updated survey depicting the disputed lands. Pooling declarations and joint operating agreements should include not only the relevant leases and adequate legal descriptions to cover mineral title to submerged or contested lands, but also should list any protective leases and the ownership of the same. Additionally, operating agreements should also be specifically tailored to provide for the allocation of risk and determination of acreage for payments of bonus, rentals and royalties attributable to disputed lands. Where there is a large acreage position with disputed tracts, parties may wish to contract for allocation of the risk should a court decide in favor of one owner over another.

IX. **Conclusion**

When examining title to lands submerged under water or lands under a cemetery or burial plots, a title examiner should inform his client as soon as possible in order to undertake any necessary curative actions. The remedies to issues arising from ambiguous title related to unique surface features can be complicated and time consuming, and may affect leasing, joint operations, and drilling and division order calculations throughout the life of the well or leasehold estates. Lease brokers, abstractors, landmen and mineral title examiners will serve their company or client well to be diligent in examining these matters at every stage and recommending practical solutions in a timely manner in order to protect their company and client interests.

The views expressed in this paper are solely those of the author. Please cite as Turner, Scott, "Mineral Ownership under Bodies of Water and Actual Bodies: Title in Submerged Lands and Cemeteries," *Special Institute on Oil and Gas Mineral Title Examination*, Paper ____, Page No. ____ (Rocky Mt. Min. L. Fdn. 2019).

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MINERAL OWNERSHIP UNDER BODIES OF WATER AND ACTUAL BODIES: TITLE IN SUBMERGED LANDS AND CEMETERIES

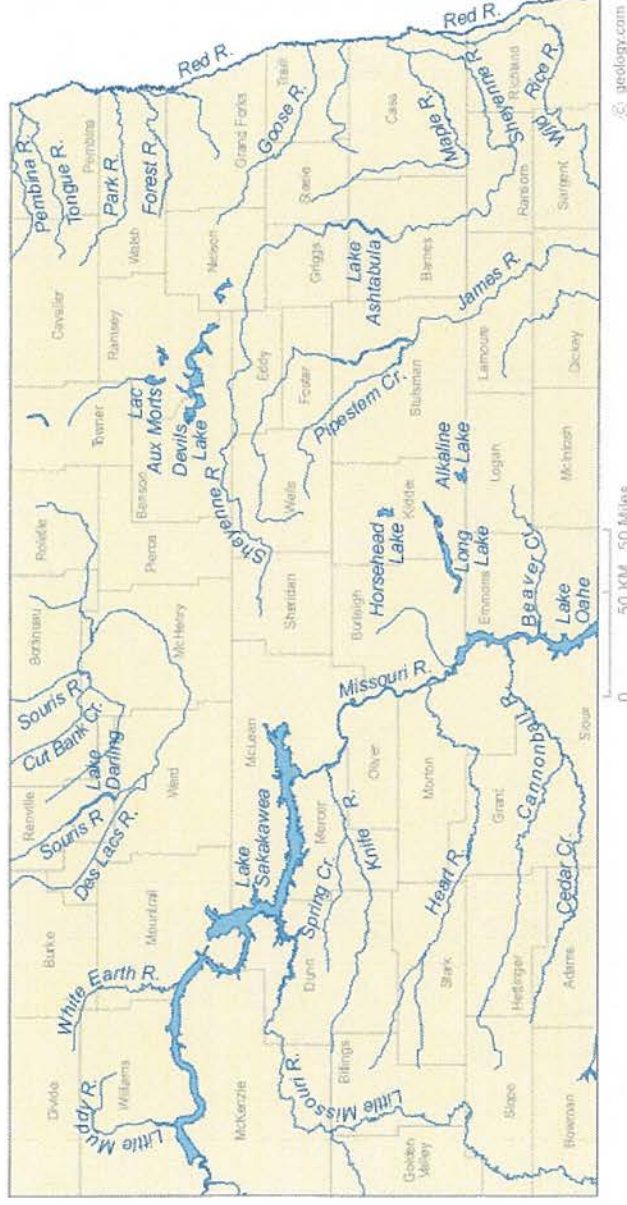


(Typically, you will not have to worry about both at the same time)

Source: <https://www.pinterest.com/pin/517011261262397286/>

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Navigable Rivers



Navigable Rivers

- Navigable > Title to the riverbed and the minerals thereunder is vested in the state upon admission to the Union
 - “Equal Footing Doctrine” – All states entering the Union assume sovereignty on “equal footing” with the 13 original states, which includes state ownership of riverbeds
 - Pre-statehood, the riverbeds are held in trust by the Federal Government for future states
- Non-Navigable > Title to the riverbed and the minerals thereunder remains vested in the federal government

Navigable Rivers

- Federal test for “navigability”

Is the river or stream “used or susceptible of being used in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water”?

- *The Daniel Ball*, 77 U.S. (10 Wall) 557, 1870

Navigable Rivers

- Presumption in favor of non-navigability



The long expanse where the Colorado River has run dry, not reaching the ocean.

Source: <https://greenblogs.nytimes.com/2011/11/17/all-rivers-do-not-run-to-the-sea/>

Navigable Rivers

- Considerations for “navigability”
 - Was the river or stream navigable at the time of statehood?
 - *United States v. Oregon*, 295 U.S. 1 (1935)
 - What is “commerce”?
 - *Montana v. United States*, 450 U.S. 544 (1981)
 - Was the river actually used or “susceptible for use”, a/k/a “navigability in fact”?
 - *United States v. Utah*, 283 U.S. 64 (1931)

Navigable Rivers

- The Segment-by-Segment Approach

- *PPL Montana v. Montana*, 450 U.S. 544 (1981)



The Missouri River at Black Eagle Falls, below a power-generating dam

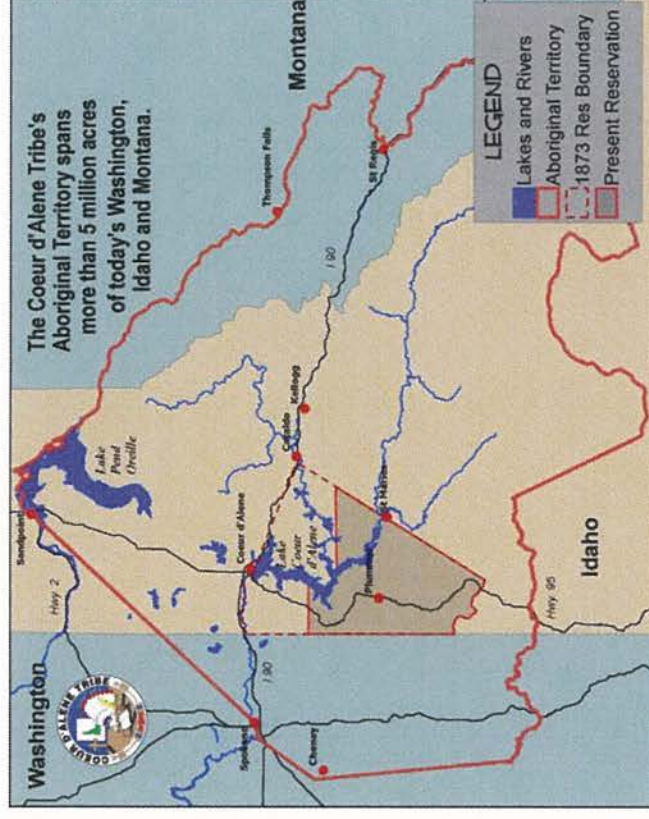
Source: https://missoulian.com/lifestyles/territory/in-great-falls-three-rivers-run-through-it-/article_bd5cd9e-091e-5d5b-a0c9-7ff1d885d6eb.html

Navigable Rivers

- The Segment-by-Segment Approach
 - *PPL Montana v. Montana*, 450 U.S. 544 (1918)
 - Portions of rivers may be non-navigable at statehood, such as the Great Falls segment of the Missouri River
- Non-navigable portions are not transferred to the states
- The rule is specific to title, does not apply to navigability for Commerce Clause or admiralty purposes
 - The “right to float” is a red herring for title purposes

Navigable Rivers

- Navigable Rivers on Established Reservations



Source: http://www.nrcal.org/PTG_Innovation_Spotlight_-_Coeur_dAlene_Workforce_Development_FINAL.pdf

Navigable Rivers

- Navigable Rivers on Established Reservations
 - There is a strong presumption against conveyance by the United States to Native American tribes.
- Overcoming the presumption:
 - (1) Did Congress intend to include bed lands within the reservation?
 - (2) Did Congress intend to defeat future state's title to the submerged lands?
- Unresolved issue: When can Congressional intent be inferred?
 - *Idaho v. United States*, 533 U.S. 262 (2001)



Navigable Rivers

- The Missouri River underlying the Fort Berthoud Reservation



Figure 35. The Fort Berthoud Reservation. This map shows the Missouri River before the Garrison Dam was built. It also shows the area taken by Lake Sakakawea after Garrison Dam was completed. Notice the 1930s and villages that existed before the dam was built. (SHSND-ND Studies)

Navigable Rivers

- The Missouri River underlying the Fort Berthoud Reservation
 - There is currently no judicial determination of title to riverbed
 - Pro-Tribe Decisions
 - *Impel Energy Corp. v. Montana BLM*, 42 IBLA 105 (Aug. 16, 1979)
 - Solicitor Hilary C. Tompkins, U.S. Dep't of the Interior, M-37044, *Opinion Regarding the Status of Mineral Ownership Underlying the Missouri River within the Boundaries of the Fort Berthold Reservation (North Dakota)*, January 18, 2017
 - Pro-State Decisions
 - Rehnquist dissent in *Idaho v. United States*, 533 U.S. 262 (2001)
 - Deputy Solicitor Daniel H. Jorjani, U.S. Dep't of the Interior, M-37052, *Partial Suspension and Temporary Withdrawal of Solicitor Opinion M-37044, Opinion Regarding the Status of Mineral Ownership Underlying the Missouri River within the Boundaries of the Fort Berthold Reservation (North Dakota)*, June 8, 2018

Navigable Rivers

- The “Bathtub Ring”



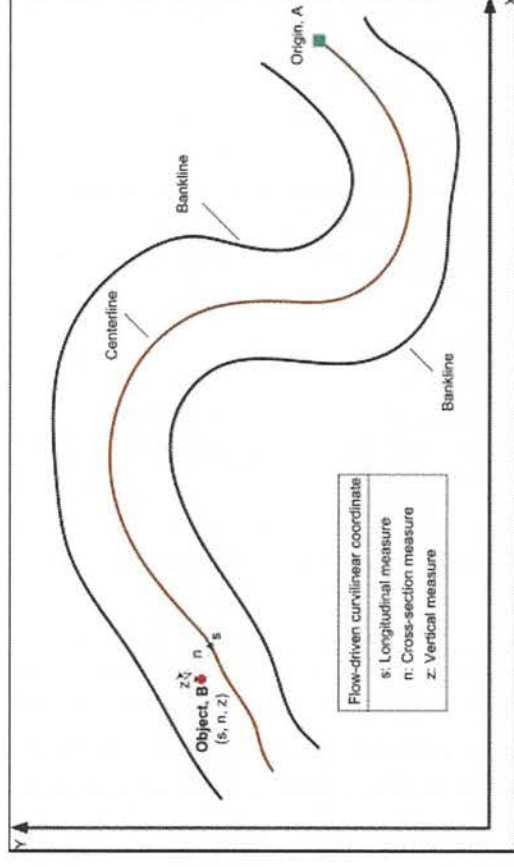
Source: <https://www.azcentral.com/story/news/local/arizona-environment/2019/03/27/critics-see-drawbacks-colorado-river-drought-deal/3245524002/>

Navigable Rivers

- The “Bathtub Ring”
 - The land and underlying minerals between the high watermark and low watermark
- Most states: high watermark to high watermark
- North Dakota: Likely the same, but see *Reep v. State*, 841 N.W.2d 644

Non-Navigable Rivers

- Title remains in the federal government
- Upon patent, a riparian landowner on either side of a non-navigable river owns to the thread



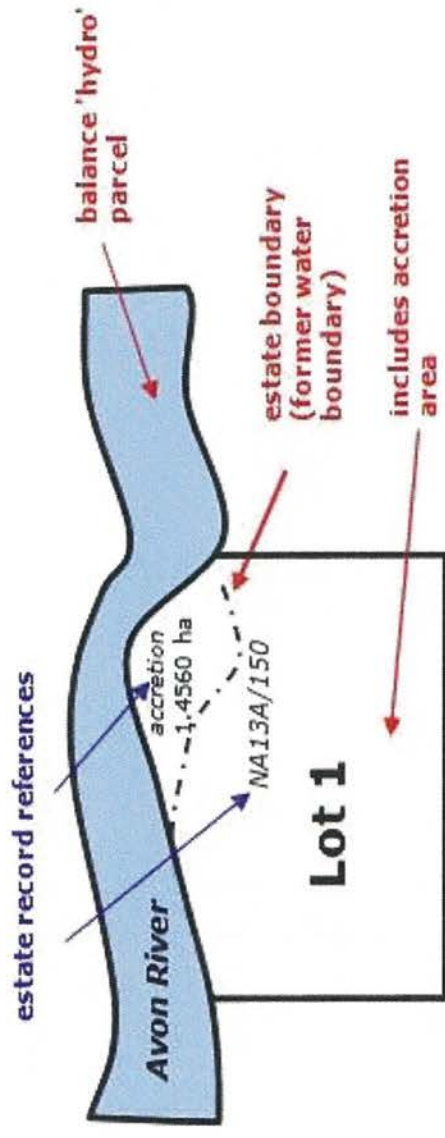
Source: <http://www.sciencedirect.com/science/article/pii/S1364815214003570>

Non-Navigable Rivers

- Movement by Accretion and Reliction
 - “Accretion” is an increase in land area due to the slow and imperceptible, but permanent, deposit of soil on the bank. (i.e., the dirt moves)
 - Landed created is owned by the owner of the bank where accretion occurred
 - “Reliction” is an increase in land area due to the slow and imperceptible, but permanent, retreat of the high-water mark of riparian property. (i.e., the water moves)
 - Landed created is owned by the owner of the bank where reliction occurred

Non-Navigable Rivers

- Movement by Accretion and Reliction



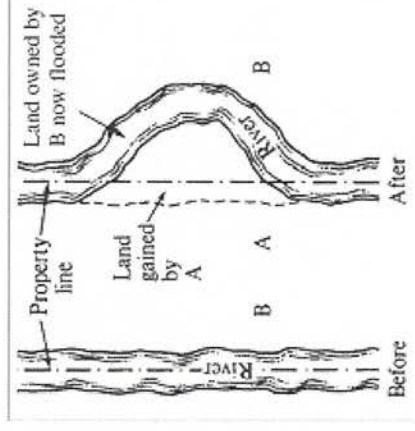
Source: <http://allsouthlandandhomes.com/land-along-creek-river-read/>

Non-Navigable Rivers

- Movement by Accretion and Reliction
 - Mineral tract boundaries likely do not change
 - See, e.g., *Jackson v. Burlington Northern Inc.*, 667 P.2d 406 (Mont. 1983), *Nilsen v. Tenneco Oil Company*, 614 P.2d 36,42 (Okla. 1980), and *Siebert v. Seneca Resources Corp.*, 28 S.W.3d 680 (Tex. App.—Corpus Christi 2000).
 - But see *Swaim v. Stephens Production Co.*, 196 S.W.3d 5 (Ark. 2004)
 - Due to lease language, the accreted land was included in a tract with a higher royalty rate (3/16 v. 1/8)

Non-Navigable Rivers

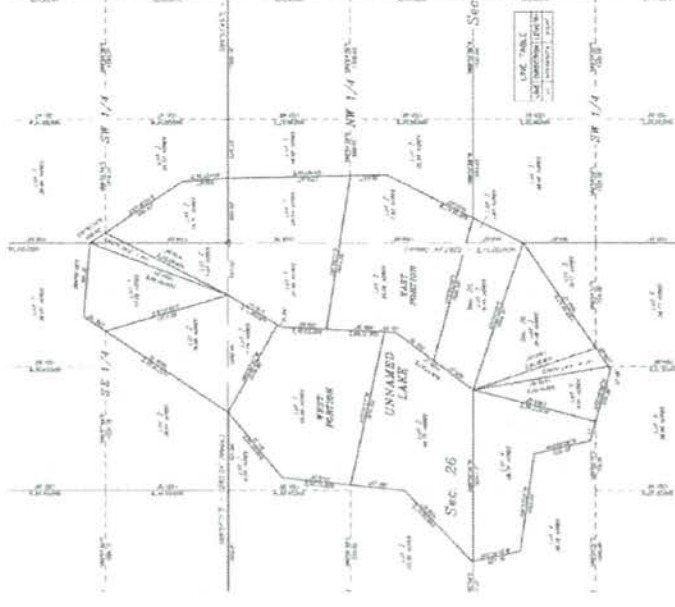
- Movement by Avulsion
 - “Avulsion” is a sudden loss or addition to land, such as flood that changes the course of a river.
 - Typically, the original property line remains for surface and mineral tracts



Source: <https://allsouthlandhomes.com/land-along-creek-river-read/>
90-43

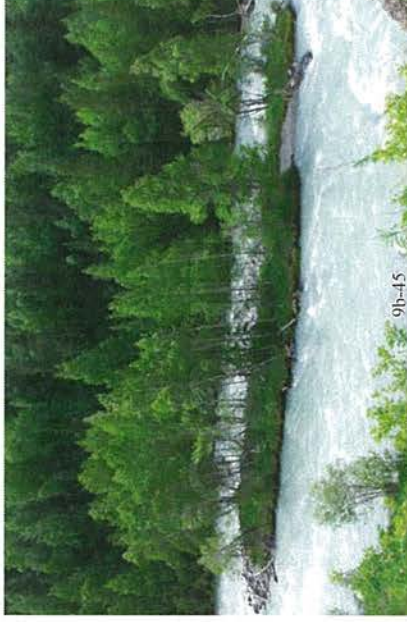
Lakes

- Navigability test is generally the same as for rivers and streams
- Adjacent owners own to the center of the non-navigable lake
 - Defining “pie wedges” can be complicated!



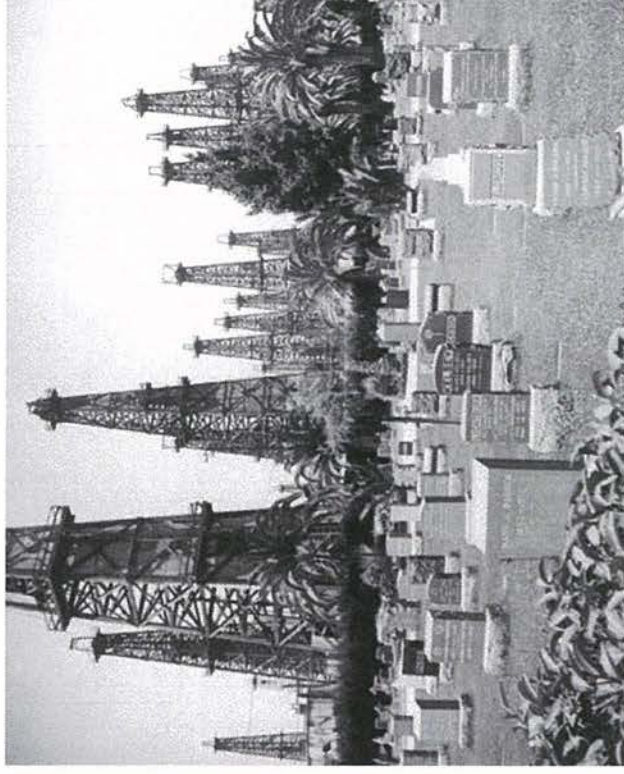
Islands

- Islands that appear in navigable bodies of water
 - If the island was in existence at statehood, it remains the property of the United States
 - If the island was submerged and unknown at statehood and later appears, it is treated in the same manner as the bed lands at statehood (i.e., the navigability test applies)



Cemeteries

- Do not disturb the dead



Sunnyside Cemetery in Long Beach, CA, c. 1937
Source: <https://www.vintag.es/2019/05/oil-fields-california-beaches.html>

Cemeteries

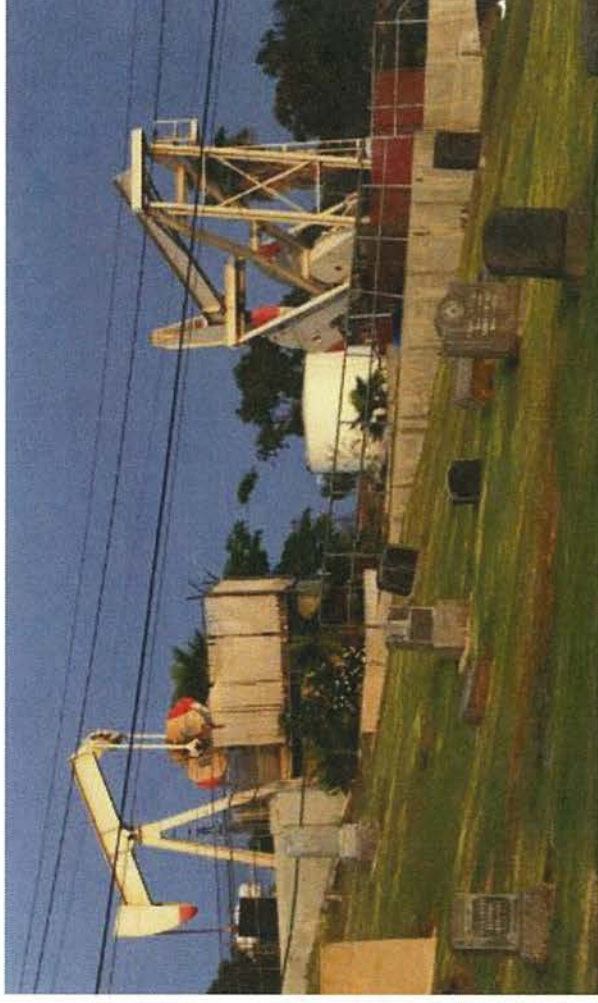
- Do not disturb the dead
- Cemetery dedications are typically treated as easements or licenses (i.e., “cemetery purposes only”)
 - Mineral interests stay with the dedicator, whether public or private
- Individual burial plots conveyed in fee without a stated purpose might be held as distinct tracts of land

Cemeteries

- Do not disturb the dead
 - Surface development is historically prohibited in cemeteries or lands dedicated as cemeteries
 - Subject to state setback regulations
 - “Undedicated” lands and relocated bodies
 - Surface inspections are important, as discovery of human remains during operations results in expensive delay
 - Fracking underneath a cemetery is probably permitted
 - Chesapeake Energy has worked with 12+ cemeteries in Fort Worth, Texas
 - Moral question from anti-industry groups
 - Fracking Zombies?

Cemeteries

- Do not disturb the dead



Signal Hill Cemetery in Long Beach, CA, c. 2003
Source: <https://www.theatlantic.com/photo/2014/08/the-urban-oil-fields-of-los-angeles/100799/>

Ascertaining Title

- Understand your client's understanding of ownership
- Analyze the applicable state or federal law
- Consider the legal descriptions in the chain of title
- Consider inclusive and exclusive conveyance language, including "cemetery use" language
- Review the patents and leasing history of bed lands as an indicator of ownership (State, Federal, or fee?)
- Contact the State Land Board to determine if the state claims the bed lands and obtain a statement or memorandum
- Review BLM master title plats for rivers and lakes (although the courses and shorelines will undoubtedly have changed)
- Advise the client to conduct surface inspections

Curative

- Obtain a survey of the disputed lands
- Take protective leases
- Obtain a statutory pooling order
- Suspend funds under a state royalty payment act until recording (1) clarifying deeds (2) a stipulation between the parties (3) quiet title decree or (4) other written agreement of the parties
- If appropriate, interplead disputed royalties
- Disinterment and relocation of bodies?

Conclusion

- Where to learn more:
 - Rocky Mountain Mineral Law Foundation www.rmmlf.org
- Questions?
 - Scott L. Turner
 - sturner@wsmtlaw.com

