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THE SUPREME COURT OF THE STATE OF ALASKA

VERNON FIEHLER,)
) Supreme Court No. S-18208
)
 Appellant,)
) Superior Court No. 1JU-19-00495 CI
)
 v.)
) OPINION
)
 T. ANTHONY MECKLENBURG,)
)
 CATHERINE MECKLENBURG,) No. 7672 – November 17, 2023
)
 STATE OF ALASKA, CITY and)
)
 BOROUGH OF JUNEAU, and WELLS)
)
 FARGO BANK, N.A.,)
)
)
 Appellees.)
)

Appeal from the Superior Court of the State of Alaska, First Judicial District, Juneau, Daniel Schally, Judge.

Appearances: Barry J. Kell and Peter A. Sandberg, Ingaldson Fitzgerald, P.C., Anchorage, for Appellant. Daniel G. Bruce, Baxter Bruce & Sullivan P.C., Juneau, for Appellees T. Anthony and Catherine Mecklenburg. Jessica M. Alloway, Assistant Attorney General, Anchorage, Vanessa N. Lamantia, Assistant Attorney General, Juneau, and Treg R. Taylor, Attorney General, Juneau, for Appellee State of Alaska. Notice of nonparticipation filed by Robert N. Palmer, III, Municipal Attorney, Juneau, for the City and Borough of Juneau.

Before: Carney, Borghesan, and Henderson, Justices.
[Maassen, Chief Justice, not participating.]

BORGHESAN, Justice.

I. INTRODUCTION

Owners of neighboring waterfront parcels of land dispute access to a shared cove. The shape and location of the cove's shoreline has changed over the years due to natural forces. The key to determining the neighbors' respective access to the cove depends upon the precise location where their shared boundary line intersected the mean high tide line when the property was surveyed in 1938. To mark that location, the surveyor placed a monument in the ground. The surveyor's notes state that the monument was placed at the mean high tide line. But there is evidence that the monument was not placed precisely at the mean high tide line. After taking evidence the superior court determined that the mean high tide line in 1938 was roughly 100 feet seaward of the monument. Based on that ruling, the superior court determined the parcels' respective boundaries and apportioned access to the cove accordingly.

The disappointed landowner appeals. He argues that the superior court erred by essentially altering the initial survey. But we do not read the superior court's decision that way. Because the surveyor set the boundary of the properties in question at the mean high tide line, the court did not err by determining the boundary based on evidence of where the mean high tide line actually was when the properties were surveyed rather than relying solely on the location of the monument. And there is sufficient evidence in the record to support the court's finding that in 1938 the mean high tide line was located well seaward of the monument. Seeing no error in the superior court's rulings, we affirm its judgment.

II. FACTS AND PROCEEDINGS

A. Facts

Vernon Fiehler and Theodor and Catherine Mecklenburg own adjacent beachfront properties near Juneau. Both properties were initially homesteads.¹ They were surveyed in 1938, and the survey was platted in 1939.

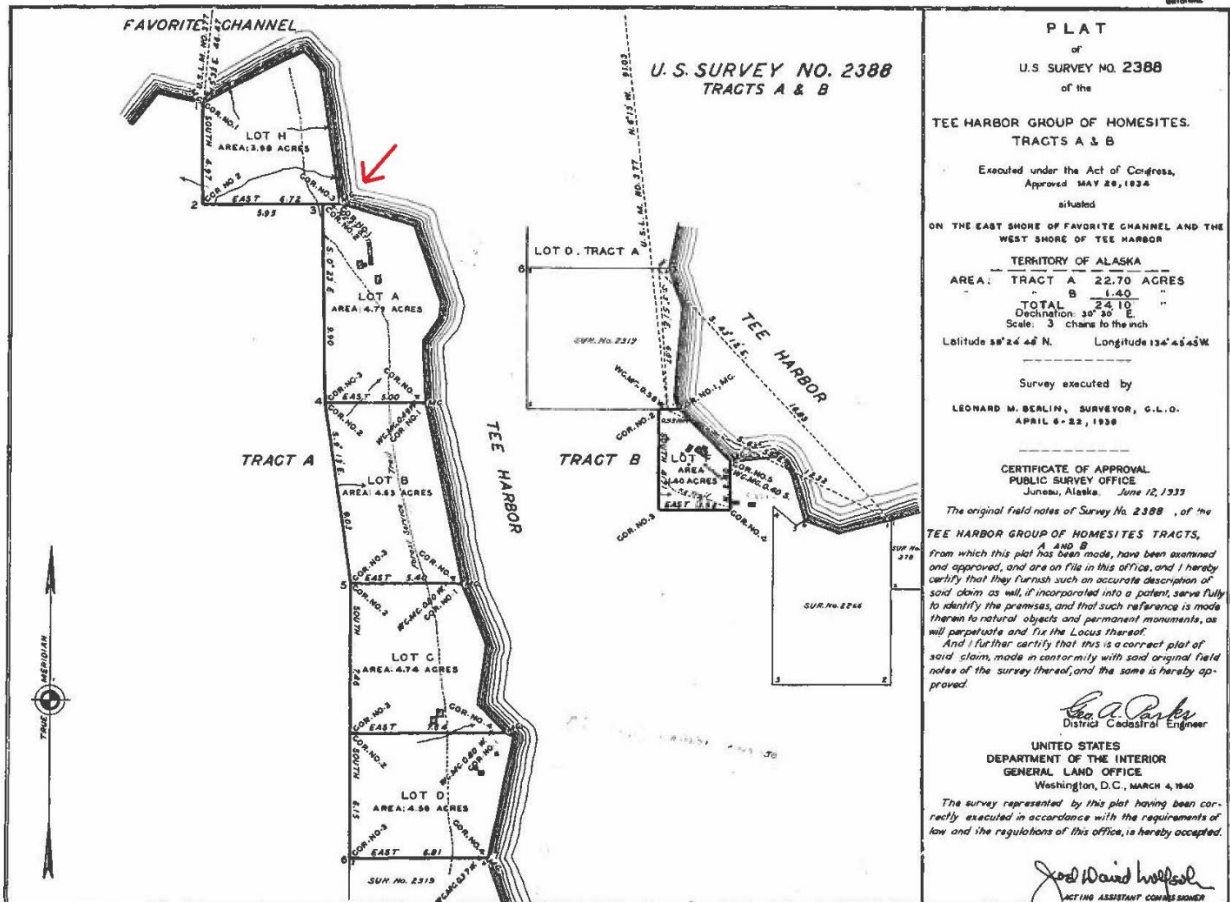
The survey map marks the eastern boundary of the two properties at issue with a “meander corner” located at the waterline. A “meander corner” is a point on a “meander line” — a straight line used in surveying to show that a property is bounded by an irregular natural feature, like the sea, and to “approximate the sinuosities” of the waterline.² The surveyor placed a physical monument in the ground to mark the meander corner.³ The surveyor’s notes describe the monument as “a brass cap” set “flush in cement in a boulder, 4x6x15 ft., at the line of mean high tide” at the “meander

¹ The surveyor’s letter describes the lots as “homesites,” but the plat itself states that the land grant is “[e]xecuted under the Act of Congress approved May 26, 1934,” making the lots homesteads. *See* Act of May 26, 1934, Pub. L. No. 73-260, 48 Stat. 809, 809-10 (amending section 10 of the Act entitled “An Act extending the homestead laws and providing for right-of-way for railroads in the District of Alaska, and for other purposes,” approved May 14, 1898, as amended). *See also* U.S. Dep’t of Interior, Bureau of Land Mgmt., *History of Alaska Homesteading, The Last Chapter in America’s Homestead Experience*, https://www.blm.gov/sites/default/files/documents/files/PublicRoom_Alaska_Homesteading_Brochure_2016.pdf at 8 (noting that homesteads were sometimes referred to as “homesites” in the 1930s).

² *File v. State*, 593 P.2d 268, 269 (Alaska 1979); *see also Hawkins v. Alaska Freight Lines, Inc.*, 410 P.2d 992, 994 (Alaska 1966) (“In the surveying of property, the meander line such as is involved here is a straight line between fixed points, or a series of connecting straight lines, run along the shore of a body of water for the purpose of marking the general contour of the shore at high water. Since it is not always possible or feasible to follow all of the minute windings of a high water line, only the general course of the body of water is followed and the meander line runs substantially along the line of high water.”).

³ A “monument” is a physical marker placed by a surveyor to indicate a marked location of the survey. *See Monument*, BLACK’S LAW DICTIONARY (11th ed. 2019).

cor[ner]” of the two lots. The plat is reproduced below. On this plat the Mecklenburgs’ property is Lot H, Fiehler’s property is Lot A, and we have marked the disputed corner with an arrow:



Conflict over the property lines began shortly after the Mecklenburgs bought their lot. The parties disputed ownership of and access to a beach in a cove on the eastern edge of the two properties.

B. Proceedings

The Mecklenburgs sued in 2019 to quiet title to the contested land. Their complaint described the contested land and asserted that they were its rightful owners. Fiehler filed an answer, which admitted that the descriptions of the land were accurate but asserted that Fiehler was entitled to some portion of the contested land. Fiehler

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emphasized that retaining access to the contested cove was crucial for him, because he used it to access his property. The remaining interested parties — the City of Juneau, Wells Fargo, and the State of Alaska — responded by essentially disclaiming any interest in the proceedings, although the State and the Mecklenburgs entered a stipulation that would allow the State to object to any new allocation of the contested tidelands.

1. Trial

At trial both parties called surveyors as expert witnesses to opine on how to determine the property boundary along the shoreline. The experts largely agreed with each other on the basic facts of the case and basic principles that should govern it. Both experts agreed that the original survey was accurate and well done. Both experts agreed on the location of each property's corners except the contested meander corner. They also agreed that — in principle — the contested property corner should be located at the intersection of the shared property line and the mean high tide line in 1938. They further agreed that the contested beach had expanded since 1938, meaning that any new land should be equitably apportioned based on the parties' initial proportion of the beach. But the experts disagreed on where the mean high tide line was located.

The Mecklenburgs' expert opined that the best available evidence of the mean high tide line in 1938 was a combination of historical tidal records and aerial surveys. Specifically, the Mecklenburgs' expert took historical tidal data for the area, mapped it onto a modern aerial survey of the contested beach, and then adjusted for isostatic rebound (i.e., the general uplifting of ground due to glacial retreat) and sediment accretion. After accounting for these variables, he concluded that the mean high tide line was roughly 100 feet seaward of the meander corner monument.

The Mecklenburgs' expert offered three reasons why the monument did not reliably mark the precise location of the disputed corner. First, the federal surveying manual governing the original survey stated that meander lines were not the actual property boundaries and implied that surveyors should therefore not take pains to

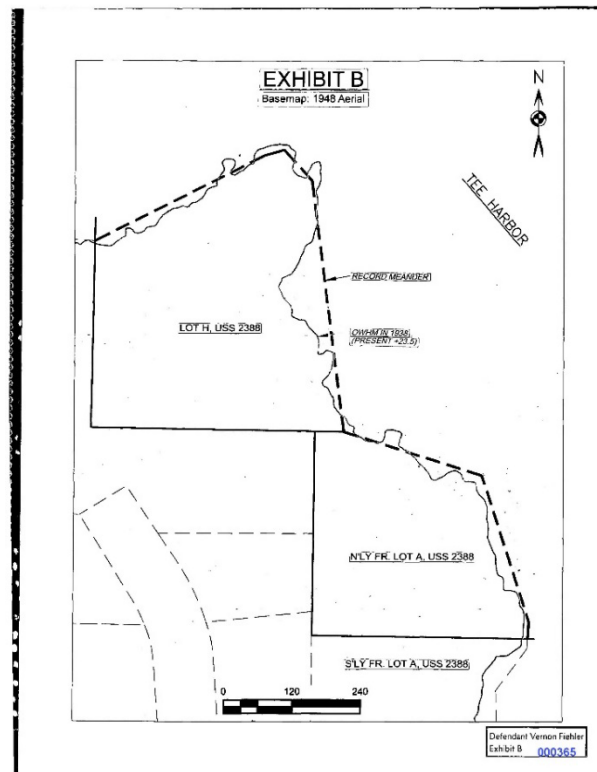
perfectly place monuments used to mark meander lines. Second, the original surveyor was not required to perform tidal observations that would allow him to accurately determine the location of the mean high tide line, and there is no evidence that the original surveyor performed any tidal observations. Third, later surveyors had examined the land and relevant survey materials and also concluded that the actual mean high tide line was a substantial distance seaward of the monument.

Fiehler's expert opined that the monument was the best evidence of the mean high tide in 1938. Fiehler's expert based his conclusion on essentially three facts. First, the surveyor's notes described the monument as being placed at the line of mean high tide. Second, the notes also stated that the monument was placed on top of a 15 foot tall boulder, and that monument is now at roughly ground level, meaning the boulder must have been buried by accreted sediment, eroded away, or sunken into the existing beach. The expert believed these changes to the boulder indicated the beach must have changed substantially since the surveyor's original observations. Third, the surveyor's placement of other monuments suggested that the surveyor was placing monuments precisely. In some instances the surveyor set a "witness" corner to indicate that the mean high tide line was a specified distance from the monument itself.⁴ The use of witness corners in other spots suggested that the disputed monument, which was not a witness corner, was placed at or close to the mean high tide line.

On cross-examination Fiehler's expert acknowledged that his own calculations of the mean high tide line in 1938 placed it substantially seaward of the

⁴ "[A] witness corner is a point that refers by bearing and distance to the point where another monument is or should be." *Collins v. Hall*, 453 P.3d 178, 181 n.4 (Alaska 2019); *see also* 11 Alaska Administrative Code 53.190 (2023) ("If the point for a primary monument is in a place that would be impractical to monument because of natural obstacles such as water bodies, a witness corner must be set. The witness distance must be shown on the plat of survey, from the existing monument, as set, to the true corner position.").

meander corner marked on the survey (the difference is shown in the drawing below that the expert prepared):



However, he concluded that the monument was still the best evidence of the mean high tide line at the time because he saw clear evidence that the shoreline had changed since 1938 and there was no other evidence of what the shoreline in 1938 looked like.

2. Superior court's ruling

The superior court ruled in favor of the Mecklenburgs and awarded them most of the contested beach. The court reasoned that meander lines are just approximations used to represent the waterlines that actually control the property boundary. Accordingly the court concluded that the monument marking the meander corner was just an approximation of the 1938 mean high tide line. The court then turned to extrinsic evidence to determine where the mean high tide line actually was.

The court concluded that the "bulk of the evidence" supported the conclusion that the monument did not accurately mark the mean high tide location in 1938. First, both experts' calculation of the mean high tide line in 1938 showed that it

was substantially seaward of the monument. Second, other surveyors had also concluded that the mean high tide line was substantially seaward of the monument. Third, there was no evidence that the original surveyor made tidal observations, undercutting the idea that the monument was used as a precise marker of the mean high tide line. In describing its conclusion the court stated that the original surveyor “was effectively mistaken when he labeled the meander corner as such instead of labeling it a witness corner.”

The superior court ordered the Mecklenburgs to propose a precise location of the mean high tide line in 1938, which Fiehler could then challenge. The court decided it would use the “angle bisect” method of apportionment once the parties provided a precise location of the 1938 waterline.⁵

The Mecklenburgs then filed a motion and proposed order, which included a plat that placed the mean high tide line in 1938 roughly 100 feet seaward of the monument. Fiehler responded, (1) arguing that the Mecklenburgs’ estimate ignored physical evidence of accretion on the beach and placed the mean high tide line too far seaward and (2) citing a concurrence from the Michigan Supreme Court emphasizing the importance of not relocating property lines when the original survey monuments could be located. Yet Fiehler did not propose a location of the mean high tide line other than the location the court had already rejected: at the monument.

The court issued a judgment adopting the Mecklenburgs’ proposed order without alteration. The court also issued a brief order stating that it reviewed Fiehler’s response but was adopting the Mecklenburgs’ proposed order.

Fiehler appeals.

⁵ According to Fiehler’s expert, the angle bisect method apportions accreted land by creating an imaginary angle out of the intersection of the mean high tide line and the properties’ boundary corner and then drawing a line through the middle of that angle. Each party receives the half of the imaginary angle adjacent to their property.

III. STANDARD OF REVIEW

“[W]hether the superior court had subject matter jurisdiction . . . is a question of law, subject to de novo review by this court.”⁶

“[T]he determination of a disputed boundary often presents a compound issue involving questions both of law and fact.”⁷ While the “relative weight of different types of evidence of disputed boundaries ordinarily presents a question of law, . . . the credibility of witnesses, including the weight given the opinions of surveyors, the location or existence of physical markers, and the timing of events, are questions of fact.”⁸ We review factual findings for clear error, which means we will reverse only if firmly convinced that the superior court has made a mistake.⁹

IV. DISCUSSION

Fiehler raises three closely related challenges to the superior court’s ruling. First, he argues that the superior court lacked subject matter jurisdiction to locate the property boundary at the time of survey at any location other than the monument. Second, assuming in the alternative that the court had subject matter jurisdiction, he argues that it was legal error to locate the 1938 property boundary at any location other than the monument. Third, he argues the court clearly erred in determining as a factual matter the location of the mean high tide line in 1938, and this factual error tainted the court’s apportionment of the accreted lands. We are not persuaded by these arguments for the reasons described below.

⁶ *Andrews v. Alaska Operating Eng’r-Emps. Training Tr. Fund*, 871 P.2d 1142, 1144 (Alaska 1994).

⁷ *Lee v. Konrad*, 337 P.3d 510, 517 (Alaska 2014) (citing *Hansen v. Stewart*, 761 P.2d 14, 16 (Utah 1988)).

⁸ *Id.*

⁹ *Id.*

A. The Superior Court Did Not Exceed Its Subject Matter Jurisdiction By Determining The Location Of The Disputed Property Boundary.

In *Cragin v. Powell* the United States Supreme Court stated that the judiciary lacks “the power to make and correct surveys.”¹⁰ Relying on *Cragin*, Fiehler argues that the superior court exceeded its subject matter jurisdiction because its order “altered” or corrected the meander corner and boundaries established in the 1938 survey. In particular, Fiehler focuses on the court’s statement that the original surveyor “was effectively mistaken” when describing the key monument as a meander corner rather than a witness corner. Fiehler contends that the court lacked authority to “relocate the meander corner” established by the original survey.

The Mecklenburgs take the position that Fiehler’s jurisdictional argument is mistaken because it improperly relies on federal law. Federal law does not apply, the Mecklenburgs argue, because the disputed lands are accreted tidal lands under state control. The State, participating in limited capacity as an appellee, disagrees with Fiehler’s argument for a different reason. Conceding that a court’s jurisdiction to correct a survey is limited, the State argues that the superior court did not actually correct the survey in this case. Instead, the State argues, the court acted lawfully by recognizing that the true property boundary was the mean high tide line, not the monument, and then determining as a factual matter where the mean high tide line existed at the time of conveyance.

We generally agree with the State’s argument on the jurisdictional issue. It is true that courts lack authority to correct surveys (at least under federal law¹¹). Yet

¹⁰ 128 U.S. 691, 698-99 (1888).

¹¹ It is not clear whether federal limits on jurisdiction apply to our resolution of this case. See *Honsinger v. State*, 642 P.2d 1352, 1353 (Alaska 1982) (explaining when state law or federal law governs disputes of lands originally conveyed via federal survey). For purposes of this decision, we assume that we are bound by the federal limits on jurisdiction.

despite the superior court's reference to the surveyor's "mistake," the court's order did not actually correct or change the survey. Instead the court, confronted with persuasive evidence that the monument was not placed precisely at the mean high tide line, properly applied federal law by determining the property boundary lay at the actual waterline rather than at the monument itself.

1. When a survey sets a property boundary with a meander corner, the true boundary of the property generally lies at the waterline, rather than at the meander corner itself.

Understanding the distinction between what courts can and cannot do requires familiarity with the basic principles of surveying and how the United States conveys public land. The land in this case was first conveyed by the United States to private citizens as homestead land. The applicable laws generally required that homesteads be rectangular plots of land defined by their position in a system of six-square-mile grids that covers the United States.¹² This grid system was created by surveyors walking the ground and laying down monuments to mark the corners of each portion of the grid.¹³ The lines of each grid were determined by running straight lines between these corners.¹⁴ The lines of properties within each grid were determined by repeating the same procedure on a smaller scale.¹⁵ By statute the physical location of these monuments controls the boundaries of the properties, even if the monuments

¹² See 43 U.S.C. §§ 751-53 (outlining grid system generally used for surveying federal lands). This system applies to Alaska. 43 U.S.C. § 751a. However, Congress also created an exception for irregular, fractional homesteads for land in Alaska not connected to the grid system, like the land at issue here. See Homestead Act of 1926, Pub. L. No. 69-104, 44 Stat. 243 (act authorizing a departure from rectangular systems of surveys of homestead claims in Alaska).

¹³ 43 U.S.C. § 752.

¹⁴ *Id.*

¹⁵ *Id.* §§ 751-53; 1 JOYCE PALOMAR, PATTON & PALOMAR ON LAND TITLES § 116 (3rd ed. 2003) (describing process for further subdividing of squares).

conflict with the distance or directions indicated on the survey.¹⁶ These legally controlling boundaries are identified by statute as “proper corners” and “proper boundaries.”¹⁷

This system of neat rectangles does not map perfectly onto the real world, which contains irregular physical features such as riverbanks and shorelines. Accordingly, the governing statute provides that if a “watercourse, Indian boundary line, or other external boundary” prevents surveyed land from being divided into even rectangles, then “the boundary lines shall be ascertained by running from the established corners due north and south or east and west lines, as the case may be, to the watercourse, Indian boundary line, or other external boundary of such fractional township.”¹⁸

Because depicting these irregular boundaries with straight lines is impractical, surveyors use a “meander line” to show that ownership of a piece of land extends to the borders of an irregularly-shaped feature.¹⁹ Unlike “proper boundaries,”²⁰ “meander lines are run . . . not as boundaries of the tract, but for the purpose of defining the sinuosities of the banks of the stream, and as the means of ascertaining the quantity

¹⁶ 43 U.S.C. § 752; *see also Cox v. Hart*, 260 U.S. 427, 436 (1922) (“A survey of public lands does not *ascertain* boundaries; it *creates* them.” (emphasis in original)).

¹⁷ 43 U.S.C. § 752.

¹⁸ *Id.*

¹⁹ *Hawkins v. Alaska Freight Lines, Inc.*, 410 P.2d 992, 994 (Alaska 1966) (“In the surveying of property, the meander line such as is involved here is a straight line between fixed points, or a series of connecting straight lines, run along the shore of a body of water for the purpose of marking the general contour of the shore at high water. Since it is not always possible or feasible to follow all of the minute windings of a high water line, only the general course of the body of water is followed and the meander line runs substantially along the line of high water.”).

²⁰ 43 U.S.C. § 752.

of the land in the fraction subject to sale, and which is to be paid for by the purchaser.”²¹ The true boundary of the meandered side of the property is the actual shoreline, not the meander line.²² The property therefore includes any land between the meander line and the body of water.²³

Meander lines may be marked by a monument. When a meander line is marked by a monument connected to a proper corner, the property line runs from the connecting proper corner through the meander corner monument or post until it hits the actual boundary of the watercourse.²⁴

²¹ *St. Paul & Pac. R.R. Co. v. Schurmeier*, 74 U.S. 272, 286-87 (1868).

²² *Id.*; *see also Horne v. Smith*, 159 U.S. 40, 43 (1895) (“It is also true that the meander line is not a line of boundary, but one designed to point out the sinuosities of the bank of the stream, and as a means of ascertaining the quantity of land in the fraction which is to be paid for by the purchaser.”); *Producers Oil Co. v. Hanzen*, 238 U.S. 325, 339 (1915) (noting “the familiar rule . . . that, in general, meanders are not to be treated as boundaries, and when the United States conveys a tract of land by patent referring to an official plat which shows the same bordering on a navigable river, the purchaser takes title up to the water line.”); *United States v. Pappas*, 814 F.2d 1342, 1344 (9th Cir. 1987) (“[S]urveyors establish meander lines only to calculate acreage, not to establish boundaries.”).

²³ *See* 1 JOYCE PALOMAR, PATTON & PALOMAR ON LAND TITLES § 117 (3d ed. 2003) (“The rule that the water itself, rather than the meander line, is the boundary has been adhered to even in extreme cases in which the strip between the line and the shore reached an area explainable only by a gross error in the survey.”); *Thomas B. Bishop Co. v. Santa Barbara Cnty.*, 96 F.2d 198, 201-02 (9th Cir. 1938) (collecting the “numerous” cases “where the smallness of the unsurveyed area and its apparent lack of value, coupled with the difficulties of the terrain, point the reason for the failure of the surveyor to run his [meander] lines with greater particularity”).

²⁴ WALTER G. ROBILLARD, ET AL., BROWN’S BOUNDARY CONTROL AND LEGAL PRINCIPLES 91 (3rd ed. 1986) (“A stake placed on the shore of a lake or upon the bank of a stream and called for is to be used for line (direction) purposes and in some instances for proportioning, whereas the more certain monument, the water, is the determining natural monument that establishes the termination of the line.”); *see also* 11 C.J.S. *Boundaries* § 14 (Westlaw May 2023 Update) (“A ‘meander corner,’ is not a

There are a few exceptions to this rule. For example meander lines determine the actual property boundary (1) when there is no body of water within a reasonable distance; (2) when there is no body of water at all; or (3) when there is “gross fraud.”²⁵ But outside those unusual circumstances, the meander line is not a property boundary. The property boundary is the physical feature that was meandered.

2. A court does not impermissibly “correct” a survey by determining that a boundary extends beyond the monument meant to mark the waterline to the actual waterline.

Recognizing the distinction between proper corners and meander corners is essential to determine how *Cragin*’s rule — that courts lack authority to “correct” surveys — applies to this case. *Cragin* is a straightforward application of the rule that the location of a “proper corner” controls a property’s boundaries. In *Cragin*, two landowners disputed the boundary of their property, which was marked with proper corners.²⁶ The trial court “appointed a surveyor for the purpose of ascertaining and fixing the boundary lines between the properties.”²⁷ But this surveyor found that the original survey was incorrect because its six-square mile grid — as actually run on the

fixed point for measurements, as are established section corners and quarter corners, but a marker for courses.”). *Brown’s Boundary Control and Legal Principles* contains a helpful illustration of this principle. WALTER G. ROBILLARD, ET AL., *supra*, at 91.

²⁵ *Lane v. United States*, 274 F. 290, 293 (5th Cir. 1921), *aff’d*, 260 U.S. 662 (1923) (collecting cases in support of these exceptions); George J. Morgenthauer, *Surveys of Riparian Real Property: Omitted Lands Make Rights Precarious*, 30 RMMLF-INST 19 (1984) (reviewing courts’ treatment of meander lines and categorizing these cases into seven exceptions to the general rule that a meander line does not control the boundaries of a property).

²⁶ *Cragin v. Powell*, 128 U.S. 691, 692-93 (1888). While this is not explicitly stated, it can be inferred from (1) the fact that there is no discussion of meander corners or references to the land grants as “fractional” and (2) the fact that the corners were reset at 6 miles from each other, the statutory distance for two proper corners. *Id.*; 43 U.S.C. § 751.

²⁷ *Cragin*, 128 U.S. at 693.

ground — was only five-and-a-half miles long.²⁸ This surveyor took it upon himself to create a new survey that corrected this half-mile discrepancy and adjusted the property corners and lines derived from this line accordingly.²⁹ The trial court accepted this new survey as the “true and correct survey in the premise” and resolved the land dispute according to the new survey.³⁰

The Supreme Court held that the trial court had exceeded its jurisdiction: “Whether the [original survey] is erroneous, or should give way to the extent of its discrepancies to the [new survey], is a question which was not within the province of the court below, nor is it the province of this court to consider and determine.”³¹ Challenges to the accuracy of the original survey could only be mounted via “direct proceeding” against the federal government.³² The Court laid out three reasons for this ruling. First, Congress explicitly stated that the corners as placed and the lines as run control.³³ Second, Congress had withdrawn the issue of redrawing surveys from federal courts’ subject matter jurisdiction.³⁴ Third, allowing courts to create new surveys would cause widespread confusion and increase litigation.³⁵ Accordingly the Supreme Court reversed the trial court and reinstated the original survey’s boundaries.³⁶

But *Cragin* did not answer the question of how a court is to determine the actual boundary of a property when it is meandered to a body of water marked with

²⁸ *Id.*

²⁹ *Id.* at 693-94.

³⁰ *Id.* at 694-95.

³¹ *Id.* at 697.

³² *Id.* at 699.

³³ *Id.* at 697.

³⁴ *Id.* at 697-98.

³⁵ *Id.* at 699.

³⁶ *Id.* at 698-700.

monuments. There are meaningful differences between a “proper corner” and a “meander corner” for purposes of *Cragin*’s rule. By statute, a proper corner must control even if it was incorrectly placed.³⁷ A court therefore lacks authority to “correct” a survey by determining that the property boundary is somewhere other than the location of the proper corner. But it does not follow that, when a survey uses a meander corner to set the property boundary at the waterline, a court improperly “corrects” the survey by determining that the boundary is located at the actual waterline rather than the location of the meander corner monument.

A meander corner merely “establishes a point on a meander line.”³⁸ As discussed above, meander lines are not boundary lines. Instead, under the governing statute, the boundary runs “to the watercourse.”³⁹ Because a meander line does not control the location of the property boundary, a meander corner logically would not control the boundary either.

The Supreme Court has endorsed this logic. In *Saint Paul & Pacific Rail Road Co. v. Schurmeier* two private parties disputed whether a grant of land based on a federal patent extended to the channel of a river or whether it “stopped at the meander-posts and the described trees on the bank of the river.”⁴⁰ The Supreme Court held that the grant of land extended beyond the meander posts to the channel of the river.⁴¹

³⁷ 43 U.S.C. § 752 (stating physical location of proper corners controls property boundaries); *Cox v. Hart*, 260 U.S. 427, 436 (1922) (“A survey of public lands does not *ascertain* boundaries; it *creates* them.” (emphasis in original)).

³⁸ *File v. State*, 593 P.2d 268, 269 (Alaska 1979).

³⁹ 43 U.S.C. § 752.

⁴⁰ 74 U.S. 272, 284 (1868). A helpful illustration of the property boundaries at issue is included in the digest of the case. *Id.* at 275-78.

⁴¹ *Id.* at 286-87. Although this case came before *Cragin*, there is no indication that it is in tension with *Cragin* or the result of changed circumstances. *See Cragin*, 128 U.S. 691. *Cragin* was based upon well-settled law that extended back

The Wisconsin Supreme Court reached the same conclusion in a different case.⁴² There the federal government conveyed land adjacent to a lake.⁴³ The surveyor set down meander posts to mark the rough location of the intersection of the lake and property line, but the lake was actually shaped quite differently than the surveyor's notes indicated and located a substantial distance beyond the meander posts.⁴⁴ The survey included the measurement from a proper corner to the meander posts.⁴⁵ One party claimed that this meant the meander post controlled the property line because "the length of boundary lines as returned shall be held and considered as the true length thereof."⁴⁶ The Wisconsin Supreme Court rejected this argument: "A meander post is not a corner nor the meander line a boundary. The lake (if within the quarter section) is the boundary, and not the meander line or meander post."⁴⁷ The court therefore held that the property line continued past the meander post.⁴⁸ These decisions confirm that a court does not exceed its jurisdiction by ruling that a property boundary extends beyond the monuments marking meander corners to the actual mean high tide line.

None of the cases Fiehler cites shows that the superior court erred by determining the original property boundary lay at the actual location of the mean high

decades. *See id.* at 699 (describing its central holding as "an elementary principle of our land law . . . settled by such a mass of decisions of this court that its mere statement is sufficient" and citing cases from the early 1800s in support). Likewise, the statute granting the land office the exclusive ability to survey was passed in 1812. *See Act of April 25, 1812, ch. 68, § 1, 2 Stat. 716 (codified as amended 43 U.S.C. § 2).*

⁴² *Underwood v. Smith*, 85 N.W. 384, 386 (Wis. 1901).

⁴³ *Id.*

⁴⁴ *Id.* A helpful illustration of the original survey and actual location of the lake is included in the digest of the case. *Id.* at 384-85.

⁴⁵ *Id.* at 386.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.* at 387.

tide line rather than the location of the monument set by the surveyor. Several cases do not involve meander corners or lines.⁴⁹ A few cases explicitly state that a meander line is not a boundary and contain no indication that a meander corner is to be treated differently.⁵⁰ And the remaining cases Fiehler cites are distinguishable because

⁴⁹ *Kirch v. Persinger*, 100 So. 166 (Fla. 1924); *State v. Phillips*, 400 A.2d 299, 309 (Del. Ch. 1979), *aff'd sub nom. Phillips v. State, ex rel. Dep't of Nat. Res. & Env't Control*, 449 A.2d 250 (Del. 1982); *Myrick v. Peet*, 180 P. 574 (Mont. 1919); *Gardner v. Fort*, 298 P.2d 468 (Nev. 1956); *Iverson v. Johnson*, 239 N.W. 757 (S.D. 1931); *Henrie v. Hyer*, 70 P.2d 154 (Utah 1937); *Phelps v. Pac. Gas & Elec. Co.*, 190 P.2d 209 (Cal. App. 1948); *Sharp v. City of Guthrie*, 152 P. 403 (Okla. 1915).

⁵⁰ *Fuller v. Shedd*, 44 N.E. 286, 290 (Ill. 1896), *aff'd sub nom. Hardin v. Shedd*, 52 N.E. 380 (Ill. 1898), *aff'd*, 190 U.S. 508 (1903) (“[W]here a stream was meandered in the original survey, and conveyance made and price paid for the quantity within the meandered lines, the grant conveyed to the thread of the stream. Therefore the boundaries of the land were not determined by the meandered line.”); *Johnson v. Hurst*, 77 P. 784, 788 (Idaho 1904), *overruled on other grounds by Callahan v. Price*, 146 P. 732 (Idaho 1915) (“It is conceded as the general rule of law that the meander line run in surveying public lands bordering upon a navigable river is not a line of boundary, but one designed merely to point out the sinuosity of the bank of the stream, and as a means only of ascertaining the quantity of land in the fraction that is to be paid for by the purchaser; and that the water course, and not the meander line as actually run on the land, becomes the true boundary line.”); *McBride v. Whitaker*, 90 N.W. 966, 970 (Neb. 1902), *aff'd*, 197 U.S. 510 (1905) (“The patents, when issued, refer to this plat for identification of the lots conveyed, and are equivalent to, and have the legal effect of, a declaration that they extend to, and are bounded by, the lake or stream. Such lake or stream itself, as a natural object or monument, is virtually and truly one of the calls of the description or boundary of the premises conveyed; and all the legal consequences of such a boundary, in the matter of riparian rights and title to land under water, regularly follow.”); *Little v. Williams*, 113 S.W. 340, 343 (Ark. 1908), *aff'd*, 231 U.S. 335 (1913) (“The legal effect of the patents to the state of the fractional sections and parts of sections surrounding the meandered lines of the lake, according to the official plats of the public survey, was to convey all riparian rights, and by virtue thereof to vest prima facie title to the bed of the lake, as shown on the plats, from meandered shore lines to center.”).

they involve exceptions to the general rule that a meander line is not a property boundary.⁵¹

Kneeland v. Korter involved the unique interaction between the Washington Constitution and federal conveyances of land below the mean high tide line.⁵² There, the property owner sued the State, seeking to quiet title to a portion of his property that was below the mean high tide line.⁵³ Most of the opinion dealt with whether the federal government had the power to convey the land below the tide line, which is usually prohibited.⁵⁴ The court ultimately concluded that the federal government could convey the land below the tide line due to a complicated interaction between the Washington Constitution and federal law.⁵⁵ The court then held that, in these unique circumstances, the meander line was the best evidence of the parties' intent for the property lines.⁵⁶ The text of the opinion can be read — as Fiehler does — for the broader proposition that the meander line is the presumptive boundary of the property. But subsequent Washington cases explicitly limit this case to the unique circumstances of pre-statehood conveyances of land below the mean high tide line by the federal government.⁵⁷ And other Washington cases explicitly state that the actual

⁵¹ We address Fiehler's citation to the Iowa Supreme Court — which actually undermines his argument — in our discussion of his argument that the surveyor's notes should control.

⁵² 82 P. 608 (Wash. 1905).

⁵³ *Id.* at 608.

⁵⁴ *Id.* at 608-10.

⁵⁵ *Id.* at 609-10.

⁵⁶ *See id.* at 611.

⁵⁷ *Wash. Boom Co. v. Chehalis Boom Co.*, 156 P. 24, 26 (Wash. 1916) (“The case of *Kneeland v. Korter* is necessarily based upon the fact that the United States had surveyed, platted and designated a part of the tidelands as an upland lot; that is, the meander line was run below the line of ordinary high water. In such cases we have

boundary of the water line controls absent clear evidence that the parties intended the meander line to control.⁵⁸

Brown v. Parker was a Michigan decision involving the special case of swamp lands and was limited by later decisions to that context.⁵⁹ There the disputed land was acquired by the state through the “state swamp lands act,” then sold to a private party.⁶⁰ Other private parties claimed the right to hunt and fish on part of this property, arguing that a portion of it was not swamp land but actually part of the bed of the lake and therefore still owned by the state.⁶¹ The Michigan Supreme Court held that the meander line conclusively established the boundaries of the lake and thus the property

consistently held that the meander line becomes the boundary line.”); *accord Stockwell v. Gibbons*, 363 P.2d 111, 112-13 (Wash. 1961) (“Under Article XVII, § 2, of the Washington State Constitution, such a land patent [for land below the high tide line conveyed pre-statehood] conveys to the patentee title to all of the property above the line of ordinary high tide or the government meander line, whichever is farther seaward.” (citing, *inter alia*, *Kneeland*, 82 P. at 608)).

⁵⁸ *Thomas v. Nelson*, 670 P.2d 682, 684 (Wash. App. 1983) (“The rule in Washington with respect to the use of a meander line as a call in a legal description is clear. A deed which uses the meander line as one of the boundaries conveys to the water, unless there is clear indication that the parties to the deed intended that the meander line should be the actual boundary.”); *Hirt v. Entus*, 224 P.2d 620, 624 (Wash. 1950) (“A perusal of the relevant cases and texts suggests, in fact, that errors of this magnitude, or even much greater ones, were not uncommon, and cases have often arisen in which it has been quite clearly demonstrated that meander lines were run a substantial distance back from the actual water lines, the area between them in some instances amounting to many more acres of land than are involved here. The force of the rule that meander lines are not boundary lines, is so strong, however, that, even in such cases, it has generally been held that the owner’s rights extend to the water’s edge.”).

⁵⁹ 86 N.W. 989, 989 (Mich. 1901).

⁶⁰ *Id.*

⁶¹ *Id.*

line.⁶² But, as later decisions clarified, this ruling was based solely on the fact that the lands at issue were conveyed under the swamp lands act.⁶³ Normally, when the government conveys land, the meander lines do not control.⁶⁴ But swamp lands require a different rule because “where [swamp lands] border[ed] on a lake or stream they frequently merge[d] into it without a definite shore line.”⁶⁵ In these circumstances, “there [is] no other means of fixing the limits of the land [and] the meander line, of necessity, [is] held to be the boundary.”⁶⁶ This rule does not apply to land that is not swamp land.⁶⁷ This case therefore has no application here.

State v. Aucoin is another case involving swamp lands.⁶⁸ The private owner of land and the State of Louisiana disagreed over ownership of drained land adjacent to a lake.⁶⁹ The private owner argued that the exposed dry land was his property because his property was meandered to the lake, meaning he was entitled to

⁶² *Id.* at 990 (“The meander lines of rivers and inland lakes, when the title to the bed is in the riparian owner, is of comparatively little significance, and it has frequently been said that they were not run to bound the possessions of the riparian owner, whose title might extend beyond them. This is true even as to the Great Lakes. We recall no case, however, that holds in express terms that title does not extend to meander lines.”).

⁶³ See *Hilt v. Weber*, 233 N.W. 159, 162-64 (Mich. 1930).

⁶⁴ *Id.* at 163 (“Public lands were patented by the United States to individuals for settlement or ordinary use and were generally dry. The meander line was run to show substantially the number of acres to be paid for. It was not meant to be strictly accurate in depicting the precise sinuosities of the shore. The boundary was where nature had placed it — at the water’s edge.”).

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.* at 160 (stating issue is how to award strip of dry land between meander stake and actual waterline of lake); *id.* at 163 (“The swamp land cases are not applicable to the issues at bar upon the instant question.”).

⁶⁸ 20 So. 2d 136 (La. 1944).

⁶⁹ *Id.* at 137-38.

any accretions from the lake drying up.⁷⁰ However, the Louisiana Supreme Court concluded that the lake bed actually belonged to the state, meaning that the plaintiff did not have any rights to accretion or reliction.⁷¹ Further, the court held that under these circumstances — specifically, swampy lands that were indistinguishable from the lake — the patent was intended to convey only the land within the meander line.⁷² As with the Michigan case, the special rule for swamp lands does not apply here.

Kirwan v. Murphy does not support Fiehler’s position either.⁷³ In that case the government conveyed land that was meandered on one side due to a lake.⁷⁴ But the lake was substantially smaller than the survey indicated.⁷⁵ The federal government then sought to re-survey the land to determine if the portion in between the meander line and actual lake qualified as “unsurveyed” land that could be surveyed and then conveyed.⁷⁶ The landowners sought to enjoin the re-survey⁷⁷ and asked the trial court to declare their property lines extended to the actual boundaries of the lake.⁷⁸ The trial court did so.⁷⁹

⁷⁰ *Id.* at 140

⁷¹ *Id.* at 146, 149.

⁷² *See id.* at 155 (“His field notes show that the swampy conditions surrounding the lake made it impossible to meander the sinuosities of the mean high-water mark.”).

⁷³ 189 U.S. 35 (1903).

⁷⁴ *Id.* at 35-36.

⁷⁵ *Id.* at 40.

⁷⁶ *Id.* at 53.

⁷⁷ *Id.*

⁷⁸ *Id.* at 37-38.

⁷⁹ *Id.* at 42.

The Supreme Court reversed, holding that the trial court exceeded its jurisdiction by enjoining the federal government from re-surveying the land.⁸⁰ The Court also held that the trial court exceeded its jurisdiction by declaring the landowners' property boundaries extended to the lake.⁸¹ But this ruling had little to do with the effect of meander lines and meander corners. Rather, by declaring the property's boundaries, the trial court effectively precluded the federal government from determining whether the land in question had actually been surveyed.⁸² Therefore *Kirwan* does not undermine the general rule described above: A court does not exceed its jurisdiction by determining that a property's boundary extends beyond the meander posts or monuments to the waterline.

3. The superior court did not exceed its jurisdiction by reconciling conflicting calls in the survey to determine that the boundary extended to the actual line of mean high tide.

Fiehler nevertheless argues that, in the particular circumstances of this case, the superior court altered the survey by treating a meander corner as a witness corner. He points out that by law, a surveyor's notes are incorporated into the plat and thus become part of the patent and control the extent of the lands conveyed.⁸³ Here the

⁸⁰ *Id.* at 56.

⁸¹ *Id.* at 54.

⁸² Generally speaking, only land that has been surveyed may be conveyed. *See* 1 JOYCE PALOMAR, PATTON & PALOMAR ON LAND TITLES § 116 (3d ed. 2003) (“It has been the policy of the federal government to make no disposition of its public lands until after they have been surveyed and a plat of the survey filed with and approved by the General Land Office.”); *Cox v. Hart*, 260 U.S. 427, 436 (1922) (“A survey of public lands does not *ascertain* boundaries; it *creates* them.” (emphasis in original)); *cf.* 43 U.S.C. § 1721 (permitting conveyance of unsurveyed lands in limited circumstances). By holding that the property lines extended to the shoreline of the lake, the trial court effectively held that the land had already been surveyed, undermining the federal government's authority to make that determination.

⁸³ *File v. State*, 593 P.2d 268, 270 n.6 (Alaska 1979) (collecting federal cases in support of this proposition); *Cragin v. Powell*, 128 U.S. 691, 698 (1888).

surveyor's notes expressly state that the meander corner monument was placed at the location of mean high tide. Therefore, Fiehler argues, the superior court's ruling that the monument was not actually placed at the mean high tide line impermissibly altered the survey.

This argument fails because it overextends *Cragin*'s holding. Although *Cragin* states that courts are forbidden from correcting a survey, it does not remove courts' powers to interpret a survey's conflicting calls (the survey's descriptions of where the property is located) to determine where a boundary lies on the ground.⁸⁴ As the Supreme Court later stated, “[w]hether a survey as originally made is correct or not is one thing, and that, as we have seen, is a matter committed exclusively to the land department, and over which the courts have no jurisdiction otherwise than by original proceedings in equity. While, on the other hand, where the lines run by such survey lie on the ground, and whether any particular tract is on one side or the other of that line, are questions of fact which are always open to inquiry in the courts.”⁸⁵

In light of persuasive evidence that the monument was not actually placed at the mean high tide line, there was tension between the surveyor's notes and the survey itself. The plat and notes showed a clear intent to use the actual boundary of the watercourse — not the meander line — as the property boundary. Giving effect to this intent required setting the property boundary at the actual location of mean high tide when the property was surveyed. Conversely, giving effect to the surveyor's notes that the monument was placed at mean high tide would mean setting the property boundary short of the actual location of mean high tide. The court had to reconcile these conflicting calls.

⁸⁴ *Cragin*, 128 U.S. at 698-99.

⁸⁵ *Russell v. Maxwell Land-Grant Co.*, 158 U.S. 253, 259 (1895).

Secondary sources agree that when survey calls conflict, the watercourse, as a natural monument, controls over the monument, which is just a marker for course.⁸⁶ The watercourse controls over the field notes' description, too.⁸⁷ A decision of the Iowa Supreme Court cited by Fiehler applied the same rules for resolving inconsistencies between calls for courses and natural monuments.⁸⁸ Accordingly that court held that the property boundary extended past the meander post to the shore of the lake.⁸⁹

The superior court did not err by determining that the actual location of the mean high tide line in 1938 — the “natural monument” — controlled over the artificial monument and notes of the surveyor. Although the court's conclusion that the

⁸⁶ WALTER G. ROBILLARD, ET AL. *supra* note 24, at 91 (“A stake placed on the shore of a lake or upon the bank of a stream and called for is to be used for line (direction) purposes and in some instances for proportioning, whereas the more certain monument, the water, is the determining natural monument that establishes the termination of the line.”); *id.* at 128 (“Artificial monuments set by a surveyor to meander a natural monument, such as a lake, river, or ocean, must yield to the more certain monument, that is the water line.”); 11 C.J.S. *Boundaries* § 106 (Westlaw May 2023 Update) (“Apart from natural objects, to which they generally yield, calls for artificial monuments or marks generally control other conflicting calls or descriptions, in determining the location of boundaries.”); *see also id.* § 14 (“A ‘meander corner,’ is not a fixed point for measurements, as are established section corners and quarter corners, but a marker for courses.”).

⁸⁷ 1 JOYCE PALOMAR, PATTON & PALOMAR ON LAND TITLES § 152 (3d ed. 2003) (“In case, therefore, of a discrepancy between the survey, as shown by the monuments thereof, and the field notes and plat, the survey controls.”).

⁸⁸ *Barringer v. Davis*, 120 N.W. 65, 70 (Iowa 1909) (“True the location of lines and corners as established by the official survey, when the subject of dispute, may be determined as other questions of fact, but when any given, fixed monument or natural object named in the survey is found, it must be respected, even though its location be out of harmony with the recorded measurements. ‘It is a universal rule that course and distance yield to natural and ascertained objects. A call for a natural object, as a river, a spring, or even a marked line, will control both course and distance.’ ” (quoting *St. Clair v. Lovington*, 90 U.S. 46, 62 (1874))).

⁸⁹ *Id.* at 66, 68, 70-71 (discussing placement of meander post and awarding land based on actual location of the meandered lake, rather than the meander post).

original surveyor “was effectively mistaken” made it sound like the court was “correcting” a mistake, the court did not alter or correct the survey in the way that *Cragin* and its progeny prohibit. Instead the court properly reconciled the survey’s conflicting calls. Doing so did not exceed the court’s subject matter jurisdiction.

B. The Superior Court Did Not Err As A Legal Matter By Considering Extrinsic Evidence To Determine The Location Of The Mean High Tide Line.

Fiehler argues that the superior court erred as a matter of law by relying on extrinsic evidence of the mean high tide line in 1938 to determine the property boundary. Fiehler argues that the superior court was required, as a matter of law, to accept the location of the monument as establishing the mean high tide line in 1938. This is incorrect.

As explained above, meander corners do not conclusively establish the location of property boundaries.⁹⁰ Instead, the actual boundaries of the physical feature that was meandered establish the property’s boundaries. Fiehler’s argument that courts must accept a meander corner monument as the only evidence of the location of the property boundary is contrary to this framework.

C. The Superior Court Did Not Clearly Err By Finding That The Meander Corner Monument Did Not Accurately Mark The Mean High Tide Line In 1938.

Finally, Fiehler argues that the superior court’s factual finding on the precise location of the mean high tide line in 1938 was clearly erroneous, meaning the

⁹⁰ See *St. Paul & Pac. R.R. Co. v. Schurmeier*, 74 U.S. 272, 284, 286 (1868) (holding that property line extended beyond “meander-posts” to the river itself); *cf. Hawkins v. Alaska Freight Lines, Inc.*, 410 P.2d 992, 993-94 (Alaska 1966) (holding that when one party, by its own actions, has rendered determination of mean high tide line “impracticable,” meander line will be rebuttably presumed to be property line); *accord* 11 C.J.S. *Boundaries* § 14 (Westlaw May 2023 Update) (“A ‘meander corner,’ is not a fixed point for measurements, as are established section corners and quarter corners, but a marker for courses.”).

superior court's subsequent apportionment of the beach was also incorrect. This argument largely rests on Fiehler's conclusion that the monument was meant to locate the actual boundary of the property. Because there is no dispute about where the monument is, Fiehler concludes that any determination locating the corner of the property away from the monument is clearly erroneous. As further evidence of the reliability and accuracy of the monument, Fiehler notes that the Mecklenburgs' expert praised the accuracy of other points on the survey and that the surveyor used witness corners in several other places where the distance between the shore and a monument was substantially less than 100 feet.⁹¹ Fiehler additionally argues that the Mecklenburgs' expert's testimony was categorically insufficient to overcome the combined weight of the "official patent, survey, notes, and plat" — especially because the expert was a "paid advocate."

The superior court did not clearly err. As discussed above, the question of where the boundaries of a property are physically located is a question of fact that may be answered by extrinsic evidence.⁹² The extrinsic evidence of the location of the mean high tide line in 1938 was conflicting.

On the one hand, the original surveyor's map and notes indicate that the monument was set at the line of mean high tide. And the surveyor used witness corners

⁹¹ As explained in footnote 4, a "witness corner" is a meander corner that is set a specified distance away from the natural feature that forms the property boundary.

⁹² *File v. State*, 593 P.2d 268, 271 (Alaska 1979) ("Prior surveys and other extrinsic evidence are admissible if they are relevant to show the proper boundaries of a disputed tract of land."); *Hawkins*, 410 P.2d at 994 (holding that determining mean high tide line would require "core samples"); *United States v. State Inv. Co.*, 264 U.S. 206, 211 (1924) ("The questions where the line run by a survey lies on the ground, and whether any particular tract is on one side or the other side of that line, are questions of fact . . . [which] will be accepted . . . unless clear error is shown." (citation omitted)); *Schurmeier*, 74 U.S. at 284 (using extrinsic evidence to determine location of boundary of river, which controlled over "meander-posts").

in other places, suggesting that when the surveyor did not set a witness corner, he placed the monument close to the actual waterline.

On the other hand, the Mecklenburgs' expert testified that — given the surveying manuals in effect at the time — the surveyor's monument was not meant to represent the actual mean high tide line. Further, both experts agreed that mapping tidal data from 1938 onto the oldest available photograph of the beach — a 1948 aerial survey — shows the waterline was likely substantially seaward of the monument in 1938. Finally, the 1948 aerial photo shows the water's edge a substantial distance away from the monument, supporting the expert's conclusion that when the monument was placed just ten years earlier, it was similarly far from the water's edge.

It was the superior court's job to weigh this conflicting evidence. We will “not reweigh evidence if the record supports the court's finding.”⁹³ Because the evidence supports the court's finding that the mean high tide line was roughly 100 feet seaward of the monument in 1938, we affirm its factual finding. We therefore affirm its legal rulings concerning the disputed boundary and the apportionment of accreted land.

V. CONCLUSION

We AFFIRM the judgment of the superior court.

⁹³ *In re Hospitalization of Rabi R.*, 468 P.3d 721, 735 (Alaska 2020) (quoting *In re Hospitalization of Luciano G.*, 450 P.3d 1258, 1264 (Alaska 2019)).