IN THE
COURT OF SPECIAL APPEALS OF MARYLAND

September Term, 2013

No. 40

POTOMAC SHORES, INC.,

Appellant,

v.

RIVER RIDERS, INC., *et al.*,

Appellees.

On Appeal from the Circuit Court for Washington County
(M. Kenneth Long, Judge)

AMICUS CURIAE BRIEF OF THE STATE OF MARYLAND AND THE COMMONWEALTH OF VIRGINIA

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AMICUS CURIAE BRIEF OF
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QUESTIONS PRESENTED

On February 27, 2014, this Court issued an order (Appx. 1-2), requesting the State of Maryland and the Commonwealth of Virginia to address the following issues:

1. Whether the boundary between Maryland and Virginia—at the low-water mark on the Virginia side of the Potomac River, as established by the Black-Jenkins Award of 1877—"should be construed as establishing a fixed and immutable boundary

according to conditions as they existed in 1877 or as a description of the location of the boundary which time and natural causes might change in the future"; and

2. Whether the principles followed in *Ohio v. Kentucky*, 444 U.S. 335 (1980), apply to the boundary between Maryland and Virginia in light of the Black-Jenkins Award, the Mathews-Nelson Survey, and other agreements between Maryland and Virginia as to the Potomac River.

In response to the Court's further invitation to address "[a]ny other issue that either Attorney General may wish to address in light of the parties' briefs and the matters addressed in this order," Maryland and Virginia submit their views with respect to a third issue implicated by arguments made in the parties' briefs:

3. Whether federal common law, which does not recognize a distinction between natural and artificial accretion, applies to the interstate boundary at issue in this case.

STATEMENT OF FACTS

The history of the boundary dispute between Maryland and Virginia spans "nearly 400 years." *Virginia v. Maryland*, 540 U.S. 56, 60 (2003). "In the 17th century, both Maryland and Virginia laid claim to the [Potomac] River pursuant to conflicting royal charters issued by different British monarchs." *Id.* Virginia traced her claim principally to "the 1609 charter issued by King James I to the London Company, and to a 1688 patent for Virginia's Northern Neck, issued by King James II to Lord Thomas Culpeper," both of which "included the entire Potomac River." *Id.* Maryland based her claim on the

charter of 1632 from King Charles I to Lord Baltimore, which also included the entire river. *See id*.

Virginia's Constitution of 1776 relinquished claims to territories contained in the charters of neighboring colonies, including Maryland, but reserved "the free navigation and use of the rivers Potowmac and Pokomoke, with the property of the Virginia shores or strands bordering on either of the said rivers, and all improvements which have been or shall be made thereon." Va. Const. art. XXI (1776), *reprinted in* 1 Hening's Stat. 50, 56 (1823), *available at* http://vagenweb.org/hening/vol01-02.htm. Delegates to Maryland's constitutional convention rejected that reservation, however, asserting that "the sole and exclusive jurisdiction over the . . . river Potowmack . . . belongs to this state." Proceedings of the Conventions of the Province of Maryland (Oct. 30, 1776), *reprinted in* 78 Md. Archives 292-93 (1836), *available at* http://msa.maryland.gov/megafile/msa/speccol/sc2900/sc2908/000001/000078/html/am78--292.html.

In March 1785, commissioners appointed by Maryland and Virginia,[1] meeting at George Washington's invitation at Mt. Vernon, negotiated a Compact that was subsequently ratified by the legislatures of both States. *See Virginia v. Maryland*, 540 U.S. at 61; 1785-86 Md. Laws, ch. 1; 1785-86 Va. Acts ch. 27, *reprinted in* 12 Hening's Stat. 50 (1823); Compact of 1785, *reprinted in* Report of the Special Master—Appendices B1, *Virginia v. Maryland*, 540 U.S 56 (2003) (No. 129), *available at*

[1] The commissioners were George Mason and Alexander Henderson, from Virginia, and Samuel Chase, Thomas Stone, and Daniel of St. Thomas Jenifer, from Maryland. *Virginia v. Maryland*, 540 U.S. at 62.

http://www.supremecourt.gov/SpecMastRpt/Orig129SpecMasterApp.pdf.[2] The Compact of 1785 provided, among other things, that Virginia would not impose tolls on vessels traveling to Maryland through the Chesapeake Bay (Article First); that the Potomac River "'shall be considered as a common highway, for the purpose of navigation and commerce to the citizens of Virginia and Maryland' (Article Sixth); that all laws regulating fishing and navigation 'shall be made with the mutual consent and approbation of both states' (Article Eighth); and that jurisdiction over criminal offenses shall be determined based on the citizenship of the offender and the victim (Article Tenth)." *Virginia v. Maryland*, 540 U.S. at 61-62 (quoting Compact of 1785). Article Seventh provided that the

> citizens of each state respectively shall have full property in the shores of Patowmack river adjoining their lands, with all emoluments and advantages thereunto belonging, and the privilege of making and carrying out wharfs and other improvements, so as not to obstruct or injure the navigation of the river, but the right of fishing in the river shall be common to, and equally enjoyed by, the citizens of both states.

Compact of 1785, note 2 above, at B3.

The success of the Mt. Vernon Conference inspired Virginia to call for the convention of states at Annapolis in 1786, which led, in turn, to the call for the constitutional convention in Philadelphia in 1787.[3] But the Compact "left the question of

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[2] The appendices to the Special Master's Report in *Virginia v. Maryland*, *available at* http://www.supremecourt.gov/SpecMastRpt/Orig129SpecMasterApp.pdf, contain the key primary sources at issue on this appeal. This was the source for the copy in the record of the Black-Jenkins Award (E. 125-29) and the Opinion of Arbitrators (E. 130-62).

[3] *See* 1 James Madison, The Debates in the Federal Convention of 1787 7 (Hunt and Scott eds. 1987); Report of the Commissioners to the Governors of Maryland and Virginia, *The Potomac River Compact of 1958*, *reprinted in* Report of the Special

boundary open to long continued disputes." *Marine Ry. & Coal Co. v. United States*, 257 U.S. 47, 64 (1921).

In 1874, Maryland and Virginia submitted the boundary question to binding arbitration on the condition that "neither of the said states, nor the citizens thereof, shall, by the decision of the said arbitrators, be deprived of any of the rights and privileges enumerated and set forth in the compact [of 1785], but that the same shall remain to and be enjoyed by the said states and the citizens thereof forever." 1874 Va. Acts ch. 135; 1874 Md. Laws, ch. 247. The arbitration resulted in the Black-Jenkins Award of 1877. (E. 125-29.) The arbitrators also issued an accompanying opinion to explain their award. *See* Opinion of Arbitrators (E. 130-62).

The Award established the boundary at the low-water mark on the Virginia side of the Potomac River, beginning at the Virginia-West Virginia line, "and thence, following the meanderings of said river, by the low water mark, to Smith's Point, at or near the mouth of the Potomac," and then crossing the Chesapeake Bay eastwardly by specific latitude and longitude coordinates. (E. 125-26.) The accompanying opinion explained that the arbitrators would have set the boundary line at the high-water mark, based on Maryland's 1632 patent from Charles I, but Virginia had acquired prescriptive title to the low-water mark by long and continuous use, a right that Maryland recognized in the Compact of 1785:

Master—Appendices, note 2 above, at E2 ("The work of these men in agreeing to the Compact of 1785 led directly to the call for the Constitutional Convention in Philadelphia and subsequently to the adoption of the Constitution of the United States.").

> The evidence is sufficient to show that Virginia, from the earliest period of her history, used the South bank of the Potomac as if the soil to low water-mark had been her own. She did not give this up by her Constitution of 1776, when she surrendered other claims within the charter limits of Maryland; but on the contrary, she expressly reserved "the property of the Virginia shores or strands bordering on either of said rivers, (Potomac and Pocomoke,) and all improvements which have or will be made thereon." By the compact of 1785, Maryland assented to this, and declared that "the citizens of each State respectively shall have full property on the shores of Potomac and adjoining their lands, with all emoluments and advantages thereunto belonging, and the privilege of making and carrying out wharves and other improvements." . . . Taking all together, we consider it established that Virginia has a proprietory right on the south shore to low water-mark, and, appurtenant thereto, has a privilege to erect any structures connected with the shore which may be necessary to the full enjoyment of her riparian ownership, and which shall not impede the free navigation or other common use of the river as a public highway.

(E. 147-48.)

Article Fourth of the Black-Jenkins Award ensured protection of those riparian rights:

> Virginia is entitled not only to full dominion over the soil to low-water mark on the south shore of the Potomac, but has a right to such use of the river beyond the line of low-water mark as may be necessary to the full enjoyment of her riparian ownership, without impeding the navigation or otherwise interfering with the proper use of it by Maryland, agreeably to the compact of seventeen hundred and eighty-five.

(E. 128-29.)

Other Articles addressed how the boundary line was to be measured. Article First said, with regard to the latitude and longitude coordinates from Smith Point and across the Bay, that the arbitrators had "come as near to a perfect mathematical accuracy as in the nature of things is possible; but in case of any inaccuracy in the described course or length of a line, or in the latitude or longitude of a place, the natural objects called for

must govern." (E. 128.) Article Third provided that the "low-water mark on the Potomac, to which Virginia has a right in the soil, is to be measured . . . from low-water mark at one headland to low-water mark at another, without following indentations, bays, creeks, inlets, or affluent rivers." (E. 128.)

Maryland and Virginia ratified the Black-Jenkins Award in 1878, and Congress gave its consent in 1879. *See* 1878 Md. Laws, ch. 274; 1878 Va. Acts ch. 246; Act of March 3, 1879, ch. 196, 20 Stat. 481.

In 1910, the Supreme Court followed the Black-Jenkins Award in settling the Potomac River boundary line between Maryland and West Virginia. *See Maryland v. West Virginia*, 217 U.S. 577, 580-81 (1910). As a result, Maryland has a "uniform southern boundary along Virginia and West Virginia at low-water mark on the south bank" of the Potomac River. *Id.* at 581.

In 2003, the Supreme Court held, in *Virginia v. Maryland*, that "Virginia, its governmental subdivisions, and its citizens may withdraw water from the Potomac River and construct improvements appurtenant to the Virginia shore of the Potomac River free of regulation by Maryland." 540 U.S. at 79 (Decree ¶ 2). The Court further ruled that "Article Seventh of the Compact of 1785 . . . applies to the entire length of the Potomac River, including its nontidal reach." *Id.* (Decree ¶ 1).

ARGUMENT

The circuit court rightly observed that the Potomac River boundary between Maryland and Virginia has occasioned "centuries of legal, and sometimes actual, fighting between the two states over the rights and privileges each ha[s] in the Potomac." (E. 239.) The circuit court further observed that "the Potomac is a prize well worth fighting over." (E. 239.) Indeed it is. Though the legal positions of Virginia and Maryland with respect to the Potomac River boundary have frequently been adverse in the past, the two States are in agreement on the principles that govern in this appeal. For the reasons set forth below, in the shared view of the Attorneys General of the State of Maryland and the Commonwealth of Virginia, the circuit court correctly concluded that the boundary between the states is the current low-water mark of the Potomac, accounting for gradual changes in the shoreline due to accretion, erosion, and reliction over time.

I. THE LOW-WATER-MARK BOUNDARY IN THE POTOMAC RIVER IS NOT FIXED IN TIME AS OF 1877 BUT IS THE PRESENT LOW-WATER MARK.

A. The Black-Jenkins Award Established a Functional Boundary Line Intended to Preserve Virginia's Right of Access to the Potomac River, Consistent with Article Seventh of the Compact of 1785.

The Black-Jenkins Award of 1877 established the boundary on the Virginia side of the Potomac River, "following the *meanderings* of said river, by the low-water mark, to Smith's Point, at or near the mouth of the Potomac. . . ." (E. 125-26 (emphasis added).) By its plain language, the boundary was written to follow the "meanderings" of the River.

Article Fourth of the Award reinforces that the River itself is the boundary, not the low-water mark as of 1877, because it ensures that Virginia enjoys "not only . . . full dominion over the soil to low-water mark on the south shore of the Potomac, but . . . a right to such use of the river beyond the line of low-water mark as may be necessary to the full enjoyment of her riparian ownership . . . agreeably to the compact of [1785]." (E. 128-29.)

A fixed boundary line would jeopardize Virginia's right under the Black-Jenkins Award to the shores of the river and to exercise riparian rights beyond the shore. That Award gave Virginia "a proprietory right on the south shore to low water-mark, and, appurtenant thereto, has a privilege to erect any structures connected with the shore which may be necessary to the full enjoyment of her riparian ownership. . . ." (E. 148.) Thus, the low-water-mark boundary line has practical and functional significance, because it protects Virginia's continuing proprietary interest in the south shore of the River and the riparian access that such interest entails.

Under the appellant's view of the boundary, however, accretion on the Virginia side would create a strip of land belonging to *Maryland*, which would deprive Virginia of its ownership of the "shore" of the Potomac River. It would also conflict with Virginia's rights of access inasmuch as Virginia's riparian landowners would be physically cut off from the River, as the appellant argues is the case here. There is simply no evidence that the arbitrators intended to leave Virginia's historical rights, exercised "from the earliest point in her history" (E. 147), so impermanent.

The explicit language of the Award comports with the Supreme Court's repeated rulings that the right of riparian access would be improperly thwarted if accreted land could separate shoreline owners from their water access:

> There are a number of interrelated reasons for the . . . doctrine of accretion. First, where lands are bounded by water, it may well be regarded as the expectancy of the riparian owners that they should continue to be so bounded. Second, the quality of being riparian, especially to navigable water, may be the land's most valuable feature and is part and parcel of the ownership of the land itself. Riparianness also encompasses the vested right to future alluvion, which is an "essential attribute of the original property." *County of St. Clair v. Lovingston*, 23 Wall. 46, 68 (1874). By requiring that the upland owner suffer the burden of erosion and by giving him the benefit of accretions, riparianness is maintained. Finally, there is a compensation theory at work. Riparian land is at the mercy of the wanderings of the river. Since a riparian owner is subject to losing land by erosion beyond his control, he should benefit from any addition to his lands by the accretions thereto which are equally beyond his control.

Bonelli Cattle Co. v. Arizona, 414 U.S. 313, 326 (1973) (citations, quotation, and footnote omitted), *overruled on other grounds*, *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 368-72 (1977). The rule dates to Blackstone[4] and has long been followed by courts in both Maryland and Virginia.[5]

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[4] 2 William Blackstone, Commentaries on the Laws of England 262 (1766) (U. Chic. Press 1979) ("[I]f a river, running between two lordships, by degrees gains upon the one, and thereby leaves the other dry; the owner who loses his ground thus imperceptibly has no remedy: but if the course of the river be changed by a sudden and violent flood, or other hasty means, and thereby a man loses his ground, he shall have what the river has left in any other place, as a recompence for this sudden loss.").

[5] *See, e.g.*, *Steelman v. Field*, 128 S.E. 558, 559 (Va. 1925) ("So far as we know, the view so clearly expressed is nowhere denied, and it appears to be universally held that the riparian owner gains the accretion, whether by reliction—the gradual and imperceptible recession of the water—or by alluvion—the gradual and imperceptible accretion from the water."); *White v. Pines Cmty. Improvement Ass'n*, 403 Md. 13, 18 (2008) ("If an intervening party were permitted to gain title to accretions or to land exposed by the

Moreover, contemporaneous authorities at the time of the Black-Jenkins Award consistently held that when a boundary was described as "meandering" along a river or other water body, it meant that the water body itself was the boundary, not the "meander line" where the water mark may have been found at the time of the grant. As the Supreme Court said in 1890, "[i]t has been decided again and again that the *meander line is not a boundary, but that the body of water whose margin is meandered is the true boundary*." *Mitchell v. Smale*, 140 U.S. 406, 414 (1891) (emphasis added) (collecting cases); *see, e.g.*, *Hardin v. Jordan*, 140 U.S. 371, 380 (1891) ("It has frequently been held, both by the Federal and state courts, that such meander lines are intended for the purpose of bounding and abutting the lands granted upon the waters whose margins are thus meandered; and that the waters themselves constitute the real boundary."); *Jefferis v. East Omaha Land Co.*, 134 U.S. 178, 196 (1890) ("[W]here a water line is the boundary . . . that line, no matter how it shifts, remains the boundary."). As the Court said in 1868, a decade before the Black-Jenkins Award, "the water-course, and not the meander-line, as actually run on the land, is the boundary." *R.R. Co. v. Schurmeir*, 74 U.S. (7 Wall.) 272, 287 (1868).

In short, the plain language of the Black-Jenkins Award, its functional significance in protecting Virginia's access to the Potomac River, and contemporaneous legal usage of the term "meandering" all show that the low-water-mark boundary line is the *current* low-water mark, not the place where the low-water mark might have been found in 1877.

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subsidence of water, the riparian landowner would be deprived of his valuable water-access rights." (quoting *Board of Pub. Works v. Lamar Corp.*, 262 Md. 24, 37 (1971))).

B. The Appellant's Claim that the Arbitrators Intended for the Boundary to be Fixed at the Low-Water Mark as of 1877 Lacks a Historical Basis, Is Unworkable, and Would Deprive Virginia and Maryland of Their Compact Rights.

At the outset, it is not entirely clear why the appellant would pick 1877 as the operative date for ascertaining the low-water-mark location. Although that is the date of the arbitrators' Award, Maryland and Virginia did not actually adopt the Award until 1878. *See* 1878 Md. Laws, ch. 274; 1878 Va. Acts ch. 246. In terms of binding the two States, one would think that would be the operative date. Or perhaps 1879, when it was confirmed by Congress, which "transform[ed] the States' agreement into federal law under the Compact Clause." *Cuyler v. Adams*, 449 U.S. 433, 440 (1981); *see* Act of March 3, 1879, ch. 196, 20 Stat. 481. The appellant offers no legal basis for assigning significance to the 1877 date over these others.

The fact of the matter is that there is no historical or legal evidence that the arbitrators, the States, or Congress understood the boundary line to be a static line where the low-water mark was located in 1877, let alone 1878, 1879, or any other year. To the contrary, the historical record undercuts the appellant's argument, for the States' representatives in the arbitration understood that the boundary would have to be drawn in such a way as to protect Virginia's riparian rights under the Compact of 1785. Indeed, "Maryland's representatives before the arbitrators . . . contended that the 'true' boundary line should be drawn *around* 'all wharves and other improvements *now extending* or which *may hereafter be extended* by authority of Virginia from the Virginia shore into the

[Potomac] beyond low water mark.'"[6] The Supreme Court noted in *Virginia v. Maryland* that, "[a]lthough the arbitrators did not accept Maryland's proposal to preserve Virginia's sovereign right to build improvements by including them within Virginia's territory, they accomplished the same result in Article Fourth of the Award." *Id.*

Again, Virginia's rights of access—explicitly preserved in the Award by reference to the "meandering" River, and by Article Fourth's reference to "full dominion over the soil to low-water mark" and "full enjoyment of riparian ownership," consistent with the Compact of 1785—could be lost if accreted land separated Virginia from the River. Maryland too might lose jurisdiction over the *waters* on the southern side of the Potomac River in places where the bank has eroded from the 1877 meander line (wherever that might have been). And because we know of no reliable record showing where erosion and accretion have occurred over the past 137 years, both States would face uncertainty in determining their rights and jurisdiction—uncertainty that the Award was intended to dispel. This is no small matter.

For instance, in homicide cases where a body is found near the southern shoreline, it is relatively easy, using a *present*-day low-water mark, to determine whether the body was found in Virginia or in Maryland. *See Traverso v. Virginia*, 366 S.E.2d 719, 721 (Va. App. 1988) (holding that trial court lacked jurisdiction where the body was found in the Potomac River six to seven feet from the Virginia shoreline). Since "the

[6] *Virginia v. Maryland*, 540 U.S. at 72 n.7 (quoting W. Whyte and I. Jones, Boundary Line Between the States of Maryland and Virginia, Before the Hons. Jeremiah S. Black, William A. Graham, and Charles J. Jenkins, Arbitrators upon the Boundary Line between the States of Virginia and Maryland (June 26, 1874) (emphasis added)).

Commonwealth bears the burden of proving venue," *id.* at 721, a boundary that requires ascertaining the 1877-low-water mark would greatly complicate such prosecutions by making the government reconstruct the 1877 boundary in every case.

Ascertaining the 1877 line would require sifting through myriad plats and ancient records, and decade-upon-decade of extrapolation from data relative to the tides, accretion, erosion, and water flow—data that are largely unavailable. By contrast, establishing the boundary at the current low-water mark enables a surveyor to rely on existing, real data related to flow conditions and actual field observations to establish where the low-water mark is today. Absent some compelling historical or legal requirement, sovereign States, surveyors, and citizens should not have to guess where the low-water-mark boundary might have been in 1877.

C. A Rule Fixing the Boundary Line as of 1877 Could Not Be Reconciled with *Maryland v. West Virginia*.

In 1910, the Supreme Court adjudicated a Potomac River boundary dispute between Maryland and West Virginia and placed the boundary at the low-water mark, just as the arbitrators had done with respect to the lower stretches of the Potomac. *Maryland v. West Virginia*, 217 U.S. at 580-81. While the Court "agree[d]" with the Black-Jenkins arbitrators' analysis of the two states' historical claims, *id*. at 580, the Court did not indicate in any way that it intended to freeze the boundary at the low-water mark as it existed in 1877. Indeed, the choice of that date would have had no legal or historical significance for West Virginia, which was not a party to the Award and which had separated from Virginia in 1867—ten years *before* the Award.

Nor can the appellant's selection of 1877 as the critical date be squared with the Court's statement that its "conclusion gives to Maryland a uniform southern boundary along Virginia and West Virginia at low-water mark on the south bank of the Potomac River . . . ." *Id.* at 581. If the Court had intended a static boundary, the only way that the boundary would be "uniform" would be if the Court had imposed on West Virginia an 1877 boundary without saying so, or if the low-water mark along the upper stretch of the Potomac as of 1910 just happened to be where it was in 1877.

The only logical conclusion is that the Court adopted the low-water mark as a *functional* boundary in order to preserve West Virginia's water-access rights under the Compact of 1785 (to which West Virginia succeeded Virginia as a beneficiary). The Court's decision in *Maryland v. West Virginia* makes clear that it agreed with the arbitrators' award because the evidence showed that Maryland had not "claimed any right to make grants on that side of the river" and that the two States had intended "to maintain riparian rights and privileges to its citizens on their own side of the river." *Id*. at 580-81. Just as the arbitrators had done before, the Court in 1910 intended an ambulatory boundary that moves with the River, "no matter how it shifts," *Jefferis*, 134 U.S. at 196, not a low-water-mark boundary frozen in time as of 1877.

D. The Appellant's Reliance on the Mathews-Nelson Survey Is Misplaced.

In 1927, commissioners appointed by Maryland and Virginia surveyed the location of the boundary line in the tidal portion of the Potomac River—between Jones

Point, in Alexandria, Virginia,[7] and Smith Point, where the River empties into the Chesapeake Bay. *See* Edward B. Mathews and Wilbur A. Nelson, Report on the Marking of the Boundary Line Along the Potomac River in Accordance with the Award of 1877 at iii (1930) (Appx. 4).[8] The Mathews-Nelson Survey of 1927 placed 58 concrete boundary monuments at specific locations identified by latitude and longitude. (Appx. 9, 11-18.) The report stated: "The present work has made no changes in the actual boundary and no decisions with respect to the old controversy involving the rights of interested states in the Potomac River." (Appx. 6.) The survey was accepted by the Virginia and Maryland legislatures. *See* 1928 Va. Acts ch. 477; 1929 Md. Laws, ch. 50.

Contrary to the appellant's suggestion, the Mathews-Nelson Survey provides no authority for the proposition that the boundary in the non-tidal Potomac, at issue here, is fixed where the low-water mark was located as of 1877. For starters, the survey applied only to the *tidal*[9] portion of the River, below Jones Point, in Alexandria. In the tidal

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[7] Jones Point is also the place on the Virginia side of the Potomac River where, in 1791, Andrew Ellicott began surveying the 10-mile square for the District of Columbia. *See* 7 The Papers of George Washington (Presidential Series) 309-10 (Jack D. Warren ed. 1998) (note), *available at* http://founders.archives.gov/documents/Washington/05-07-02-0175.

[8] The parties included a handful of pages from the Mathews-Nelson Report in the record extract. (E. 215-19.) For the Court's convenience, the entire report is included in the appendix to this brief. (Appx. 3-38.)

[9] "Little Falls marks the boundary between the tidal and non-tidal reaches of the River, with more than two-thirds of the River's entire length above Little Falls. Shortly after Little Falls, the River enters the District of Columbia. The River then empties into Chesapeake Bay some 117 miles farther downstream from Little Falls." Report of the Special Master 3, *Virginia v. Maryland*, 540 U.S 56 (2003) (Orig., No. 129), *available at* http://www.supremecourt.gov/SpecMastRpt/Orig129_120602.pdf

Potomac, there are many more "indentations, bays, creeks, inlets, [and] affluent rivers," (E. 128), which required the projection of the boundary across open water. Accordingly, Mathews and Nelson typically placed monuments to locate the headlands, with the line extending between them—crossing the water—consistent with Article Third of the Award. (Appx. 9 (Plate III), 13 (Plate V).)

Nothing in their report suggests that they sought to determine the low-water mark as of 1877. It recites that they "traversed the entire shore from Smith Point to Jones Point." (Appx. 9.) In other words, they examined the shoreline as it was in 1927; they did not attempt to compute or derive its location as of fifty years before, in 1877. Admittedly, the surveyors said that "it will be possible in the future, in case of loss of any of these monuments for any reason, to reestablish the same from them and to determine the exact location of the boundary at salient points." (Appx. 9.)[10] And it is conceivable that a court might someday conclude that the Mathews-Nelson Survey, once ratified by Maryland and Virginia, fixed the low-water-mark boundary on the tidal stretch of the river where it was as of 1927, regardless of later accretions or erosions. But even if that were to happen, such a conclusion would be based on the view that the 1927 Survey and its express ratification by the States superseded the Black-Jenkins Award for the tidal stretch of the river, not on the unsubstantiated premise that the Award froze the boundary along the entire river where the low-water mark was as of 1877.

[10] That statement may be in tension with Article First of the Award, which makes clear that "natural objects called for must govern" over the specific "latitude or longitude of a place." (E. 128.)

In short, the Mathews-Nelson Survey is inapposite, because it did not mark the 1877 line and did not address the non-tidal portion of the River at issue in this case.

II. THE PRINCIPLES FOLLOWED IN *OHIO V. KENTUCKY* DO NOT APPLY TO THE BOUNDARY BETWEEN MARYLAND AND VIRGINIA.

A. The Holding of *Ohio v. Kentucky* Was Based on the Unique Historical Circumstances Surrounding Virginia's Relinquishment of its Western Claims.

The Supreme Court cases that govern the boundary along the Ohio River—*Illinois v. Kentucky*, 500 U.S. 380 (1991); *Ohio v. Kentucky*, 444 U.S. 335 (1980); *Indiana v. Kentucky*, 136 U.S. 479 (1890); and *Handly's Lessee v. Anthony*, 18 U.S. (5 Wheat.) 374 (1820)—do not apply to the Potomac River boundary between Maryland and Virginia. As the most recent of those decisions made clear, the rule that applies to the state boundaries along the Ohio River is based on unique historical circumstances surrounding Virginia's unilateral cession of lands to the United States and the stare decisis effect of the nineteenth-century decisions that established the boundary at the low-water mark on the northern shore as of Kentucky's entry into statehood in 1792:

> We based [the holding of *Ohio v. Kentucky*] on the history of Virginia's 1784 cession to the United States of the lands "northwest of the river Ohio" and Kentucky's succession to Virginia's northwest boundary upon reaching statehood in 1792. We relied on the prior opinion in *Indiana v. Kentucky*, in which Justice Field, for a unanimous Court, reviewed this history and held that Kentucky's boundary with Indiana followed the low-water mark on the northerly shore of the Ohio River "when Kentucky became a State." The same history and precedent that supplied the general rule for determining the boundary separating Kentucky from its neighboring States of Ohio and Indiana on the Ohio River also govern the determination of Kentucky's historical boundary on that river with Illinois.

Illinois, 500 U.S. at 383-84 (citations omitted). As a result of this historical and jurisprudential background, when Kentucky argued in 1980 that the boundary should be the then-current low-water mark (which had moved further north due to dams that raised the water level), the Court rejected the contention, saying "it is far too late in the day to equate the Ohio . . . with any other boundary river that does not have the historical antecedents possessed by the Ohio, antecedents that fix the boundary not as the river itself, but as its northerly bank." *Ohio*, 444 U.S. at 338. "If there could be any doubt about this, it surely was dispelled completely when the Court decided *Indiana v. Kentucky*, 136 U.S. 479 (1890)." *Id*.

The Court made clear in *Ohio v. Kentucky* that the rule it applied was based on these unique "historical factors," and, for this reason, the boundary along the Ohio River is "different" from the "customary situation" that prevails on boundary rivers. 444 U.S. at 337. None of the historical and jurisprudential considerations that determined the boundary along the Ohio River is present here; not one case has ever suggested that the Potomac River boundary is fixed in time as of 1877 or any other date.

This case is controlled by the Black-Jenkins Award and the historical circumstances concerning the Potomac River, and not the context-specific cases governing the Ohio River. Quoting from its earlier Ohio River decision in *Handly's Lessee*, the Supreme Court identified two types of boundary cases:

> When a great river is the boundary between two nations or states, if the original property is in neither, and there be no convention respecting it, each holds to the middle of the stream. But when, as in this case, one State is the original proprietor, and grants the territory on one side only, it retains

> the river within its own domain, and the newly-created State extends to the river only. The river, however, is its boundary.

Ohio, 444 U.S. at 338 (quoting *Handly's Lessee*, 18 U.S. at 379). The first type of boundary case encompasses those disputes where the two States have competing, deeded claims to the boundary river and "the original property is in neither [State]." In those cases, the boundary is at the middle of the river unless the two States have entered into a "convention" that places the line elsewhere. In that first type of case, the "well-recognized and accepted rules of accretion and avulsion attendant upon a wandering river have full application." *Id*. at 337.

The second type of boundary case was addressed in *Ohio v. Kentucky*, where "one State is the original proprietor, and grants the territory on one side only . . . ." *Id.* at 338 (quoting *Handly's Lessee*, 18 U.S. at 379). Virginia historically claimed all lands beyond the Ohio River but yielded to the United States "all right, title, and claim, which the said Commonwealth had to *the territory northwest of the river Ohio*, subject to the conditions annexed to the said act of cession." *Handly's Lessee*, 18 U.S. at 377 (emphasis added). The grant was thus a unilateral grant, not the result of competing proprietary claims; there was nothing to "split down the middle." Virginia "retain[ed] the [Ohio] river within its own domain," *id*. at 379, both for itself and for Kentucky, when, in 1792, it succeeded to Virginia's title.

The Potomac River boundary between Maryland and Virginia falls within the first line of cases identified in *Ohio v. Kentucky* for several reasons. Most importantly, the Potomac River boundary was not determined by reference to a single deed, as in the Ohio

River cases. Rather, both States, from their earliest existence, claimed the Potomac River, or parts thereof, as their own. As noted above, "[c]ontrol of the River has been disputed for nearly 400 years." *Virginia v. Maryland*, 540 U.S. at 60. The States had competing claims based on conflicting royal patents; neither State was "the original proprietor." Inasmuch as Virginia's status as the "original proprietor" is what lies at the heart of *Ohio v. Kentucky*, its holding does not control here.

Although the boundary between Maryland and Virginia does not lie in the middle of the river, as the Court in *Handly's Lessee* suggests is the norm, that is because Maryland and Virginia resolved the boundary by "convention," not by operation of common law. That "convention" is the Black-Jenkins Award of 1877, which set the boundary line at the low-water mark on the Virginia side of the River. The fact that the Potomac River boundary was resolved by "convention," rather than by interpreting the extent of one state's "original property," also distinguishes this case from *Ohio v. Kentucky* and places it in the class of cases where the "well-recognized and accepted rules of accretion and avulsion attendant upon a wandering river have full application." *Ohio*, 444 U.S. at 337.

B. That the Potomac and Ohio Rivers Each Has a Low-Water-Mark Boundary Has No Legal Significance Here.

The appellant assigns less significance to the presence of a "convention" and more significance to the fact that the Potomac, like the Ohio, has a low-water-mark boundary. According to the appellant, the distinguishing feature between the "two distinct lines of cases" the Court identified in *Ohio v. Kentucky* is *where* the boundary lies. The appellant

asserts that if the boundary lies "in the middle of a river (not on one bank)," the boundary moves according to the rules of accretion and avulsion, but if "the boundary is on one bank of the river," the boundary is fixed. (Appellant's Brief at 6-7.)

But nothing about the *location* of a boundary—whether it be at low-water mark, high-water mark, or in the middle of the river—bears on whether that boundary moves with the river or is fixed at a particular point in time. In terms of geology and cartography, a low-water-mark boundary can move with the river just as well as a boundary placed in the middle of the river. As discussed above, the significance of the low-water-mark boundary in *Ohio v. Kentucky* is not the low-water mark itself, but *why* the boundary was placed at the low-water mark.

While the Potomac and the Ohio each has a low-water-mark boundary, that is where the similarity ends. The Supreme Court fixed the Ohio River boundary at the low-water mark in order to give effect to Virginia's original cession of lands. If the Court had placed the boundary at the *high*-water mark, Virginia (and Kentucky) would have had jurisdiction, at low flow, over the strip of land on the opposite shore—that is, "the territory northwest of the river Ohio"—a circumstance that could not be squared with the terms of Virginia's cession. As the Court put it, "Wherever the river is a boundary between States, it is the main, the permanent river, which constitutes that boundary; and the mind will find itself embarrassed with insurmountable difficulty in attempting to draw any other line than the low water mark." *Handly's Lessee*, 18 U.S. at 380-81. The boundary thus was placed at low-water mark to give effect to Virginia's cession of lands *beyond* the river, not to resolve competing claims.

The historical situation on the Potomac is precisely the opposite. As discussed above, *both* States claimed the river, with Maryland claiming to the high-water mark on the Virginia side and Virginia variously claiming to the high-water mark on the Maryland side or the middle of the River. (E. 136.) The Potomac boundary was placed at low-water mark not by one State's deed—as in *Ohio v. Kentucky*—but by prescription, in recognition of Virginia's historical use of the southern shore of the Potomac from time immemorial. (E. 147-48.) The decision to place the boundary at the low-water mark thus does not come with the interpretive rules that require a Court to give effect to the grantor's cession; it is instead governed by the States' own "convention"—the Black-Jenkins Award. And as discussed above, that Award establishes an ambulatory boundary, not one that is fixed in time.

C. *Ohio v. Kentucky* Involved Issues Specific to Kentucky's Entry into the Union, Which Are Not Present Here.

The Court's refusal in *Ohio v. Kentucky* to revisit its earlier decisions relating to the Ohio River was reinforced by the additional circumstance of Kentucky's admission to the Union. As the Supreme Court made clear in *Indiana v. Kentucky*, the boundary question hinged not on what Kentucky's current claim might be, but what its rights were upon admission to the Union:

> But the question here is not, as if the point were raised today for the first time, to what State the tract, from its situation, would now be assigned, but whether it was at the time of cession of the territory to the United States, or more properly when Kentucky became a State, separated from the mainland of Indiana by the waters of the Ohio River.

136 U.S. at 508. Kentucky's admission to statehood fixed the extent of its jurisdiction; "[h]er dominion and jurisdiction continue as they existed at the time she was admitted into the Union, unaffected by the action of the forces of nature upon the course of the river." *Id*.

The significance of admission to the Union is reflected in other aspects of state sovereignty and jurisdiction. For example, under the equal-footing doctrine, when a territory is admitted to the Union, it succeeds to the federal government's ownership of the lands beneath the navigable waters within the borders of the new state. *See PPL Montana, LLC v. Montana*, 132 S.Ct. 1215, 1227-28 (2012); *see also Lessee of Pollard v. Hagan*, 44 U.S. 212, 224 (1845). "For state title under the equal-footing doctrine, navigability is determined at the time of statehood." *Montana PPL*, 132 S.Ct. at 1228; *see also Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co*., 429 U.S. 363, 370 (1977) ("The title to the land underlying the Colorado River at the time Arizona was admitted to the Union vested in the State as of that date"). Once a territory is admitted to the Union as a new State, "the State's title to the riverbed vests absolutely as of the time of its admission. . . ." *Corvallis Sand & Gravel*, 429 U.S. at 370-71. In the same way, the Court in *Ohio v. Kentucky* identified the boundary line as it existed upon Kentucky's admission to statehood in 1792, which vested absolutely its sovereign jurisdiction over the lands encompassed within its grant.

Virginia and Maryland, by contrast, were both mature states by the time their boundary was settled. The location of the boundary is thus determined by the Black-Jenkins Award, not by the circumstances surrounding either State's entry into the Union.

And just as Supreme Court precedents indicate that the Potomac River boundary is not controlled by the unique circumstances of the Ohio River cases, the Black-Jenkins Award confirms that the boundary between Maryland and Virginia follows the low-water mark on the Virginia side as it evolves over time. Accordingly, the principles applied in *Ohio v. Kentucky* do not apply here.

III. FEDERAL COMMON LAW GOVERNS ISSUES OF ACCRETION ALONG THE POTOMAC RIVER BOUNDARY LINE.

The appellant argues that, even if the Potomac River boundary is the present-day low-water mark, the land on the Virginia shore at the location in question resulted from "artificial or 'man-made' accretion" to the upland. (Appellant's Brief at 12.) Citing California cases, the appellant argues that artificial or man-made accretion operates like an avulsion and does not change the property or boundary line, meaning that the ostensibly accreted land on the Virginia side is actually in Maryland. (*Id.*)

Virginia and Maryland take no position on the factual merit of the appellant's accretion claim or on whether the appellant owns property on the Virginia side of the River. Nor do we take a position on whether the appellant's allegations make the United States a necessary party, given that the claim to land titled in the United States would implicate the federal government's interests. We submit, however, that federal common law, not state law, governs the question, and that federal common law does not distinguish between natural and artificial accretions.

"Federal common law governs interstate bodies of water, ensuring that . . . neither State harms the other's interest in the river." *Virginia v. Maryland*, 540 U.S. at 74 n.9.

Thus, Virginia's river-access rights in the Potomac River are "subject to the constraints of federal common law and the Award." *Id.* at 75; *see* 1-6 Waters and Water Rights § 6.03 (West 2014) ("Federal common law also necessarily applies when the dispute is between two states over changes in a river that marks the boundaries between them, rather than between private landowners over proprietary rights.").

Unlike California law, federal common law does not distinguish between natural and artificial causes of accretion. *See California ex rel. State Lands Comm'n v. United States*, 457 U.S. 273, 281-85 (1982). Under the "federal rule . . . accretions, regardless of cause, accrue to the upland owner. . . ." *Id.* at 285. Finding that federal law applied, the Supreme Court in *State Lands Commission* rejected the contrary California rule, which *did* distinguish "between accretive changes to a boundary caused by natural forces and boundary changes caused by the construction of artificial objects." *Id.* at 277.[11] Should this Court reach the question of accretion, therefore, it should apply federal common law, not the California rule on which the appellant relies.

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[11] As state law goes, California is in a distinct minority. *See* Annotation, R*iparian Owner's Right to New Land Created by Reliction or by Accretion Influenced by Artificial Condition Not Produced by Such Owner*, 63 A.L.R.3d 249, § 2a (1978 & Supp. 2010) ("[E]xcept for the courts of California, the overwhelming number of courts . . . have not been deterred from awarding accreted or relicted lands to riparian or upland owners by the fact that some act of man served in whole or in part to cause the otherwise natural processes of accretion or reliction to function."); *id.* § 5a ("[T]he California cases are usually viewed as constituting a body of opinion on the instant subject which stands apart from that generally prevailing."); *Rayne v. Coulbourne*, 65 Md. App. 351, 364 (1985) ("In the majority of jurisdictions that have been faced with this issue, it has generally been held that it is immaterial whether the deposits causing the new land derived from natural causes or had an artificial impetus so long as the deposits were gradual.").

CONCLUSION

In response to the Court's inquiry:

1. The boundary between Maryland and Virginia in the non-tidal Potomac, at issue in this case, is the present-day low-water mark on the Virginia side of the River, not the low-water mark as of 1877;

2. The principles applied in *Ohio v. Kentucky*, 444 U.S. 335 (1980), are limited to the unique history of the Ohio River and do not apply to the Potomac River boundary between Maryland and Virginia; and

3. If the Court reaches the issue, the question of accretion along the Potomac River boundary is governed by federal common law, which does not distinguish between natural and artificial accretion.

Respectfully submitted,

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May 8, 2014

Rule 8-504(a)(9) certification: This brief was printed with proportionally spaced type—Times New Roman, 13-point.

CERTIFICATE OF SERVICE

I certify that, on May 8, 2014, this brief was served by mail on each of the following:

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APPENDIX

1. Order, *Potomac Shores, Inc. v. River Riders, Inc.*, et al., Sept. Term 2013, No. 40 (Feb. 27, 2014) ..... Appx. 1

2. Edward B. Mathews and Wilbur A. Nelson, Report on the Marking of the Boundary Line Along the Potomac River in Accordance with the Award of 1877 (1930) ..... Appx. 3

POTOMAC SHORES, INC. Appellant, v. RIVER RIDERS, INC. ET AL., Appellees.	* * * * * * * *	IN THE COURT OF SPECIAL APPEALS OF MARYLAND September Term, 2013 No. 40 (CC#21C12044157)

* * * * * * * * * * * * *

ORDER

After oral argument, and it appearing to the Court that (1) an issue raised in this appeal, *viz.*, the manner by which the boundary between the State of Maryland and the Commonwealth of Virginia should be determined for the area subject to this litigation, may be of public importance to both the State and the Commonwealth, and (2) it is appropriate for the Court to request amicus curiae briefs from the Attorneys General of the State and the Commonwealth pursuant to Md. Rule 8-511, it is this 27th day of February, 2014, by the Court of Special Appeals, on its own motion,

ORDERED that the Clerk of this Court is directed to mail a copy of this order, together with two copies of the briefs and record extracts filed herein, to the Attorney General of Maryland and the Attorney General of Virginia and this order shall serve as an invitation to each official to file an amicus curiae brief in this proceeding addressing:

a. Whether the boundary between the State of Maryland and the Commonwealth of Virginia along the Potomac River established in the Black-Jenkins Award of 1877 as:

> Beginning at a point on the Potomac River where the line between Virginia and West Virginia strikes the said river at low-water mark, and thence following the meanderings of said river by the low water mark to Smith's Point, at or near the mouth of the Potomac . . . .

and established, as to parts of the river, by the Mathews-Nelson Survey of 1928, should be construed as establishing a fixed and immutable boundary according to conditions as they existed in 1877 or as a description of the location of the boundary which time and natural causes might change in the future; and

b. Whether the principles enunciated in *Ohio v. Kentucky*, 444 U.S. 335 (1980) are applicable to the boundary between Maryland and Virginia in light of the Black-Jenkins Award, the Mathews-Nelson Survey and other agreements between Maryland and Virginia as to the Potomac River; and

c. Any other issue that either Attorney General may wish to address in light of the parties' briefs and the matters addressed in this order; and it is further

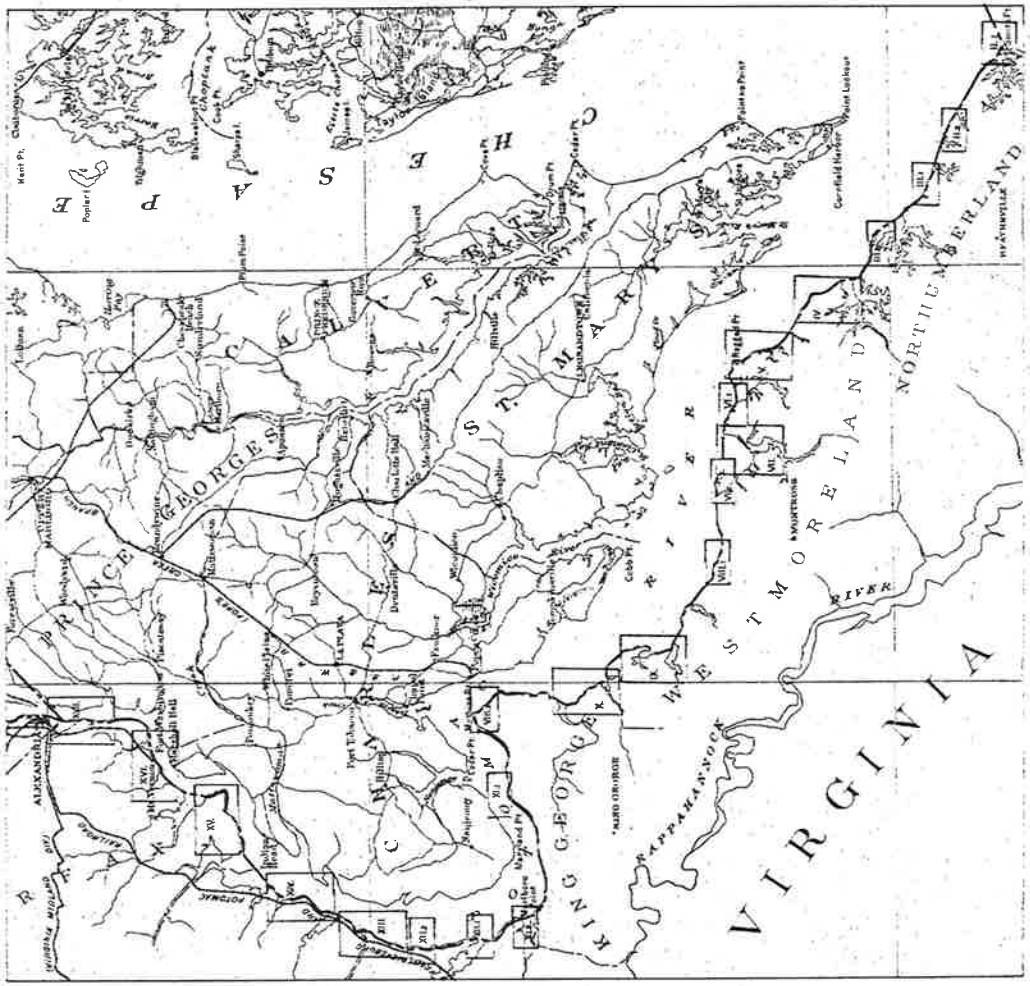
ORDERED that any brief submitted pursuant to this order shall be filed within 40 days of the date of this Order; and it is further

ORDERED that the above-captioned appeal case shall be stayed until: (1) briefs from the Attorneys General are filed; (2) either or both of the Attorneys General indicates in writing to the clerk of this court that he declines to file a brief; or (3) 40 days from the date of this order, whichever first occurs.

FOR A PANEL OF THE COURT

(CHIEF JUDGE'S SIGNATURE APPEARS ON ORIGINAL ORDER)

PETER B. KRAUSER, CHIEF JUDGE



GENERAL INDEX MAP SHOWING POSITION OF INDIVIDUAL PLATES ALONG THE BOUNDARY LINE

PLATE I

VIRGINIA-MARYLAND BOUNDARY LINE

ANNAPOLIS, MARYLAND

REPORT ON THE MARKING OF THE BOUNDARY LINE ALONG THE POTOMAC RIVER IN ACCORDANCE WITH THE AWARD OF 1877

BY

EDWARD B. MATHEWS
Commissioner for Maryland

AND

WILBUR A. NELSON
Commissioner for Virginia

BALTIMORE
1930

Composed and Printed at the
WAVERLY PRESS, INC.
Baltimore, Md., U. S. A.

To their Excellencies, Hon. Albert C. Ritchie, Governor of Maryland and Hon. John Gardner Pollard, Governor of Virginia,

Sirs:

According to instructions given to us in November 1927, the undersigned determined the interpretation of the Award of 1877, accepted by the States of Virginia and Maryland in so far as this Award related to the boundary between the states on the Potomac River from Smith Point to Jones Point. Their report with accompanying explanatory maps and suggestions was published and Virginia (Acts of Assembly 1928, Chapter 477) and Maryland (Acts of Assembly 1929, Chapter 50) approved this interpretation and authorized that a line should be defined on the ground by monuments or reference points. Under this authorization the undersigned have secured the co-operation of the United States Coast and Geodetic Survey and have marked the line by suitable monuments whose location may be readily determined. We submit herewith a final report defining these points and outline the work which has been done in accordance with our instructions.

Very respectfully,

Edward B. Mathews,
Commissioner for Maryland
Wilbur A. Nelson,
Commissioner for Virginia

June 15th, 1930

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REPORT ON THE MARKING OF THE BOUNDARY LINE ALONG THE POTOMAC RIVER IN ACCORDANCE WITH THE AWARD OF 1877

BY

EDWARD B. MATHEWS, *Commissioner for Maryland*

AND

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The Award of the Arbitrators of 1877 was the culmination of interstate dicussion and controversy over a long term of years. When this Award was made the accompanying explanatory map showed clearly the location of the boundary for only 17.1 miles, extending from Smith Point upstream to the mouth of Judith Creek. For 50 years the undefined portion of the line was accepted without question as following the low-water mark on the south bank of the Potomac River. When this question did arise it became necessary to review the whole problem and to select the best interpretation in accordance with the Award of 1877 and the needs of the citizens affected. The present work has made no changes in the actual boundary and no decisions with respect to the old controversy involving the rights of interested states in the Potomac River. It may, however, be interesting to review briefly the problem which is discussed in greater detail elsewhere.*

HISTORICAL REVIEW OF THE BOUNDARY QUESTION

The original charter of rights of Virginia and Maryland left on the boundary question the residual facts that the line dividing the states

* Report on the Location of the Boundary Line along the Potomac River in Accordance with the Award of 1877. Md. Geol. Survey, vol. 12, Appendix, 1928, pp. 1–48.

Report on the Resurvey of the Maryland-Pennsylvania Boundary; Part of the Mason and Dixon Line. Md. Geol. Survey, vol. 7, 1908, 412 pp.

followed the right bank of the Potomac River. Legal controversies on the question have arisen many times but in practically every instance the final decision was the same. When the colonies became individual states the possibilities of trouble lurked in the facts that the inhabitants of Maryland could not reach the open sea without traversing that portion of Chesapeake Bay in Virginia and at the same time Virginians living along the Potomac could not enjoy the privileges of their waterway without entering the territory of Maryland. To overcome this difficulty the Compact of 1785 was drawn up, after years of discussion, at Mount Vernon under the guidance of George Washington and subsequently was ratified by both Maryland and Virginia.

The boundary disputes between the states for a century subsequent to this time were not concerned with that portion of the boundary along the Potomac River as most of the discussions were on the dividing line on the Eastern Shore and the Arbitration of 1877 was principally devoted to these problems. The Arbitrators of 1877 defined a portion of the boundary between Virginia and Maryland as

> "Beginning at a point on the Potomac River where the line between Virginia and West Virginia strikes the said river at low-water mark, and thence following the meanderings of said river by the low-water mark to Smiths Point, at or near the mouth of the Potomac, in latitude 38° 53′ 46″ . . . ."

In the verbal award certain modifications of the general terms were made by the insertion of the clause

> "The low-water mark on the Potomac, to which Virginia has a right in the soil, is to be measured by the same rule, that is to say, from low-water mark at one headland to low-water mark at another, without following indentations, bays, creeks, inlets, or affluent rivers."

Furthermore, the arbitrators expressed the opinion that certain islands were "not *in*, but *upon* the river" and were situated on the Virginia side at the low-water mark. These modifications of the general principle occasioned confusion and the problem of Hog Island was referred in 1889 to a special arbitrator, Henry L. Whiting, representing the United States Coast and Geodetic Survey. (See Appendix No. 11 to Rept. of U. S. Coast and Geodetic Survey for 1890, pp. 621–623).

The question of applying these exceptions to specific points along the

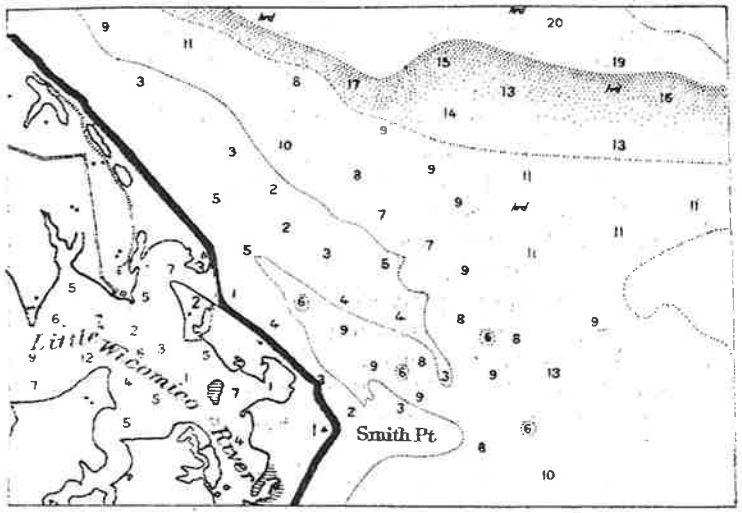


FIG. 1. PORTION OF LINE BETWEEN SMITH POINT AND WICOMICO RIVER SHOWING LOCATION OF MONUMENTS 1-3

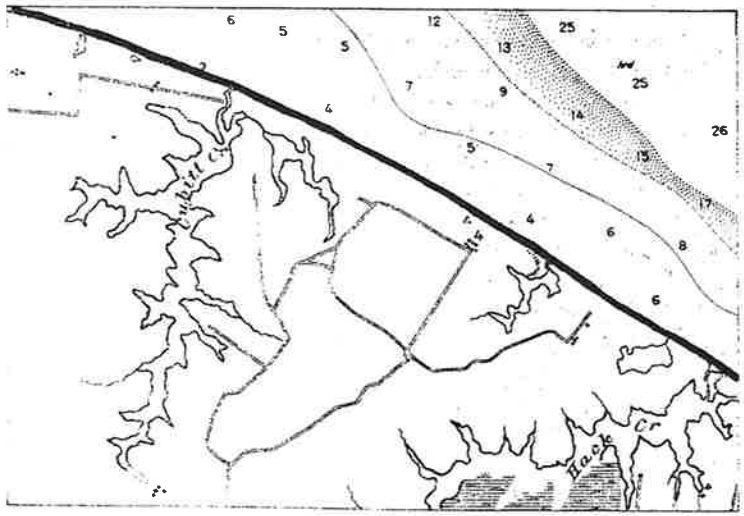


FIG. 2. PORTION OF LINE BETWEEN HACK CREEK AND CUBITT CREEK SHOWING LOCATION OF MONUMENT 4

boundary and representing the conclusions on a map was referred to the State Geologists of Virginia and Maryland in 1927. Their interpretation of the Award of 1877, as it applied to the boundary along the Potomac River from Smith Point to Jones Point on the southeastern boundary of the District of Columbia was laid down on the map of the United States Coast and Geodetic Survey and presented to the assemblies of Maryland and Virginia for approval as outlined in the "Report on the Location of the Boundary Line along the Potomac River in accordance with the Award of 1877". This report with its maps was issued separately and also incorporated as an appendix to Volume XII of the reports of the Maryland Geological Survey. The recommendations were approved by Virginia (Acts of Assembly 1928, Chapter 477) and by Maryland (Acts of Assembly 1929, Chapter 50) and the Commissioners were authorized to define the line on the ground by monuments or reference points.

Work of the Commissioners

Edward B. Mathews was appointed Commissioner for Maryland and Wilbur A. Nelson, Commissioner for Virginia in accordance with the Acts accepting the line and authorizing the commissioners. The latter upon their appointment conferred with the United States Coast and Geodetic Survey, requesting that the latter bureau appoint an engineer to supervise the actual marking of the line and to determine the location of the reference points in order that the matter might be redetermined or relocated at any time in the future by reference to the general triangulation system of the United States Coast and Geodetic Survey. The meeting of the representatives of the two states with Major William Bowie of the United States Coast and Geodetic Survey was held in Washington June 8, 1929, when it was agreed that the Federal Bureau would supply an engineer to assist in the selection and location of suitable points along the boundary line at which monuments would be erected and located under the supervision of the engineer from the Federal board. Lieutenant Ector B. Latham was designated as engineer and during the first week of July Mr. Nelson, Commissioner for

Virginia, and Professor Edward W. Berry, Assistant State Geologist of Maryland, acting for the Commissioner for Maryland, with Lieutenant Latham traversed the entire shore from Smith Point to Jones Point, selecting sites for monuments and marking the same with temporary stakes. It was agreed at this time that the concrete monuments with suitable metallic cap should be made by the Virginia Highway Department and placed at points specified, under the direction of Mr. Joseph G. Heflin of Colonial Beach, Virginia. From the middle of July until early in October the engineer was engaged in supervising the erection of suitable concrete monuments and making the necessary field observations for determining geographic position. Fifty-eight monuments were erected and their location determined along the line and the work was completed for the approval of the Commissioners.

The Commissioners met at Colonial Beach and examined the monuments along the line during the last of November and the first of December when they approved the work of the engineer. At this time it was decided that four range beacons should be erected, two on Hollins Marsh marking the line across Nomini Bay and two on Kingkopsico Point marking the line across the mouth of Lower Machodoc River.

With the setting up of these beacons in January 1930, the field work of the Commissioners was completed.

The engineer completed the determination of the location of the reference points along the line and submitted descriptions of the same to the Commissioners as given in the following pages. From these statements and determinations the boundary line is defined and it will be possible in the future, in case of loss of any of these monuments for any reason, to reestablish the same from them and to determine the exact location of the boundary at salient points. For most of the distance along the shore this boundary line will be a greater or less distance from the actual contact between land and water, due to the fact that in passing from low-water mark at one point to low-water mark at another point the line leaves the actual shore and is indicated by the distances described on the various monuments.

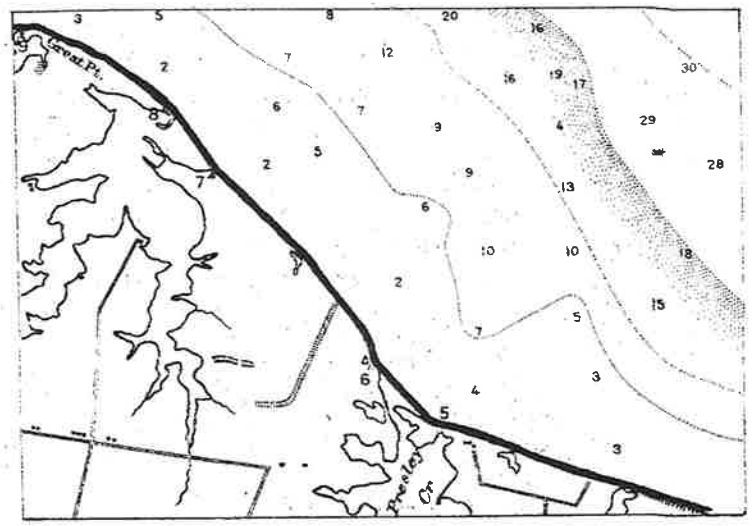


FIG. 1. PORTION OF LINE BETWEEN PRESLEY CREEK AND GREAT POINT SHOWING LOCATION OF MONUMENTS 5-8

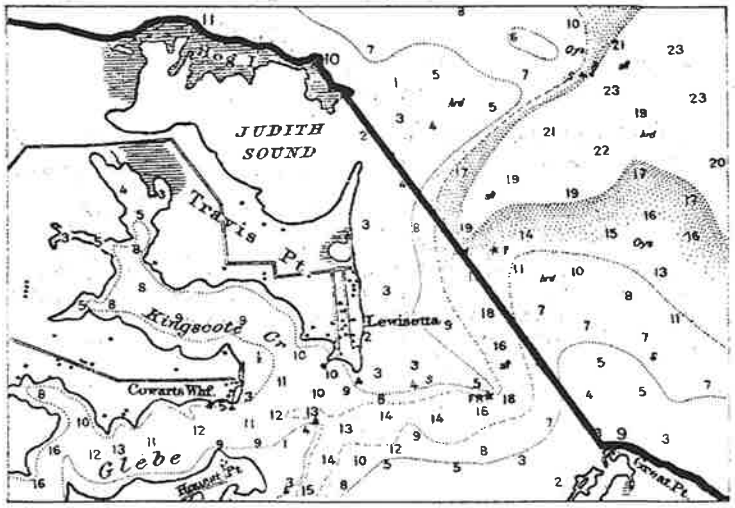
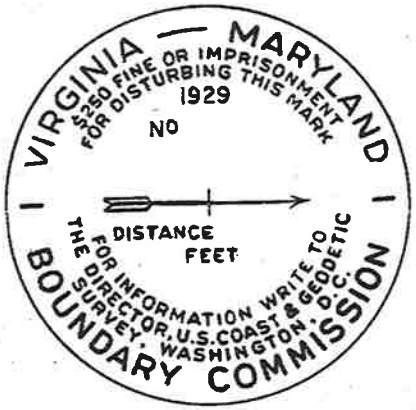


FIG. 2. PORTION OF LINE NEAR ENTRANCE TO COAN RIVER SHOWING LOCATION OF MONUMENTS 9-11

Standard Mark of the Boundary Commission

The mark of the Virginia-Maryland Boundary Commission consists of a die-cast concrete pyramid, with hooks for bonding with base, in the top of which is set a bronze cap, lettered as shown in the accompanying illustration. The number of the monument, together with the azimuth and distance to the boundary are stamped on each monument. These markers were erected for the Commission by the Virginia Highway Department.



Definition of the Boundary Along the Potomac River Between Maryland and Virginia

In 1877 the Arbitrators defined the boundary line between Virginia and Maryand in the following terms:

> "Beginning at a point on the Potomac River where the line between Virginia and West Virginia strikes the said river at low-water mark, and thence following the meanderings of said river by the low-water mark to Smiths Point, at or near the mouth of the Potomac, in latitude 38° 53′ 46″ . . . ." "the low-water mark on the Potomac . . . . is to be measured . . . . from low-water mark at one headland to low-water mark at another, without following indentations, bays, creeks, inlets, or affluent rivers."

Subsequently this verbal Award was interpreted by Messrs. Edward B. Mathews and Wilbur A. Nelson and said interpretation was accepted by the General Assemblies of Maryland and Virginia and Messrs. Mathews and Nelson were appointed Commissioners to mark the line in accordance wih their interpretation. The line as now determined by the States may be defined in the following terms.

(All latitudes are north, all longitudes are west, all azimuths are in degrees S, from south around by west). Latitudes and Longitudes are referred to the North American Datum.

Definition of the Boundary Line along the Potomac River

Smith Point to Great Point, Coan River

No. 1 *Beginning* at a point on Smith Point, lat. 37° 53′ 11.06″, lon. 76° 44′ 14.66″ referenced by Monument No. 1, which is 160 feet distant in azimuth 76°. (Pl. II, Fig. 1.)

No. 2 *Thence* along the low-water mark to a point, lat. 37° 53′ 19.20″ lon. 76° 14′ 19.22″, referenced by Monument No. 2, which is 144 feet distant in azimuth 31°. (Pl. II, Fig. 1.)

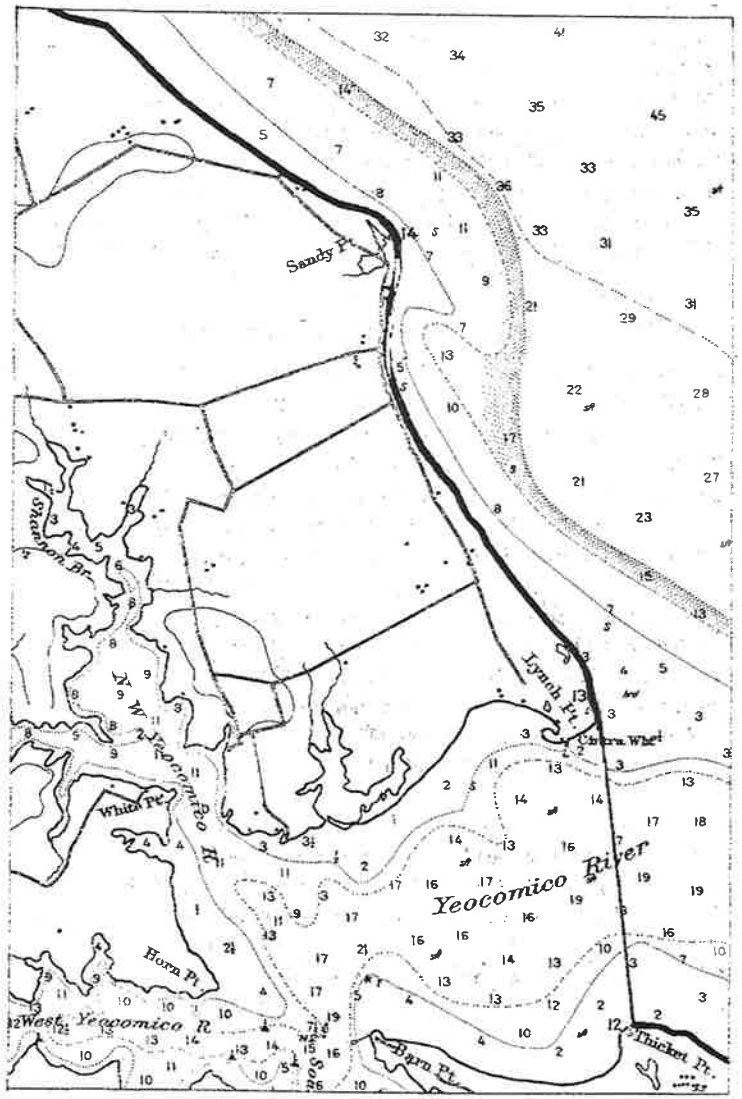
No. 3 *Thence* by a straight line, 871.0 feet, azimuth 125° 34′ 02″, across the mouth of the Little Wicomico River to a point, lat. 37° 53′ 24.05″, lon. 76° 14′ 28.05″, referenced by Monument No. 3 which is 100 feet distant in azimuth 50°. (Pl. II, Fig. 1.)

No. 4 *Thence* along the low-water mark through a point, lat. 37° 56′ 43.46″, lon. 76° 20′ 20.79″, referenced by Monument No. 4 which is 86 feet distant, in azimuth 29° (Pl. II, Fig. 2) and continuing along the low-water mark, crossing such small estuaries as may be encountered, on a straight line from headland to headland to a point, lat. 37° 57′ 59.27″, lon.

No. 5 76° 24′ 47.90″, referenced by Monument No. 5 which is 600 feet distant in azimuth 355°. (Pl. III, Fig. 1.)

No. 6 *Thence* in a straight line 2613.6 feet in azimuth 134° 20′ 50″, across the entrance to Presley Creek to a point, lat. 37° 58′ 15.98″, lon. 76° 25′ 14.58″ referenced by Monument No. 6, which is 300 feet distant in azimuth 63°. (Pl. III, Fig. 1.)

Appx. 11



PORTION OF LINE BETWEEN THICKET POINT AND SANDY POINT, NEAR MOUTH OF YEOCOMICO RIVER, SHOWING LOCATION OF MONUMENTS 12-14

Thence along the low-water mark to a point, lat. 37° 58′
No. 7 55.15″, lon. 26′ 03.42″, referenced by Monument No. 7
which is 226 feet distant in azimuth 16°. (Pl. III, Fig. 1.)

Thence by a straight line 1685.9 feet in azimuth 150° 11′
00″ across the entrance to Cod Creek, to a point lat. 37° 59′
No. 8 09.61″, lon. 76° 26′ 13.89″, referenced by Monument No. 8,
which is 150 feet distant in azimuth 63°. (Pl. III, Fig. 1.)

Thence along the low-water mark to a point on Great
Point, lat. 37° 59′ 22.43″, lon. 76° 26′ 32.21″, referenced by
No. 9 Monument No. 9, which is 195 feet distant in azimuth 23°.
(Pl. III, Fig. 2.)

GREAT POINT, COAN RIVER, TO RAGGED POINT

Beginning at a point on Great Point, lat. 37° 59′ 22.43″,
No. 9 lon. 76° 26′ 32.21″, referenced by Monument No. 9, which is
195 feet distant in azimuth 23°. (Pl. III, Fig. 2.)

Thence by a straight line, 10105.7 feet in azimuth 142° 42′
51″, across the mouth of Coan River to a point on Hog
Island, lat. 38° 00′ 41.96″, lon. 76° 26′ 48.75″, referenced by
No. 10 Monument No. 10, which is 103 feet distant in azimuth 66°.
(Pl. III, Fig. 2.)

Thence along the low-water mark through a point 38° 00′
No. 11 59.18″, lon. 76° 28′ 26.55″, referenced by Monument No. 11
which is 170 feet distant in azimuth 350° (Pl. III, Fig. 2)
and continuing along the low-water mark to a point on
Thicket Point, lat. 38° 00′ 37.15″, lon. 76° 31′ 01.51″,
No. 12 referenced by Monument No. 12 which is 100 feet distant,
in azimuth 26°. (Pl. IV.)

Thence by a straight line 6494.8 feet in azimuth 181°
39′ 11″ across the mouth of the Yeocomico River to a point
No. 13–S lat. 38° 02′ 41.33″, lon. 76° 30′ 59.17″ referenced by Monu-
ment No. 13 south mark, which is 106 feet distant in azimuth
96°. (Pl. IV.)

Thence along the low-water mark through a point lat. 38°

No. 13-N 02′ 41.46″, lon. 76° 30′ 59.96″, referenced by Monument No. 13, north mark, which is 172 feet distant in azimuth 14° and continuing along the low-water mark through a point on Sandy Point, lat. 38° 04′ 26.36″, lon. 76° 32′ 06.88″, ref-
No. 14 erenced by Monument No. 14, which is 72 feet distant in azimuth 96° (Pl. IV) and continuing along the low-water mark to a point lat. 38° 06′ 21.01″, lon. 76° 35′ 41.01″,
No. 15 referenced by Monument No. 15 which is 49 feet distant in azimuth 26°. (Pl. V.)

Thence by a straight line 3400.4 feet in azimuth 148° 57′ 23″ across the entrance to Jacksons and Garners creeks to a
No. 16 point lat. 38° 06′ 49.81″, lon. 76° 36′ 02.98″, referenced by Monument No. 16 which is 80 feet distant in azimuth 94°. (Pl. V.)

Thence along the low-water mark to a point lat. 38° 07′
No. 17 51.94″, lon. 76° 36′ 15.40″, referenced by Monument No. 17 which is 286 feet distant in azimuth 70°. (Pl. V.)

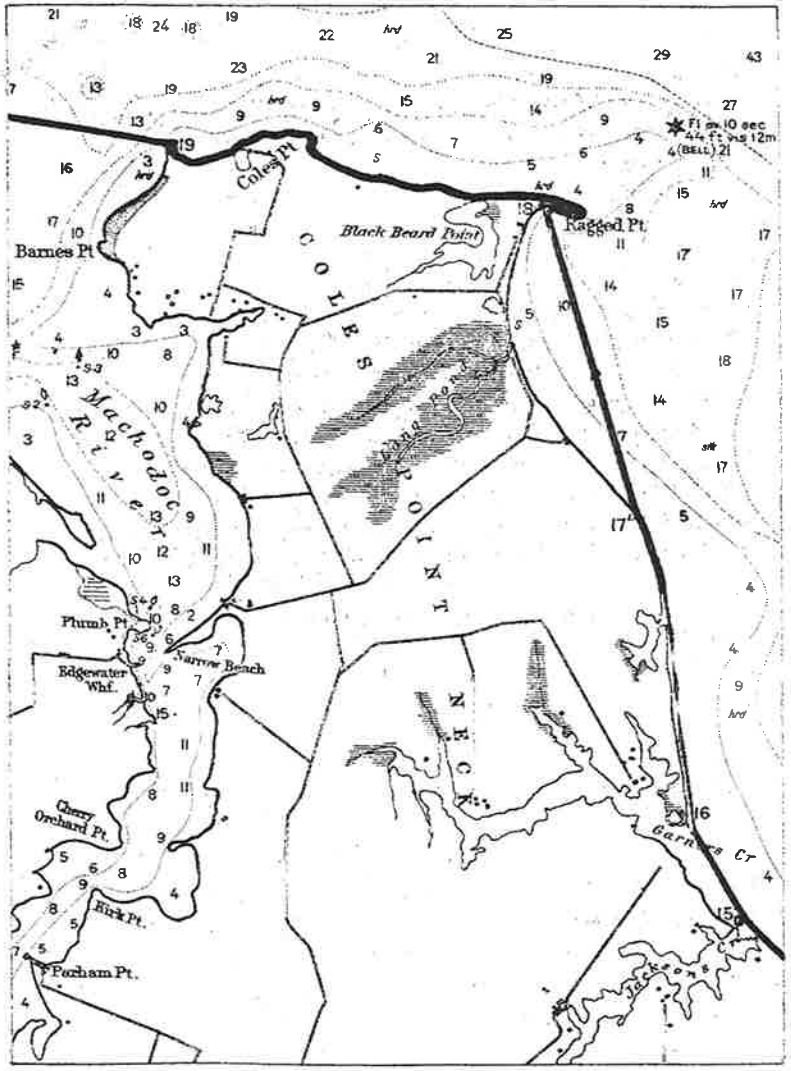
Thence by a straight line 6782.0 feet in azimuth 163° 54′ 58″ to a point on Ragged Point, lat. 38° 08′ 56.36″, lon. 76°
No. 18-E 36′ 38.92″, referenced by Monument No. 18, east mark, which is 493 feet distant in azimuth 100°. (Pl. V.)

RAGGED POINT TO CHURCH POINT

Beginning at a point on Ragged Point, lat. 38° 08′ 56.36″,
No. 18-E lon. 76° 36′ 38.92″, referenced by Monument No. 18, east mark, which is 493 feet distant in azimuth 100°. (Pl. V.)

Thence along the low-water mark, around the end of Ragged Point through a point lat. 38° 08′ 57.80″, lon. 76° 36′
No. 18-W 44.89″, referenced by Monument No. 18 west mark, which is 60 feet distant in azimuth 10°, (Pl. V) continuing along the low-water mark to a point on Stony Bar, lat. 38° 09′
No. 19 10.91″, lon. 76° 38′ 18.53″, referenced by Monument No. 19, which is 700 feet distant in azimuth 357°. (Pl. V.)

Thence by a straight line, 14636.7 feet in azimuth 100°



PORTION OF LINE IN THE VICINITY OF RAGGED POINT SHOWING LOCATION OF MONUMENTS 15-19

04′ 54″ across the mouth of Lower Machodoc River to a point, lat. 38° 09′ 36.20″, lon. 76° 41′ 18.95″, referenced by
No. 20 Monument No. 20, which is 149 feet distant in azimuth 43°. (Pl. VI, Fig. 1, Pl. VII.)

Thence along the low-water mark to a point on Kingcopsico Point, lat. 38° 09′ 41.26″, lon. 76° 24′ 05.45″, referenced by
No. 21 Monument No. 21, east mark, which is 660 feet distant in azimuth 10°, and continuing along the low-water mark to a point lat. 38° 09′ 35.91″, lon. 76° 42′ 09.49″, referenced by
No. 21 Monument No. 21, west mark, which is 234.10 feet distant in azimuth 298° 20′. (Pl. VI, Fig. 1, Pl. VII.)

Thence by a straight line 14371.0 feet, in azimuth 96° 58′ 53″, across the mouth of Nomini Bay to a point lat. 38°
No. 22 09′ 53.14″, lon. 76° 45′ 08.09″, referenced by Monument No. 22, which is 49 feet distant, in azimuth 39°. (Pl. VI, Fig. 2.)

Thence along the low-water line to a point, lat. 38° 10′
No. 23 04.46″, lon. 76° 45′ 56.18″, referenced by Monument No. 23, which is 80 feet distant in azimuth 346°. (Pl. VI, Fig. 2.)

Thence in a straight line 4535.9 feet in azimuth 92° 44′ 08″ to a point lat. 38° 10′ 06.60″, lon. 76° 46′ 52.74″, referenced
No. 24 by Monument No. 24, which is 100 feet distant in azimuth 352°. (Pl. VI, Fig. 2.)

Thence along the low-water line, through a point lat. 38°
No. 25 10′ 13.30″, lon. 75° 51′ 31.42″ referenced by Monument No. 25, which is 74 feet distant in azimuth 48° (Pl. VIII, Fig. 1), continuing along the low-water line to a point on Church Point, lat. 38° 12′ 30.76″, lon. 76° 56′ 57.79″, referenced by
No. 26 Monument No. 26, which is 85 feet distant in azimuth 348°. (Pl. IX.)

CHURCH POINT TO AQUIA CREEK

Beginning at a point on Church Point, lat. 38° 12′ 30.76″,
No. 26 lon. 76° 56′ 57.79″ referenced by Monument No. 26, which is 85 feet distant in azimuth 348°. (Pl. IX.)

Thence in a straight line, 154° 27′ 12″, 8789.3 feet across the entrance to Mattox Creek to a point on Gum Bar Point,
No. 27 lat. 38° 13′ 49.15″, lon. 76° 57′ 45.29″, referenced by Monument No. 27 which is 100 feet distant, in azimuth 78°. (Pl. IX.)

Thence along the low-water mark to a point lat. 38° 16′
No. 28 27.00″, lon. 76° 59′ 25.26″, referenced by Monument No. 28, which is 60 feet distant in azimuth 347°. (Pl. X.)

Thence by a straight line to a point lat. 38° 16′ 48.73″,
No. 29 lon. 77° 00′ 05.73″, referenced by Monument No. 29 which is 30 feet distant in azimuth 67°. (Pl. X.)

Thence along the low-water line to a point on Beabors Point, lat. 38° 18′ 40.86″, lon. 77° 01′ 51.68″, referenced by
No. 30 Monument No. 30, which is 145 feet distant in azimuth 44°. (Pl. X.)

Thence in a straight line, 210° 55′ 10″, 8844.6 feet to a point lat. 38° 19′ 56.89″, lon. 77° 00′ 54.65″ referenced by
No. 31 Monument No. 31, which is 150 feet distant in azimuth 102°. (Pl. X.)

Thence along the low-water line through a point lat. 38° 22′
No. 32 27.68″, lon. 77° 00′ 43.55″, referenced by Monument No. 32, which is 240 feet distant in azimuth 74°. (Pl. VIII, Fig. 2.)

Thence continuing along the low-water line to a point on Mathias Point, lat. 38° 24′ 03.34″, lon. 77° 02′ 40.11″,
No. 33 referenced by Monument No. 33, which is 170 feet distant in azimuth 356° (Pl. VIII, Fig. 2) and continuing along the low-water line to a point on Metomkin Point, lat. 38° 22′
No. 34 03.05″, lon. 77° 08′ 19.67″ referenced by Monument No. 34, which is 50 feet distant in azimuth 26° (Pl. XI, Fig. 1) and continuing along the low-water mark to a point on Bull Bluff, lat. 38° 20′ 34.64″, lon. 77° 17′ 05.83″, referenced by
No. 35 Monument No. 35 which is 100 feet distant in azimuth 7°. (Pl. XI, Fig. 2.)

Thence by a straight line, 163° 40′ 23″, 3355.2 feet to a

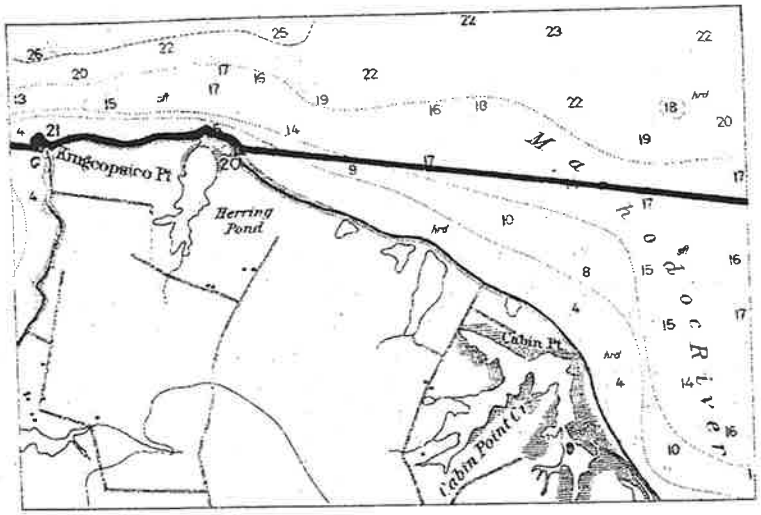


FIG. 1. PORTION OF LINE NEAR KINGCOPSICO POINT SHOWING LOCATION OF MONUMENTS 20-23

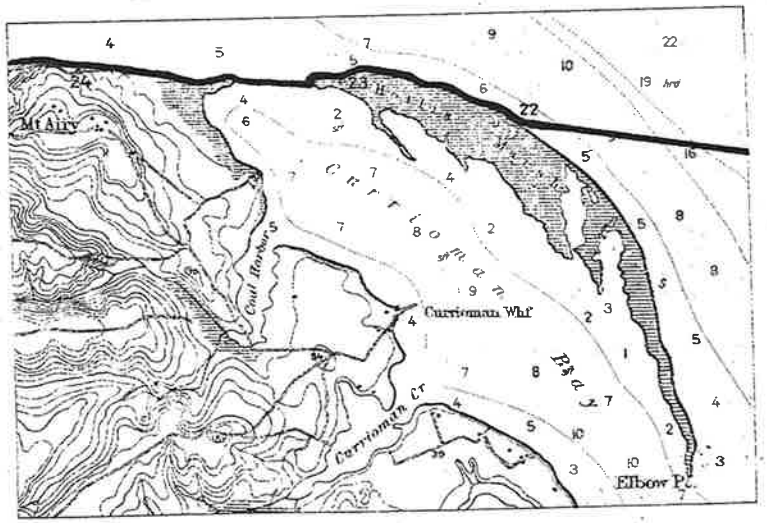


FIG. 2. PORTION OF LINE ON HOLLINS MARSH, NOMINI BAY, SHOWING LOCATION OF MONUMENTS 22-24

point on Marlborough Point, lat. 38° 21′ 06.47″, lon. 77°
No. 36 17′ 17.67″, referenced by Monument No. 36, which is 60 feet distant in azimuth 114°. (Pl. XI, Fig. 2.)

Thence along the low-water line to a point, lat. 38° 22′
No. 37 30.87″, lon. 77° 18′ 38.34″, referenced by Monument No. 37, which is 65 feet distant in azimuth 4°. (Pl. XII, Fig. 1.)

AQUIA CREEK TO FREESTONE POINT

Beginning at a point, lat. 38° 22′ 30.78″, lon. 77° 18′
No. 37 38.34″, referenced by Monument No. 37, which is 65 feet distant in azimuth 4°.

Thence by a straight line, 169° 09′ 51″, 8388.3 feet to a point on Brents Point, lat. 38° 23′ 52.19″, lon. 77° 18′
No. 38 38.34″, referenced by Monument No. 38, which is 125 feet distant in azimuth 65°. (Pl. XII, Fig. 1.)

Thence along the low-water line to a point, lat. 38° 26′
No. 39 07.30″, lon. 77° 19′ 14.16″, referenced by Monument No. 39, which is 276 feet distant in azimuth 96°. (Pl. XII, Fig. 2.)

Thence by a straight line to a point on Clifton Point,
No. 40 lat. 38° 28′ 24.20″, lon. 77° 19′ 07.75″, referenced by Monument No. 40, which is 80 feet distant in azimuth 105°. (Pl. XIII.)

Thence along the low-water line to a point, lat. 38° 30′
No. 41 24.28″, lon. 77° 17′ 49.56″, referenced by Monument No. 41, which is 90 feet distant in azimuth 116°. (Pl. XIII.)

Thence by a straight line, 217° 25′ 54″, 1105.6 feet to a point on Chopawamsic Island, lat. 38° 30′ 56.93″, lon. 77°
No. 42 17′ 29.49″. referenced by Monument No. 42, which is 85 feet distant in azimuth 101°. (Pl. XIII.)

Thence by a straight line, 207° 40′ 54″, 3687.1 feet to a point, lat. 38° 30′ 56.63″, lon. 77° 17′ 27.96″, referenced by
No. 43 Monument No. 43, which is 125 feet distant in azimuth 104°. (Pl. XIII.)

Thence along the low-water line to a point on Shipping

Point, lat. 38° 31′ 38.77″, lon. 77° 17′ 00.04″, which is
No. 44 referenced by Monument No. 44, which is 60 feet distant in azimuth 91°. (Pl. XIII.)

Thence by a straight line, 203° 42′ 47″, 2614.3 feet to a point on Possum Point, lat. 38° 32′ 02.43″, lon. 77° 16′
No. 45 46.81″, which is referenced by Monument No. 45, which is 36 feet distant in azimuth 103°. (Pl. XIV.)

Thence along the low-water line to a point on Cockpit Point, lat. 38° 33′ 39.07″, lon. 77° 15′ 26.77″, referenced by
No. 46 Monument No. 46, which is 160 feet distant in azimuth 92°. (Pl. XIV.)

Thence by a straight line, 194° 23′ 48″, 11084.8 feet across the mouth of Powells Creek, to a point on Freestone Point,
No. 47-S lat. 38° 35′ 25.20″, lon. 77° 14′ 50.05″, referenced by Monument No. 47, south mark, which is 110 feet distant in azimuth 102°. (Pl. XIV.)

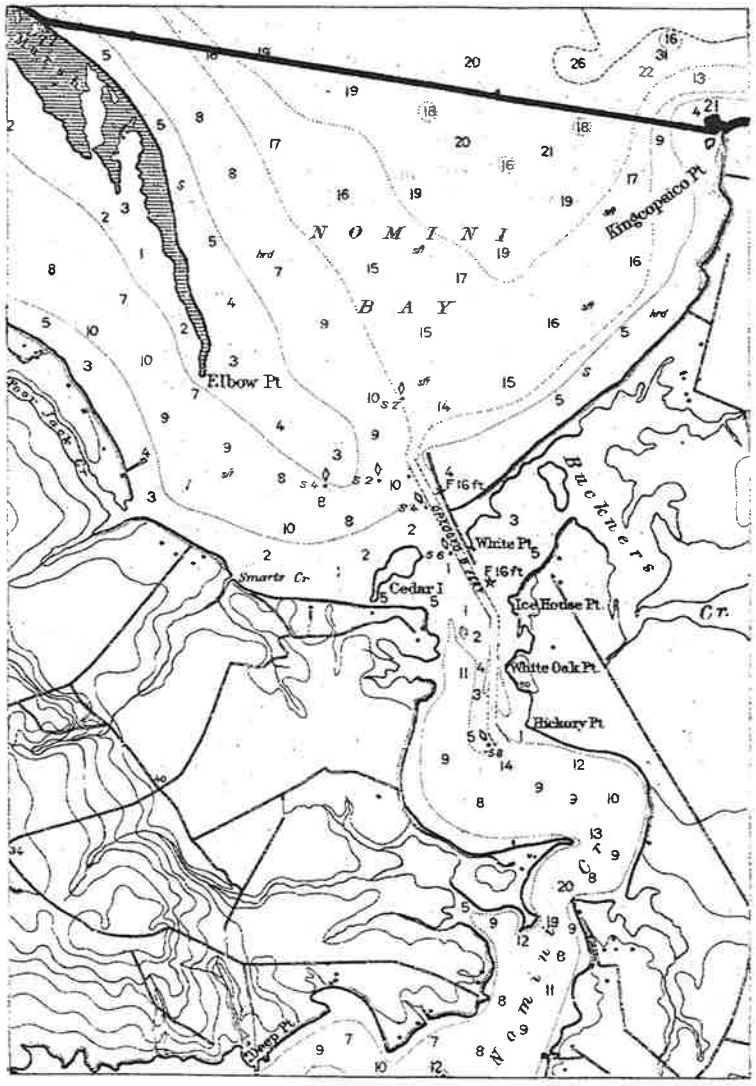
Thence along the low-water mark to a point, lat. 38° 35′
No. 47-N 35.50″, lon. 77° 14′ 48.43″, referenced by Monument No. 47, north mark, which is 1044.2 feet distant, in azimuth 13° 06′ 55″. (Pl. XIV.)

FREESTONE POINT TO ALEXANDRIA

Beginning at a point on Freestone Point, lat. 38° 35′
No. 47-N 35.50″, lon. 77° 14′ 48.43″, referenced by Monument No. 47, north mark, which is 1044.2 feet distant in azimuth 13° 06′ 55″. (Pl. XIV.)

Thence by a straight line, 233° 40′ 58″, 15056.6 feet to a point across the mouth of Occoquan Bay on High Point,
No. 48 lat. 38° 37′ 03.62″, lon. 77° 12′ 15.58″, referenced by Monument No. 48, which is 150 feet distant in azimuth 200°. (Pl. XV.)

Thence along the low-water line to a point, lat. 38° 37′
No. 49 31.97″, lon. 77° 10′ 08.63″, referenced by Monument No. 49, which is 65 feet distant in azimuth 119°. (Pl. XV.)



PORTION OF LINE ON NOMINI BAY SHOWING LOCATION OF MONUMENTS 21-22

Thence by a straight line 252° 38′ 06″, 11498.6 feet to a point on Hallowing Point, lat. 38° 38′ 05.87″, lon. 77° 07′ 50.33″, which is referenced by Monument No. 50, which is 220 feet distant in azimuth 120°. (Pl. XV.)

No. 50

Thence along the low-water line to a point, lat. 38° 39′ 00.51″, lon. 77° 08′ 11.52″, referenced by Monument No. 51, which is 100 feet distant in azimuth 102°. (Pl. XV.)

No. 51

Thence by a straight line, 186° 20′ 10″, 8738.4 feet to a point on White Stone Point, lat. 38° 40′ 26.36″, lon. 77° 07′ 59.36″, which is referenced by Monument No. 52, which is 80 feet distant, in azimuth 168°. (Pl. XVI.)

No. 52

Thence along the low-water line to a point, lat. 38° 41′ 07.64″, lon. 77° 07′ 22.32″, which is referenced by Monument No. 53, which is 50 feet distant in azimuth 114°. (Pl. XVI.)

No. 53

Thence by a straight line, 229° 47′ 46″, 6648.9 feet, across the mouth of Dogue Creek to a point on Ferry Point, lat. 38° 41′ 50.06″, lon. 77° 06′ 18.27″, referenced by Monument No. 54, which is 50 feet distant in azimuth 162°. (Pl. XVI.)

No. 54

Thence along the low-water line to a point, lat. 38° 42′ 32.83″, lon. 77° 04′ 48.86″, referenced by Monument No. 55, which is 25 feet distant, in azimuth 150°. (Pl. XVI.)

No. 55

Thence by a straight line, across the mouth of Little Hunting Creek, 242° 46′ 03″, 1961.9 feet, to a point, lat. 38° 42′ 41.70″, lon. 77° 04′ 26.69″, referenced by Monument No. 56, which is 75 feet distant in azimuth 250°. (Pl. XVI.)

No. 56

Thence along the low-water line to a point, lat. 38° 44′ 27.78″, lon. 77° 02′ 33.16″, referenced by Monument No. 57, which is 50 feet distant, in azimuth 98°. (Pl. XVII.)

No. 57

Thence by a straight line, 181° 45′ 12″, 18013.1 feet to a point on Jones Point, lat. 38° 47′ 25.75″, lon. 77° 02′ 26.20″, referenced by Monument No. 58, which is 42 feet distant in azimuth 180°. (Pl. XVII.)

No. 58

Description of Monument and Stations

No. 1 On the south shore of the Potomac River at Smith Point. The last point to the eastward that will see the bare bay [?] at the mouth of the Little Wicomico River. The mark is set in a bight in the trees which are scrubby pines, and is approximately 26 yards from the high-water mark. The mark is the standard mark of the Virginia-Maryland Boundary Commission. It is 10 inches square on top and projects 1½ feet above the ground. A tablet stamped Virginia-Maryland Boundary Commission is embedded in the top of of the concrete, which is the material of which the mark is made. There is no reference mark. (Pl. II, Fig. 1.)

The Point is poorly located for a triangulation station.

No. 2 The station is on the south bank of the Potomac River near the entrance to the Little Wicomico River. The mark is approximately 60 yards southeast of the river, 8 yards directly inshore from the face of an 8-foot bluff. The mark is in a clear space in the trees which are water oaks and pines. The ground near the mark is covered with honeysuckle. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. It is poorly located for a triangulation station. (Pl. II, Fig. 1.)

No. 3 On the south shore of the Potomac River, approximately 75 yards northwest of the entrance of the Little Wicomico River, in the center of a grove of trees 14 yards from the top of the bank with a sharp face about 4 feet high. The trees are small pines. There is no reference mark. The mark is the standard mark of the Virginia-Maryland Boundary Commission. The point is poorly located for a triangulation station. (Pl. II, Fig. 1.)

No. 4 The point is 11.60 meters azimuth 187° from station Lee. (Pl. II, Fig. 2.)

No. 5 The station is located on the south shore of the Potomac River, approximately three-eighths of a mile downstream

Appx. 19

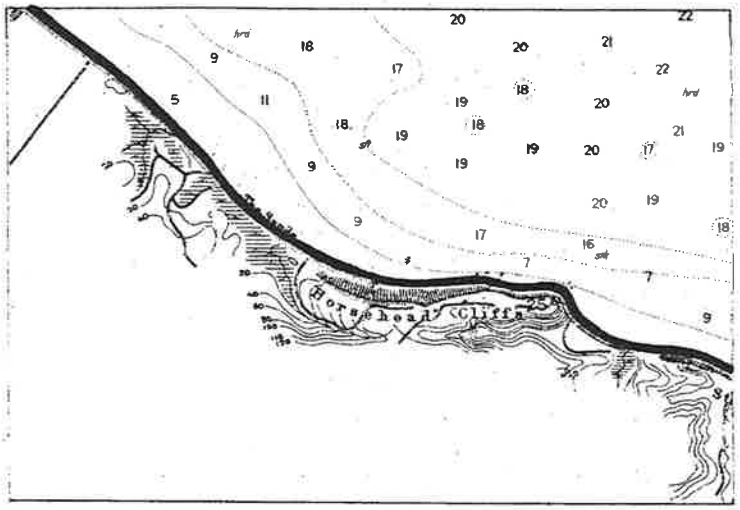


FIG. 1. PORTION OF LINE NEAR HORSEHEAD CLIFFS SHOWING LOCATION OF MONUMENT 25

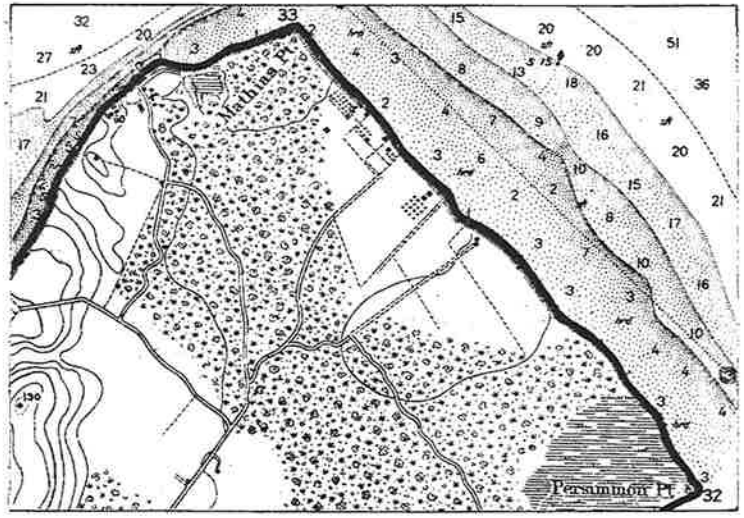


FIG. 2. PORTION OF LINE BETWEEN PERSIMMON POINT AND MATHIAS POINT SHOWING LOCATION OF MONUMENTS 32-33

from Presley Creek, on ground about 4 feet high, on property belonging to Mrs. Horner. The mark is in the barn yard and there is a large, old cherry tree about 15 yards northwest of the station. The mark is 30 yards from the edge of a bank about 4 feet high and there have been driven into the beach at a point just offshore from the mark a number of small piles, or trap stakes, which will aid in the recovery of the station. This point is not well located as a triangulation station as it will not see points on the Virginia side of the river, but may be of value as topographic or hydrographic control. There is no reference mark. (Pl. III, Fig. 1.)

No. 6 The point is located approximately three-eighths of a mile northwest of the mouth of Presley Creek on the projecting point, the farthest point upstream that will see the entrance. Mark was placed between two medium-sized oak trees about 12 yards southeast of a small summer cottage. No one was living in the cottage at any time that the station was visited. The mark was placed inshore to avoid the probability of its being washed out by the erosion of the bank but, if occupied eccentrically, will be of considerable value as a triangulation station. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. III, Fig. 1.)

No. 7 The point is the first point that appears downstream from the mouth of Cobb Creek which is the first creek southeast of Coan River. The mark was placed approximately 12 yards from the high-water line in a growth of pine, oak, and holly trees. There are a number of small cedars in the vicinity and a large oak tree which has been blown down. Several trees were cut in order to clear lines. The mark is on gently rising ground and is about 3 feet above the high-water mark. The point is poorly located for a triangulation station. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. III, Fig. 1.)

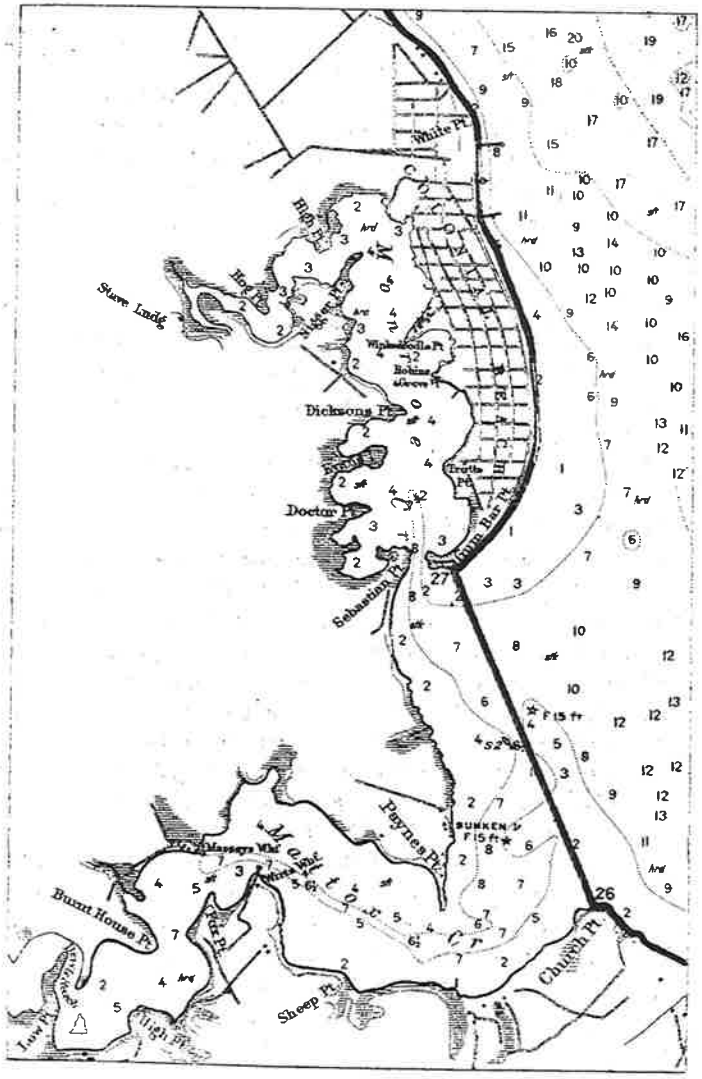
No. 8 The mark is on the sandy peninsula that forms the western shore of Cobb Creek about midway of the peninsula and about 20 yards east of the woods. It is about 30 yards from the high-water mark. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is of little value as a triangulation station. (Pl. III, Fig. 1.)

No. 9 The mark is on Great Point which forms the eastern entrance to Coan River. It is on the high ground east of the flat, low ground that forms the extreme end of the Point, about 18 yards from the edge of the trees. Station is about 4 feet above high-water mark and about 8 yards inshore from it. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. Several trees were cut in clearing lines. This point sees to the north and west and is of some value as a triangulation station. (Pl. III, Fig. 2.)

No. 10 The mark is on the eastern end of Hog Island about 80 feet from the high-water mark and back of a small clump of bushes (salt bush). The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The value of this point as a triangulation station is minimized by the proximity of Triangulation Station Hog. (Pl. III, Fig. 2.)

No. 11 The mark was placed on the northernmost point of Hog Island on the highest ground in the vicinity, which is just back of several small salt bushes about 20 yards from the end of the point. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The proximity of Station Hog minimizes its value as a triangulation station. (Pl. III, Fig. 2.)

No. 12 The mark was placed on Thicket Point, the point that makes out inside the Yeocomico and which is about 150 yards west of the principal part of the point. It is in a



PORTION OF LINE NEAR COLONIAL BEACH SHOWING LOCATION OF MONUMENTS 26-27

small clump of cedars to the west of the marshy ground that extends west from the trees that grow on the end of the point. It is about 12 yards inside the high-water line and about 4 feet above the high-water mark. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is of no value as a triangulation station. (Pl. IV.)

No. 13 The station is on the sand bar that has been built up offshore from Lynch Point, which is the west bank of the Yeocomico River at the mouth. The point used as a triangulation station is the southernmost of two monuments placed 0.69 meters apart. The marks are on the highest part of the bar—an island at high tide—a peninsula at low tide. The marks are approximately in the center of the high ground east and west and 25 yards from the high-water line directly in from the end of the point. There is no reference mark. The marks are the standard marks of the Virginia-Maryland Boundary Commission. (Pl. V.)

No. 14 The mark, a standard mark of the Virginia-Maryland Boundary Commission, was placed 2.86 meters, in azimuth 176° from triangulation station Sandy Point 4. (Pl. V.)

No. 15 On the southeast shore of Jackson Creek and about 60 yards from the Creek. It is 1 meter from a fence that runs to the bank of the Potomac River. To the west of the fence is a thick grove of trees 60 to 70 feet high that obstruct the view to the west. The station was occupied eccentrically. The mark is between the shore of the river and a large barn about 10 yards from the bank of the river and about 40 yards from the barn. The mark is the standard mark of Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. V.)

No. 16 On the northeast shore of Garner Creek about 80 yards from the end of the point that forms the entrance to the creek. The station is about 20 yards from the high-water

mark and about 4 feet above the high-water mark. It is on land that slopes gently to the northwest. Around the station there is a rather thick growth of cedar saplings about 3 feet high. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. Of little value as a triangulation station. (Pl. IV.)

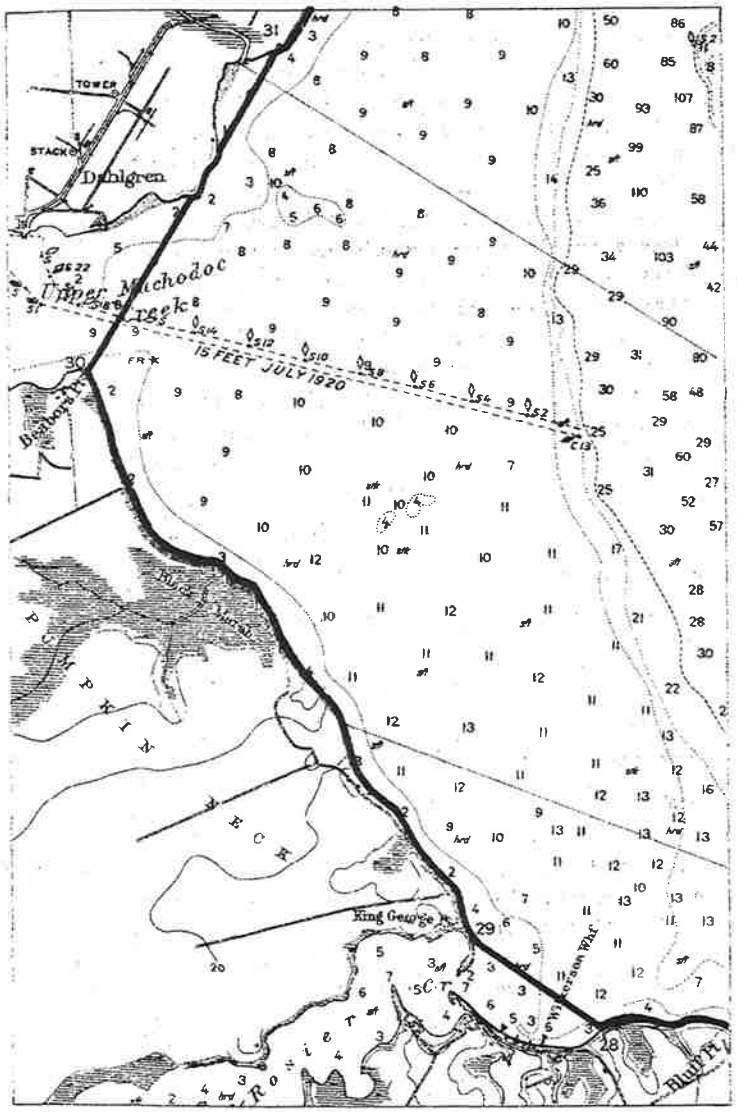
No. 17 The station is on the first blunt point southeast of Ragged Point 20 yards inshore from a precipitous bank. At the ends of the bank and directly offshore from the mark, a pine tree about 1½ feet butt was blazed with a triangular blaze and a nail driven at each angle. The mark sets in a heavy growth of pine and was located eccentrically. The point is worthless as a triangulation station. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. V.)

No. 18 There are two monuments placed side by side and are located as follows from Station Ragged Point 3:

Piney Point Lighthouse	0°	00′	00″	
East mark.....	55°	10′		distance 1.981 meters
West mark.....	72°	25′		distance 1.628 meters

The marks are the standard marks of the Virginia-Maryland Boundary Commission. (Pl. V.)

No. 19 The station is just inside the entrance to the (lower) Machodoc River, on the southeast side of the river on a point locally known as Stony Point. It is on the high ground that lies just back of the point approximately 125 yards inshore from the face of the bluff, which is about 15 feet high. It is to the east of a cultivated field on which has been set out a number of small cedar bushes. It is to the west of a small holly tree that is growing at the end of a line of cedar trees. There is a lane just west of the station. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. V.)



PORTION OF LINE BETWEEN BLUFF POINT AND UPPER MACHODOC CREEK SHOWING LOCATION OF MONUMENTS 28-31

No. 20 Ecc. The station is located on the south shore of the Potomac River on the broad point of land, the western end of which is called Kingcopsico Point. The station is located on the edge of the high land just back of the beach. There is a large single water-oak tree standing in the immediate vicinity of the station under which Boundary Monument No. 20 was placed. The eccentric station was put in to avoid cutting this tree. The point is marked with a Coast and Geodetic Survey standard reference mark, the arrow points to the boundary monument. As this point is well located for a triangulation station, the eccentric station was marked and its geographic position computed. The boundary monument will serve as a reference mark. This station is part of the Main Scheme triangulation. (Pl. VI, Fig. 1.)

No. 20 The station is located near Boundary Monument No. 20 Eccentric, as follows:

At Bound. Mon. No. 20 Ecc.

Blackstone Island Lighthouse	0°	00′	00″	
Boundary Monument No. 20	201°	18′	18″	distance 11.025 meters

No. 21 The station is located near triangulation station Murray, as follows:

At Station Murray

Blackstone Island Lighthouse	0°	00°	"0"	
Boundary Monument No. 21	103°	30′	39″	distance 2.840 meters

Standard mark of the Virginia-Maryland Boundary Commission. (Pl. VI, Fig. 1, Pl. VII.)

No. 22 The station is located on the south shore of the Potomac River on Hollis Marsh about 12 yards from the edge of the land and about two-thirds of the distance from Elbow Point to the extreme western end of the island. (Hollis Marsh is an island that is almost entirely covered by water at an

extreme high tide). The mark is placed back of the line of salt bushes and can be seen from the water a short distance offshore. There are no prominent land marks in the vicinity of the station and the best method to follow in attempting to recover this point will be to cruise slowly along the shore, looking out for the mark. There is no reference mark. (Pl. VI, Fig. 2.)

No. 23 The station is located on the south shore of the Potomac River at the western end of Hollis Marsh, which is an island almost entirely covered at high water. The station is approximately 18 yards from the extreme western end of the marsh and is located in the midst of some salt bushes on the highest land in the vicinity. It is well located as a triangulation station and its position is equal to a Main Scheme triangulation station. A signal 15 feet high is necessary to see to the east. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. VI, Fig. 2.)

No. 24 The station is located on the south shore of the Potomac River at the east end of Nomini Cliffs, about 40 yards from the edge of the trees to the east. The mark is inshore approximately 8 yards from the face of a bluff about 6 feet high and about half way between the face of the bluff and the top of the hill. It is located in a thick growth of hickory, sweet gum, and pine trees and just east of a small cedar tree. A number of trees were cut in clearing lines of sight. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is valueless as a triangulation station. (Pl. VI, Fig. 2.)

No. 25 The station is located on the south shore of the Potomac River near the eastern end of Horsehead Cliffs, on the nonprominent point near the eastern end of the cliffs. To reach the station go ashore at the low land between Horsehead and Nomini cliffs at the place that is used for loading

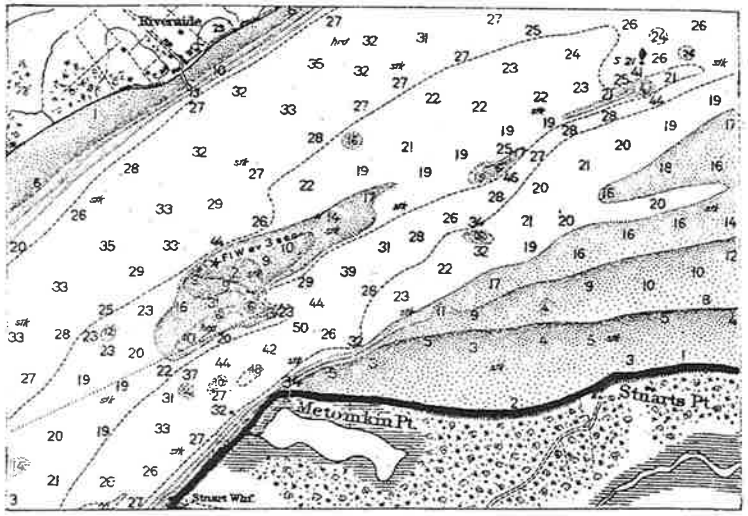


FIG. 1. PORTION OF LINE NEAR METOMKIN POINT, OPPOSITE RIVERSIDE, SHOWING LOCATION OF MONUMENT 34

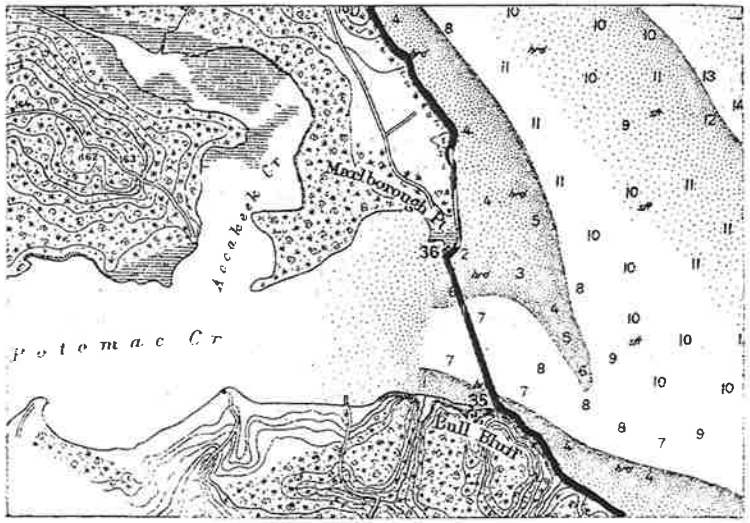


FIG. 2. PORTION OF LINE AT MOUTH OF POTOMAC CREEK SHOWING LOCATION OF MONUMENTS 35-36

railroad ties and timber by saw mills working in the vicinity, and follow the trail that leads around the back of the first hill, keeping to the right up the hill, continue until the top of the cliffs is reached. The station is located at the edge of the second-growth pines that grow thickly at the top of the cliffs. The cliffs are about 150 feet high. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. Considerable clearing is necessary if this station is to be used for triangulation purposes. (Pl. VIII, Fig. 1.)

No. 26 The station is located on the south shore of the Potomac River at the mouth of Mattox Creek on Church Point on the top of a bluff about 18 feet high in a field in which a number of small trees have been set out. The mark is approximately 20 yards from the top of the bluff and about 100 yards east from a gully that runs normal to the shore line. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The view from this point is restricted and the point is of little value as a triangulation station. (Pl. IX.)

No. 27 The station is located on the south shore of the Potomac River, near the entrance to Mattox Creek, on Gum Bar Point on a small point that makes out from the main point and is known locally as Crow Bar Point. It is north of the junction of three roads and is at the top of the bank that rises to the west of the road running north and south. It is 25 yards north of a large cedar tree that is growing at the road intersection. There are a number of cedar trees in the vicinity. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is of little value as a triangulation station. (Pl. IX.)

No. 28 The station is located on the south shore of the Potomac River near the entrance to Rosier Creek. It is about three-

eighths of a mile west of Bluff Point at the top of a bluff about 30 feet high. The station is approximately 24 feet from the top of the bluff that is midway between two cedar trees, the largest trees in the vicinity. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is not well located as a triangulation station. (Pl. X.)

No. 29 The monument is located 2.735 meters from Station Rosier 2 azimuth 345°. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. X.)

No. 30 The station is 3.192 meters from Station Cut 2 on Beabor Point in azimuth 273°. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. X.)

No. 31 The station is located on the south shore of the Potomac River on the first point northwest of the entrance to Upper Machodoc Creek. The point appears as the last point visible from Beabors Point. The end of the point consists of several very large boulders of cemented gravel, lying at the foot of a steep bluff about 15 feet high. The mark is 20 yards inshore from the top of the bluff just behind the aforementioned boulders. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. X.)

No. 32 The mark was set 1.348 meters from Station Persimmon 3 in azimuth 353°. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. VIII, Fig. 2.)

No. 33 The station is located on the south shore of the Potomac River on the northernmost point of land on Mathias Point, in the yard of W. H. Jackson's house, 7 yards from the top of a bluff approximately 40 feet high, 10 yards west of a large water oak tree, 5 yards east of a small cedar tree, 15 yards north of the house of W. H. Jackson. The mark is the standard mark of the Virginia-Maryland Boundary

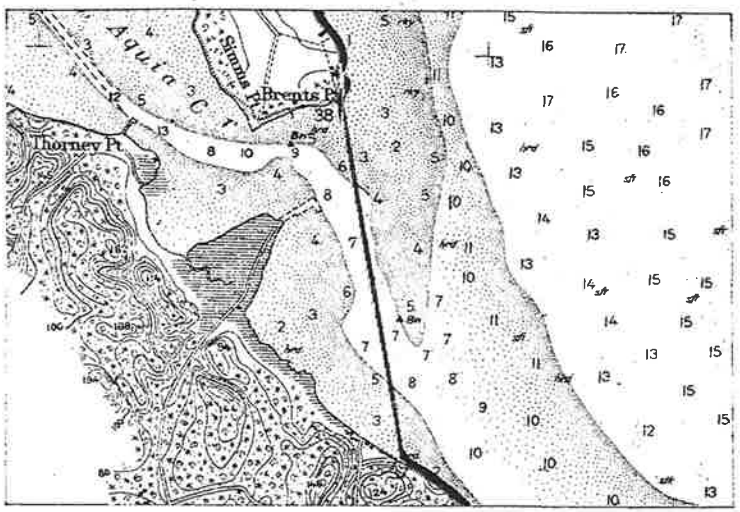


FIG. 1. PORTION OF LINE NEAR BRENTS POINT SHOWING LOCATION OF MONUMENTS 37-38

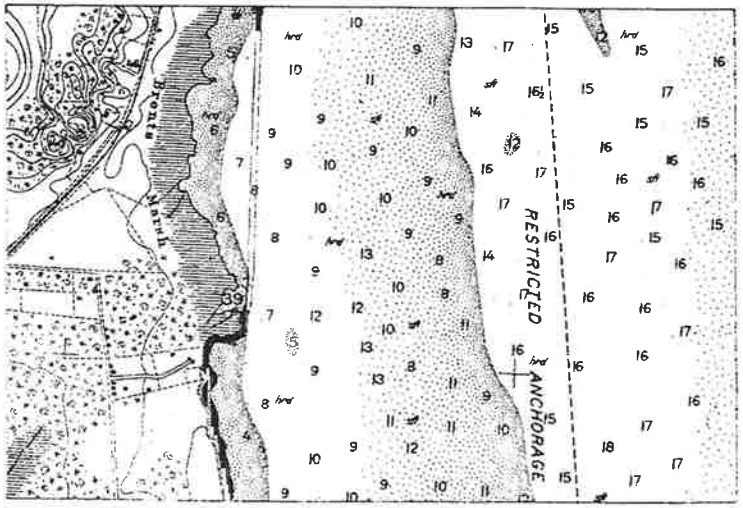


FIG. 2. PORTION OF LINE NEAR BRENTS MARSH SHOWING LOCATION OF MONUMENT 39

Commission. There is no reference mark. (Pl. VIII, Fig. 2.)

No. 34 The station is 3.370 meters, azimuth 22° 30′ from Station Metomkin 3. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. XI, Fig. 1.)

No. 35 Station is on the west shore of the Potomac River and the south shore of Potomac Creek, on Bull Bluff. The bluff is about 175 feet high and is prominent. The face of the bluff is heavily wooded. To reach the station, land at the small houseboat that has been pulled up on the shore in the gully, the first break in the cliffs inside the creek. Turn sharply to the left and proceed straight up the side of the steep hill to the top. The top of the hill is a ridge, the crest being normal to the shore of the creek. The station is on the northwest edge of the crest, about 5 yards from the face of cliff. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is of little value as a triangulation station, due to the fact that it lies in a grove of tall trees. (Pl. XI, Fig. 2.)

No. 36 The station is on the northern shore of Potomac Creek on Marlborough Point, 12 yards from the end of the point on low sandy ground. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is of small value as a triangulation station. (Pl. XI, Fig. 2.)

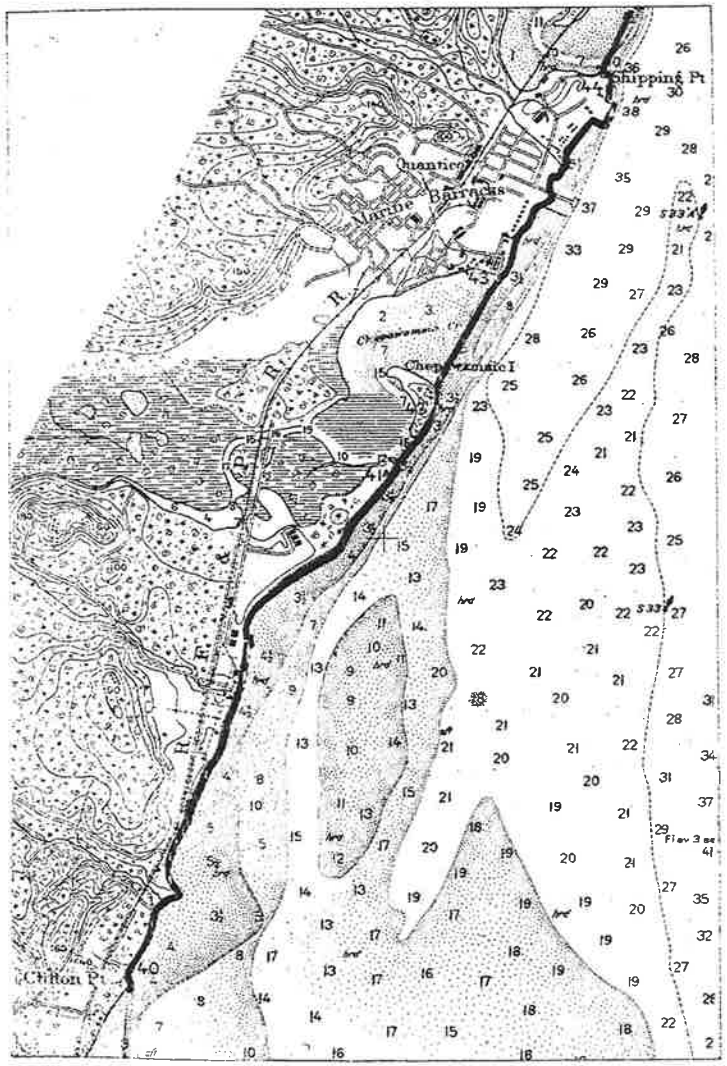
No. 37 The station is on the western shore of the Potomac River about three-fourths of a mile below the entrance to Aquia Creek on the most northerly bluff that rises from the water's edge. The station is at the center of the bluff at the highest point of the bluff. To reach the station follow the dim trail that leads up the northern slope of the bluff. A number of trees were cut in order to clear lines of sight. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XII, Fig. 1.)

No. 38 On the western shore of the Potomac River, the northern shore of Aquia Creek on Brents Point, about 80 yards from the extreme end of the point and 15 yards from the high-water line of the Potomac River. The mark is on the sandy plain that lies between the water's edge and the high ground. To reach the station go ashore at the edge of the trees on Brents Point to the northward and follow a dim trail southward. There is a small persimmon tree, some of the branches of which were cut in order to erect a pole over the station, and a small sycamore. The mark is 6 yards south of the persimmon tree and 7 yards northwest of the sycamore tree. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. The point is of no value as a triangulation station. (Pl. XII., Fig. 1.)

No. 39 The station is on the western shore of the Potomac River on the point that lies farthest south on Brents Marsh. The mark is 20 yards from the water edge at the extreme edge of the point. A small duck blind was just off the point in 1929. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XII, Fig. 2.)

No. 40 The station is 2.886 meters from Station Fishery on Clifton Point in azimuth 42° 30′. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. XIII.)

No. 41 The station is on the west shore of the Potomac River and the south shore below Chopawamsic Island at the top of a bluff about 10 feet high and about 10 yards from the edge of the ridge that forms the top of the bluff. It is in a clump of trees, a number of which were cut in clearing lines of sight. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XIII.)



PORTION OF LINE BETWEEN WIDEWATER AND QUANTICO SHOWING LOCATION OF MONUMENTS 40-44

No. 42 The station is on Chopawamsic Island on the western shore of the Potomac River amidst a grove of trees and 27.118 meters in azimuth 175° from Station Chap. (Pl. XIII.)

No. 43 The station is on the western shore of the Potomac River and the northern shore of Chopawamsic Creek. It is on the point formed by a turn in the concrete retaining wall around the property of the Marine Barracks and just behind the wall. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XIII.)

No. 44 The station is on the western shore of the Potomac River and the southern shore of Quantico Creek, on Shipping Point near the highest point of the hill. The station is 2 yards east-southeast of the large pine tree growing on the point. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XIII.)

No. 45 The station is on the western shore of the Potomac River and the northern shore of Quantico Creek on Possum Point, 12 yards from the end of the point which is of made land. It is at the center of an old railroad bed. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XIV.)

No. 46 The mark is 2.573 meters from Station Cockpit 2 in azimuth 6°. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. XIV.)

No. 47 The monument, consisting of two marks, is located near Station Freestone, as follows:

Az. Freestone to south mark, 15° Distance 1.662 meters.
Az. Freestone to north mark, 24° Distance 1.021 meters.

Marks are standard marks of the Virginia-Maryland Boundary Commission. (Pl. XIV.)

No. 48 The station is on the western shore of the Potomac River about 150 yards from the extreme end of High Point which is the point north of the entrance to Occoquan Bay. The station is about 15 yards from the edge of the bluff and about 50 yards from the water's edge. It is in a clear space in the surrounding trees and the ground is covered with honeysuckle. When digging the holes for the stand a section of 2-inch tile was uncovered which from the position determined for this station appears to be old Station High Point, erroneously described. It is approximately 0.3 meters southeast of the station Boundary Monument 48. The mark is a standard monument of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XV.)

No. 49 The mark was set near Station Shelton (Sycamore Point) as follows:

At Station Shelton,

Hallowing Monument 49.....	252°	00′ 19′	00″ 56″	distance 12.711 meters

(Pl. XV.)

No. 50 The station is located hear Station Hallowing as follows:

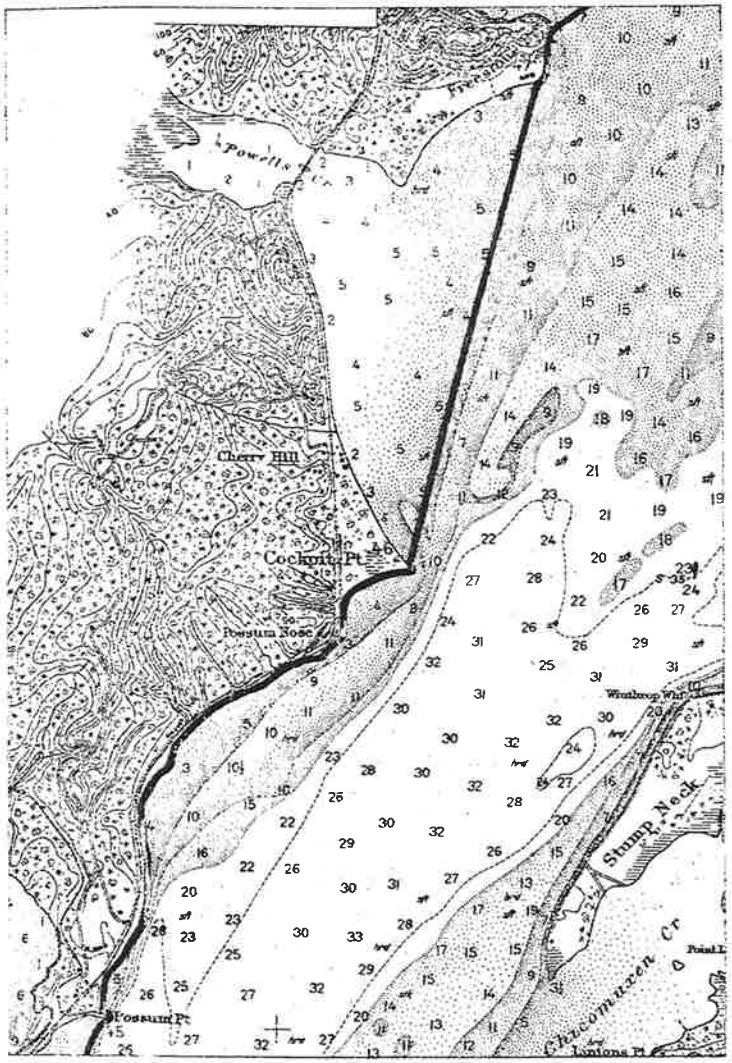
At Station Hallowing,

Shelton Monument 50.....	51°	00′ 18′	00″ 43″	distance 25.628 meters

The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. XV.)

No. 51 The station is 1.577 meters from Station Gunston, in azimuth 49°. (Pl. XV.)

No. 52 The station is on the western shore of the Potomac River and the northern shore of Gunston Cove on White Stone Point 12 meters from the edge of the cliff and 1 meter from the road that runs along the edge of the top of the bluff.



PORTION OF LINE BETWEEN POSSUM POINT AND FREESTONE POINT SHOWING LOCATION OF MONUMENTS 45-47

To reach the station, go ashore at the old wharf inside Gunston Cove, turn sharply to the right and follow the old wood road that leads up the hill for a distance of approximately three-eighths of a mile to a blazed pine tree just south of the road at a bend in the road. The stump of an oak tree that was cut in clearing lines of sight lies about 25 yards south of this tree. The monument is 3 feet from a small pine tree that stands just west of the road at this point. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XVI.)

No. 53 The station is on the west bank of the Potomac River on White Stone Point approximately 100 yards north of White Stone Point Light, at the top of a bluff about 5 feet high and midway between the top of this bluff and a road that runs parallel to the shore line. It is 10 yards south of a red box rack. The mark is among some high trees and was located eccentrically. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. "Box rack"—a large platform at the top of an inclined plane on which the large boxes used by the Bureau of Fisheries (resembling lobster pots) are stored. (Pl. XVI.)

No. 54 The station is 3.245 meters from Station Ferry Point in azimuth 55°. The mark is the standard mark of the Virginia-Maryland Boundary Commission. (Pl. XVI.)

No. 55 The station is on the west shore of the Potomac River and the south shore of Little Hunting Creek, on the low, gravelly point just at the mouth of the creek. It is 4 yards back of the high-water line in the center of the point and is in the midst of a grove of tall trees—beech, hickory, and sycamore. A sycamore stump with a few live branches low down grows on the extreme end of the point. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XVI.)

No. 56 The station is on the west shore of the Potomac River and the north shore of the Little Hunting Creek on the most westerly bluff at the mouth of the creek. The bluff is about 10 feet high. It is at the edge of a cultivated field and 7 yards from the edge of the bluff. Several small cedar trees are growing in the vicinity of the station. The mark is the standard of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XVI.)

No. 57 The station is on the west shore of the Potomac River opposite the red bluff off the mouth of Broad Creek. It is on the gently rising ground 7 yards inside the face of a low bluff that runs along the water's edge. It is 20 yards south of a small shack and between two large cedar trees. It is 119.535 meters from Station Mathew in azimuth 2° 32′ 15″. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XVII.)

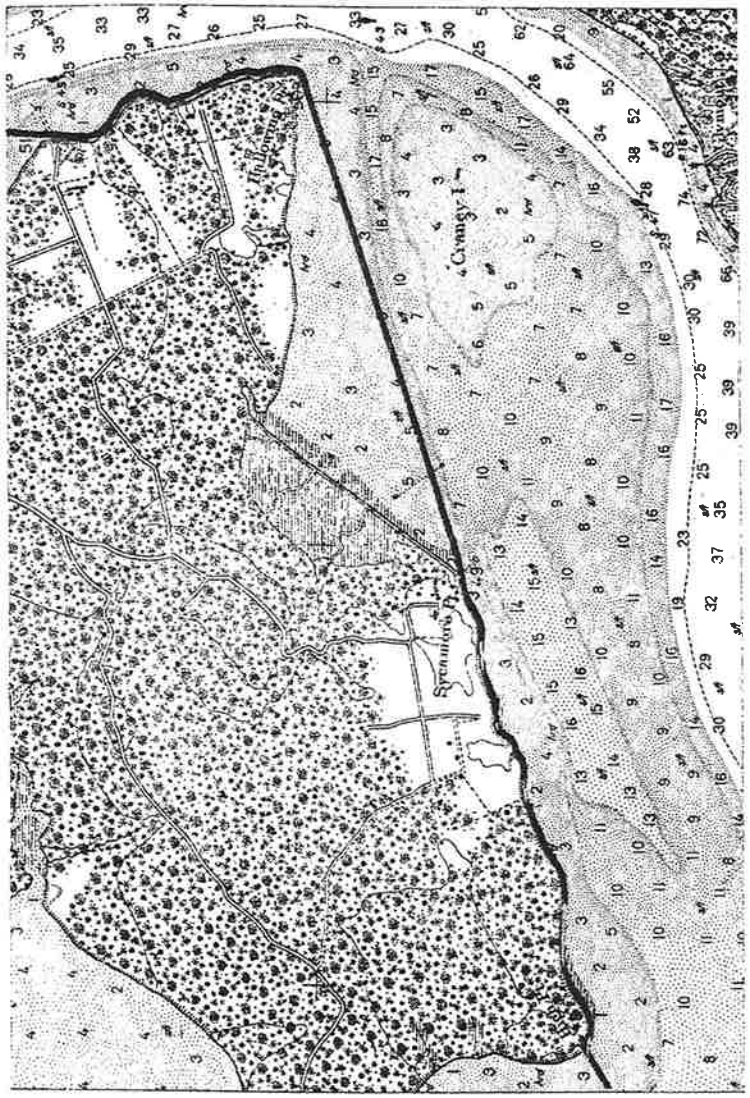
No. 58 The station is on the west shore of the Potomac River on the north shore of Hunting Creek, on Jones Point about half way between the old lighthouse and the present Jones Point Light. It is beneath and just east of a large, spreading sycamore tree. The station is 65.892 meters from Jones Point Light (new) in azimuth 81° 55′ 38″. The mark is the standard mark of the Virginia-Maryland Boundary Commission. There is no reference mark. (Pl. XVII.)

OTHER POINTS SERVICEABLE IN LOCATING LINE

Hog Station.

Hog Station	*Meters*	*Direction* 0′	00″	00″
Point Lookout Tank.....	231.63	71	34	08
Bound. Mon. No. 10.....	20.98	92	37	17

The station is on the south shore of the Potomac River on Hog Island about 40 yards east of a narrow neck of sand on which there is no vegetation and which appears



PORTION OF LINE OPPOSITE GLYMONT SHOWING LOCATION OF MONUMENTS 48-51

to be washing away. It is on a sand dune about 5 feet high the top of which is covered with a sparse growth of marsh grass. All around the station there is a prolific growth of salt bush. The station is approximately 150 yards east of the clump of pine trees that are the only prominent object on the island.

The mark is the old reference mark, Station Hog Island 4 which, instead of Ordnance mark as called for in the description, was found to be a C. and G. S. reference mark. A triangle was cut in the mark, around the point used, and it was stamped "1929."

The reference mark was set at the foot of a small stunted pine. (Pl. III, 2.)

Tank (Quantico). This is the large fat water tank that is located on the hill west of Quantico. It is painted with black and white checks and is a prominent landmark. At night a dim red light is displayed from the top of the tank. This tank was erected since the execution of the triangulation along the river in 1928. There is no station or reference mark. (Pl. XIII.)

Point Lookout Tank. The station is the tall water tank that stands approximately 100 yards west of Point Lookout Hotel. Point used was the finniel of the tank. The tank is approximately 100 feet high and is painted black with "POINT LOOKOUT" in large white letters. There is no station or reference mark. (Cf. Pl. I.)

Saint George 6.

Piney Point Lighthouse	*Meters*	*Direction* 0° 00′ 00″
Reference mark No. 1	52.53	343 09 12
Reference mark No. 2	43.29	64 01 58

On the northern shore of the Potomac River on Saint George Island, approximately 70 yards northwest of the

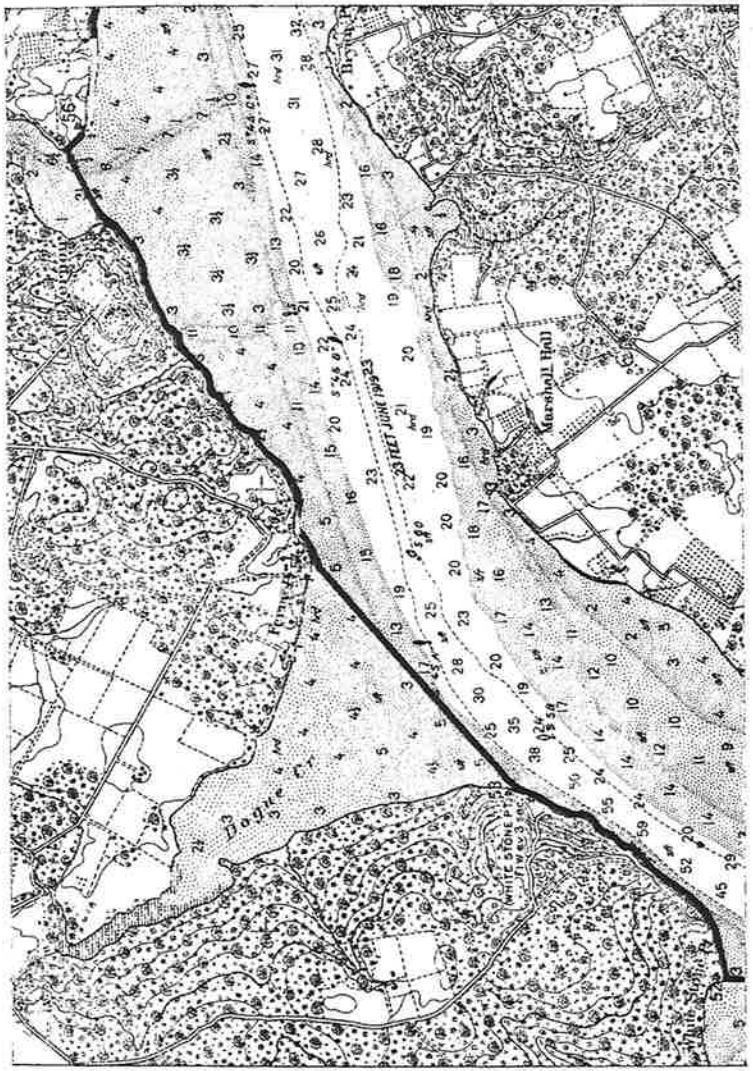
extreme southern point of the island and about 30 yards from the high-water mark to the east. The station is on a sandy plain about 3 feet above high water. The vegetation is a sparse growth of short grass. Piney Point Lighthouse shows between the large pine tree growing across the small pond to the west and the twin pines growing south of the pond. The shore on the Potomac side of the island is washing away while the shore on the Saint Mary's side is being built up. Reference mark No. 1 is at the foot of a small pine tree and reference mark No. 2 is at the southeast corner of the small summer cottage, which is the most southerly of a number of houses on the island.

Smith 3.

Waller	*Meters*	*Direction* 0°	00′	00″
Reference mark No. 1.....	6.263	182	49	49
Reference mark No. 2.....	14.611	288	32	43

On the eastern shore of the Potomac River on Smith Point, 12 meters in from the face of the bluff and 14.6 meters north of Smith Point Light. Station Twin shows through an opening in the trees. The station is in the top of a small ridge that runs normal to the shore line. A 4-foot stand will see all of the 1928 stations but the line to Marlborough 2 must be cleared of some small bushes. Reference mark No. 2 is just inshore of Smith Point Light. No. 1 is in the center of a small open place near the station.

Many other stations have been occupied along the Virginia shore by the U. S. Coast and Geodetic Survey in their triangulation work. These are described in Special Publication No. 114, Washington, 1925. The more important are listed as follows:



PORTION OF LINE IN THE VICINITY OF MARSHALL HALL AND MOUNT VERNON
SHOWING LOCATION OF MONUMENTS 62-56

	Latitude			Longitude			Description on page	Bearings on other stations, page
	°	′	″	°	′	″		
Smiths Point Lighthouse	57	52	47.473	76	11	02.453	...	165
Miller	37	54	49.067	76	16	17.423	515	195
Lee	37	56	42.766	76	20	20.841	511	192
Bitt	37	57	00.510	76	21	08.818	...	190
Bye	37	59	12.851	76	26	17.898	514	194
Coan 2	37	59	25.777	76	26	40.894	...	191
Hog Island	38	00	42.717	76	27	47.705	511	190
Yoecomico	38	02	46.529	76	31	12.406	...	190
Lynch 2	38	02	59.795	76	31	20.436	...	190
Sandy Point 4	38	04	28.336	76	32	08.690	511	191
Ragged Point 2	38	08	59.380	76	36	43.568	...	191
Coles Point 2	38	09	12.036	76	37	46.165	...	191
Currioman 2	38	09	36.394	76	42	08.229	...	204
Murray	38	09	34.804	76	42	06.994	532	205
George	38	10	05.274	76	45	42.546	533	207
Nomini 2	38	10	06.845	76	47	25.308	531	205
Meuse	38	11	43.442	76	54	30.881	...	206
Popes Creek 2	38	11	51.311	76	54	42.342	...	205
Taylor	38	13	47.626	76	58	00.335	...	205
White Point 2	38	15	25.293	76	57	44.930	...	205
Rosier 2	38	16	48.699	77	00	06.111	532	205
Bucks	38	19	21.448	77	01	28.041	...	207
Shell Bank							532	205
Shell	38	20	14.050	77	00	54.583	551	207
Persimmon 2	38	22	30.27	77	00	47.13	...	250
Mathias	38	23	44.049	77	03	24.927	551	218
Stuart 2	38	22	05.486	77	06	55.967	553	218
Metomkin 2	38	22	02.725	77	08	19.727	552	218
Wheat 2	38	20	39.146	77	10	11.708	553	218
Grimes 2	38	20	20.040	77	12	16.147	...	219

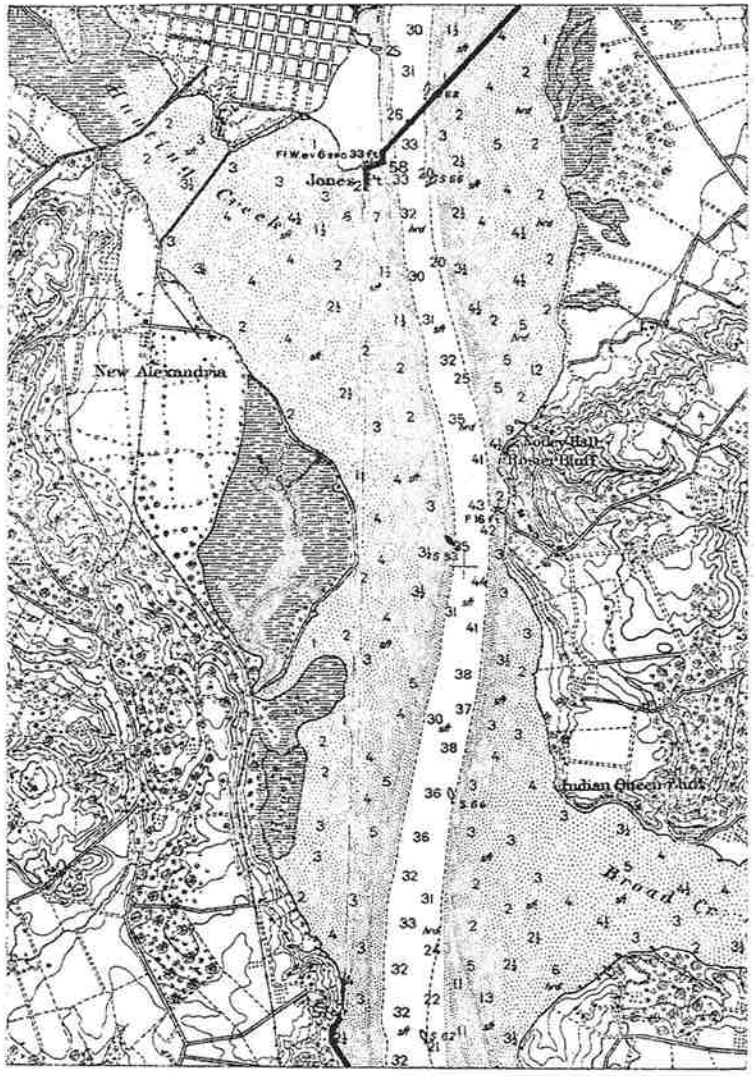
	Latitude			Longitude			Description on page	Bearings on other stations, page
	°	′	″	°	′	″		
Tanzy	38	19	58.143	77	15	57.277	553	219
Marlborough	38	21	34.801	77	17	19.560	553	219
Waller	38	25	25.935	77	19	14.355	554	219
Fishery	38	28	24.273	77	19	08.094	554	219
Cockpit	38	33	38.679	77	15	26.378	555	219
Fairfax	38	35	24.793	77	14	51.682	556	220
Knight	38	37	09.625	77	11	30.609	556	220
Sycamore	38	37	27.678	77	10	23.685	556	409
Hollowing Point	38	38	09.927	77	07	52.756	557	223
Gunston	38	39	00.293	77	08	12.421	557	223
Benvenue	38	39	49.220	77	09	00.44	557	220
Whitestone Point	38	40	30.514	77	07	55.592	...	220
Dogue	38	41	17.678	77	07	20.248	557	221
Ferry Point	38	41	50.088	77	06	18.114	554	221
Mt. Vernon 2	38	42	36.541	77	05	03.195	558	221
D. C., S. cor.	38	47	25.15	77	02	27.01	559	229

Consent of Congress

A draft of a proposed bill to obtain the consent of Congress to the line accepted by Virginia and Maryland was referred by Senator Philip Lee Goldsborough to the Legislative Counsel of the U. S. Senate who submitted a memorandum to the effect that such action was not necessary.

The reasons assigned were that joint action by the interested states did not constitute an agreement or compact within the intent of the Constitution as given in Article 1 Section 9 and subsequently interpreted in Virginia v. Tennessee,* since there had been no change in the relation of either of the states to the general government and secondarily that no additional action was necessary as Congress in accepting the Award of 1877 had implicitly given authority to the states to carry the award into effect by placing the boundary line on maps and marking the same on the ground.

* 148. U. S. 53.



PORTION OF LINE BELOW JONES POINT SHOWING LOCATION OF MONUMENTS 57-58

The boundary as now laid down on the maps is now the actual boundary and its position at any point may be determined from the monuments established, although the line itself is almost everywhere over water. The monuments if removed or destroyed may be reestablished as their geographic positions have been defined by latitude and longitude.