REPORT

OF THE

INTERNATIONAL WATERWAYS COMMISSION

UPON THE

INTERNATIONAL BOUNDARY

BETWEEN THE

DOMINION OF CANADA AND THE UNITED STATES

THROUGH THE

ST. LAWRENCE RIVER AND GREAT LAKES

1915

Typical Boundary Monument.

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THROUGH THE

ST. LAWRENCE RIVER AND GREAT LAKES

AS ASCERTAINED AND RE-ESTABLISHED

PURSUANT TO

ARTICLE IV OF THE TREATY BETWEEN GREAT BRITAIN AND THE UNITED STATES SIGNED 11th APRIL, 1908.

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INTERNATIONAL WATERWAYS COMMISSION,
OFFICE OF AMERICAN SECTION,
328 FEDERAL BUILDING,
BUFFALO, N. Y., April 29, 1915.

The Secretary of State of the United States,
Washington, D.C.

The Minister of Public Works of Canada,
Ottawa, Canada.

The Boundary Treaty between Great Britain and the United States, signed at Washington, April 11, 1908, contained the following article authorizing and empowering the International Waterways Commission to ascertain and re-establish accurately the boundary between Canada and the United States from its intersection with the St. Lawrence River near the forty-fifth parallel of north latitude and thence through the Great Lakes and communicating waterways to the mouth of Pigeon River in Lake Superior.

BOUNDARY TREATY OF 1908.

ARTICLE IV.

The boundary from its intersection with the St. Lawrence River to the mouth of Pigeon River.

The High Contracting Parties agree that the existing International Waterways Commission, constituted by concurrent action of the United States and the Dominion of Canada and composed of three Commissioners on the part of the United States and three Commissioners on the part of the Dominion of Canada, is hereby authorized and empowered to ascertain and reestablish accurately the location of the international boundary line beginning at the point of its intersection with the St. Lawrence River near the forty-fifth parallel of north latitude, as determined under Articles I and VI of the Treaty of August

9, 1842, between Great Britain and the United States, and thence through the Great Lakes and communicating waterways to the mouth of Pigeon River, at the western shore of Lake Superior, in accordance with the description of such line in Article II of the Treaty of Peace between Great Britain and the United States, dated September 3, 1783, and of a portion of such line in Article II of the Treaty of August 9, 1842, aforesaid, and as described in the joint report dated June 18, 1822, of the Commissioners appointed under Article VI of the Treaty of December 24, 1814, between Great Britain and the United States, with respect to a portion of said line and as marked on charts prepared by them and filed with said report, and with respect to the remaining portion of said line as marked on the charts adopted as Treaty charts of the boundary under the provisions of Article II of the Treaty of 1842, above mentioned, with such deviation from said line, however, as may be required on account of the cession by Great Britain to the United States of the portion of Horse Shoe Reef in the Niagara River necessary for the light-house erected there by the United States in accordance with the terms of the protocol of a conference held at the British Foreign Office December 9, 1850, between the representatives of the two Governments and signed by them agreeing upon such cession; and it is agreed that wherever the boundary is shown on said charts by a curved line along the water the Commissioners are authorized in their discretion to adopt, in place of such curved line, a series of connecting straight lines defined by distances and courses and following generally the course of such curved line, but conforming strictly to the description of the boundary in the existing treaty provisions, and the geographical coordinates of the turning points of such line shall be stated by said Commissioners so as to conform to the system of latitudes and longitudes of the charts mentioned below, and the said Commissioners shall so far as practicable mark the course of the entire boundary line located and defined as aforesaid, by buoys and monuments in the waterways and by permanent range marks established on the adjacent shores or islands, and by such other boundary marks and at such points as in the judgment of the Commissioners it is desirable that the boundary should be so marked; and the line of the boundary defined and located as aforesaid shall be laid down by said Commissioners on accurate modern charts prepared or adopted by them for that purpose, in quad-

ruplicate sets, certified and signed by the Commissioners, two duplicate originals of which shall be filed by them with each Government; and the Commissioners shall also prepare in duplicate and file with each Government a joint report or reports describing in detail the course of said line and the range marks and buoys marking it, and the character and location of each boundary mark. The majority of the Commissioners shall have power to render a decision.

The line so defined and laid down shall be taken and deemed to be the international boundary as defined and established by Treaty provisions and the proceedings thereunder as aforesaid from its intersection with the St. Lawrence River to the mouth of Pigeon River.

In compliance with this article, the International Waterways Commission have the honour to submit their final report on the boundary between Canada and the United States through the St. Lawrence River, Great Lakes, and communicating waterways.

The boundary between the Dominion of Canada and the United States of America, through the St. Lawrence River and the Great Lakes, was originally defined by the Provisional Treaty of Peace between Great Britain and the United States, concluded at Paris, November 30, 1782. The following is a copy of Article II of this Treaty, which relates specifically to the boundary between Canada and the United States:

PROVISIONAL TREATY OF PEACE, 1782.

ARTICLE 2D.

From the north west Angle of Nova Scotia, viz. that angle which is form'd by a Line drawn due north, from the source of St. Croix River to the Highlands, along the said Highlands which divide those Rivers that empty themselves into the River St. Laurence, from those which fall into the Atlantic Ocean, to the northwesternmost Head of Connecticut River; thence down along the middle of that River to the 45th. Degree of North Latitude; from thence by a Line due West on said Latitude, untill it strikes the River Iroquois, or Cataraquy; thence along the middle of said River into Lake Ontario; through the middle of said Lake, untill it strikes the Communication by Water be-

tween that Lake and Lake Erie; thence along the middle of the said Communication into Lake Erie; through the middle of said Lake untill it arrives at the Water Communication between that Lake and Lake Huron; thence along the middle of said water communication into the Lake Huron; thence through the middle of said Lake to the Water Communication between that Lake and Lake Superior; thence through Lake Superior northward of the Isles Royal & Phelipeaux, to the Long Lake; thence through the middle of said Long Lake, and the water Communication between it and the Lake of the Woods, to the said Lake of the Woods, thence through the said Lake to the most Northwestern point thereof, and from thence on a due west Course to the River Missisippi; thence by a Line to be drawn along the middle of the said River Missisippi, untill it shall intersect the northernmost part of the 31st. Degree of North Latitude. South, by a line to be drawn due East, from the Determination of the Line last mention'd, in the Latitude of 31 Degrees North of the Equator, to the middle of the River Apalachicola or Catahouche; thence along the middle thereof, to its junction with the Flint River; thence strait to the Head of St. Mary's River, and thence down along the middle of St. Mary's River to the Atlantic Ocean. East, by a Line to be drawn along the middle of the River St. Croix, from its Mouth in the Bay of Fundy to its Source; and from its Source directly North, to the aforesaid Highlands which divide the Rivers that fall into the Atlantic Ocean, from those which fall into the River St. Laurence; comprehending all Islands within twenty Leagues of any part of the Shores of the united States, and lying between Lines to be drawn due East from the points where the aforesaid Boundaries between Nova Scotia on the one part and East Florida on the other shall respectively touch the Bay of Fundy, and the Atlantic Ocean; excepting such Islands as now are, or heretofore have been within the Limits of the said Province of Nova Scotia.

About nine months later, September 3, 1783, a definite treaty of peace was concluded at Paris between Great Britain and the United States. Article II of this treaty defines the boundary line through the St. Lawrence River and the Great Lakes as follows:

TREATY OF 1783, GREAT BRITAIN AND UNITED STATES.

ARTICLE 2D.

And that all Disputes, which might arise in future on the Subject of the Boundaries of the said United States may be prevented, it is hereby agreed and declared, that the following are and shall be their Boundaries, viz: From the North West Angle of Nova Scotia, viz: that Angle which is formed by a Line drawn due North from the Source of St. Croix River to the Highlands, along the said Highlands, which divide those Rivers that empty themselves into the River St. Laurence, from those which fall into the Atlantic Ocean, to the North Western most Head of Connecticut River: Thence down along the middle of that River to the Forty Fifth Degree of North Latitude; from thence by a Line due West on said Latitude, until it strikes the River Iroquois or Cataraquy; Thence along the middle of said River into lake Ontario; Through the middle of said Lake until it strikes the Communication by Water between that Lake and Lake Erie; Thence along the middle of said Communication into Lake Erie, through the middle of said Lake until it arrives at the Water Communication between that Lake and Lake Huron, Thence along the middle of said Water Communication into the Lake Huron, thence through the middle of said Lake to the Water Communication between that Lake and Lake Superior, thence through Lake Superior Northward of the Isles Royal and Phelipeaux to Long Lake, Thence through the middle of said Long Lake and the Water Communication between it and the Lake of the Woods, to the said Lake of the Woods, thence through the said Lake to the most Northwestern Point thereof, and from thence on a due west Course to the River Mississippi, Thence by a Line to be drawn along the middle of the said River Mississippi until it shall intersect the Northern-most Part of the Thirty first Degree of North Latitude. South, by a Line to be drawn due East from the Determination of the Line last mentioned in the Latitude of thirty one Degrees North of the Equator to the Middle of the River Aplachicola or Catahouche, Thence along the middle thereof to its Junction with the Flint River, Thence strait to the Head of St. Mary's River; and thence down along the middle of Saint Mary's River to the Atlantic Ocean. East, By a Line to be drawn along the middle of the

River St. Croix, from its mouth in the Bay of Fundy to its source, and from its Source directly North to the aforesaid Highlands which divide the Rivers that fall into the Atlantic Ocean from those which fall into the River Saint Laurence; comprehending all Islands within twenty Leagues of any Part of the shores of the United States, and lying between Lines to be drawn due East from the Points where the aforesaid Boundaries between Nova Scotia on the one Part and East Florida on the other, shall respectively touch the Bay of Fundy and the Atlantic Ocean, excepting such Islands as now are or hertofore have been within the Limits of the said Province of Nova Scotia.

On December 24, 1814, Great Britain and the United States concluded the Treaty of Ghent, at Ghent. This treaty provided for the appointment of two Commissioners to map and locate the boundary line in accordance with Article II of the Treaty of 1783.

TREATY OF GHENT, 1814.

ARTICLE 6.

Whereas by the former Treaty of Peace that portion of the boundary of the United States from the point where the Forty Fifth Degree of North Latitude strikes the River Iroquois or Cataraquy to the Lake Superior was declared to be " along the middle of said River into Lake Ontario, through the middle of said Lake until it strikes the communication by water between that Lake and Lake Erie, thence along the middle of said communication into Lake Erie, through the middle of said Lake until it arrives at the water communication into the Lake Huron, thence through the middle of said Lake to the water communication between that Lake and Lake Superior," and whereas doubts have arisen what was the middle of the said River, Lakes, and water communications, and whether certain Islands lying in the same were within the dominions of His Britannic Majesty, or of the United States; In order therefore finally to decide these doubts, they shall be referred to Two Commissioners to be appointed, sworn and authorized to act exactly in the manner directed with respect to those mentioned in the next preceding article, unless otherwise specified in this present article. The said Commissioners shall meet, in the first instance at Albany in the State of New York, and shall

have power to adjourn to such other place or places, as they shall think fit. The said Commissioners shall by a report or declaration under their hands and seals designate the boundary through the said River, Lakes and Water communications, and decide to which of the two Contracting parties the several Islands lying within the said Rivers, Lakes and Water communications do respectively belong in conformity with the true intent of the said Treaty of Seventeen Hundred and Eighty Three. And both parties agree to consider such designation and decision as final and conclusive. And in the event of the said Two Commissioners differing or both or either of them refusing, declining or wilfully omitting to act, such reports, declarations or statements shall be made by them or either of them, and such reference to a friendly Sovereign or State shall be made in all respects as in the latter part of the Fourth Article is contained, and in as full a manner as if the same was herein repeated.

ARTICLE 7.

It is further agreed that the said Two last mentioned Commissioners, after they shall have executed the duties assigned to them in the preceding article, shall be and they are hereby authorized upon their oaths impartially to fix and determine according to the true intent of the said Treaty of Peace of Seventeen Hundred and Eighty Three, that part of the boundary between the dominions of the two Powers which extends from the water communication between Lake Huron and Lake Superior to the most north western point of the Lake of the woods; to decide to which of the two parties the several Islands lying in the Lakes, water communications and Rivers forming the said boundary do respectively belong, in conformity with the true intent of the said Treaty of Peace of Seventeen Hundred and Eighty Three, and to cause such parts of the said boundary as require it, to be surveyed and marked. The said Commissioners shall by a report or declaration under their hands and seals designate the boundary aforesaid, state their decision on the points thus referred to them, and particularize the Latitude and Longitude of the most north western point of the Lake of the Woods and of such other parts of the said boundary as they may deem proper. And both parties agree to consider such designation and decision as final and conclusive. And in the event of the said two Commissioners differing or both or either of them refusing, declining or wil-

fully omitting to act, such reports, declarations or statements shall be made by them, or either of them and such reference to a friendly Sovereign or State, shall be made in all respects as in the latter part of the Fourth Article is contained, and in as full a manner as if the same was herein repeated.

The Commission under Article VI of the Treaty of Ghent for locating the boundary from the St. Lawrence River to the communication between Lake Huron and Lake Superior met November 18, 1816, and having agreed held their last meeting June 22, 1822.

DECISION OF THE COMMISSIONERS UNDER THE SIXTH ARTICLE OF THE TREATY OF GHENT. DONE AT UTICA, IN THE STATE OF NEW YORK, 18TH JUNE, 1822.

The Undersigned Commissioners, appointed sworn and authorized, in virtue of the Sixth Article of the Treaty of Peace and Amity between His Britannic Majesty and The United States of America, concluded at Ghent on the twenty fourth day of December in the year of our Lord One thousand eight hundred and fourteen, impartially to examine, and, by a Report or Declaration under their hands and seals, to designate " that portion of the boundary of the United States from the point where the 45th degree of North latitude strikes the river Iroquois or Cataragua along the Middle of said river into lake Ontario through the middle of said lake until it strikes the communication by water between that lake and lake Erie thence along the middle of said Communication into lake Erie through the middle of said lake until it arrives at the Water Communication into lake Huron thence through the middle of said water communication into lake Huron, thence through the middle of said lake to the water communication between that lake and lake Superior " and to " decide to which of the two contracting parties the several islands lying within the said rivers lakes and water communications, do respectively belong in conformity with the true intent of the treaty of 1783:" do decide and declare that the following described line (which is more clearly indicated on a series of Maps accompanying this Report exhibiting correct surveys and delineations of all the rivers lakes water communications and islands embraced by the Sixth Article of the Treaty of Ghent by a Black line shaded on the British side with Red and on the American side with Blue and each sheet of which series of maps is identified by

a certificate subscribed by the Commissioners and by the two Principal Surveyors employed by them) is the true boundary intended by the two before mentioned Treaties: that is to say,

Beginning at a Stone Monument, erected by Andrew Ellicott Esquire in the year of our Lord One thousand eight hundred and seventeen on the South bank or shore of the said River Iroquois or Cataragua (now called the St. Lawrence) which Monument bears South seventy four degrees and forty five minutes west and is eighteen hundred and forty yards distant from the Stone Church in the Indian Village of St. Regis and indicates the point at which the forty fifth parallel of North latitude strikes the said river. Thence running north thirty five degrees and forty five minutes west into the river on a line at right angles with the Southern shore to a point one hundred yards south of the opposite island called Cornwall Island: Thence turning westerly and passing around the southern and western sides of said island keeping one hundred yards distant therefrom and following the curvatures of its shores to a point opposite to the north west corner or angle of said island Thence to and along the middle of the main river until it approaches the eastern extremity of Barnhart's Island: Thence northerly along the Channel which divides the last mentioned island from the Canada shore keeping one hundred yards distant from the island until it approaches Sheik's Island: Thence along the middle of the Strait which divides Barnhart's and Sheik's Islands to the Channel called The Long Sault which separates the two last mentioned islands from the Lower Long Sault Island: Thence westerly (crossing the centre of the last mentioned Channel) until it approaches within one hundred yards of the north shore of the Lower Sault Island Thence up the north branch of the river keeping to the north of and near the Lower Sault Island and also north of and near the Upper Sault (sometimes called Baxter's) Island and south of the two small islands marked on the Map A and B to the Western extremity of the Upper Sault or Baxter's Island: Thence passing between the two islands called The Cats to the middle of the river above: Thence along the middle of the river keeping to the north of the small islands marked C and D and north also of Chrystler's Island and of the small island next above it marked E until it approaches the north east angle of Goose Neck Island: Thence along the passage which divides the last mentioned island from the Canada shore keeping one hundred yards from the island to the upper end of the same:

Thence South of and near the two small islands called the Nut islands: Thence north of and near the island marked F and also of the Island called Dry or Smuggler's Island: Thence passing between the islands marked G and H*, to the north of the island called Isle au Rapid Plat: Thence along the north side of the last mentioned Island, keeping one hundred yards from the shore to the upper end thereof: Thence along the middle of the river keeping to south of and near the islands called Cousson (or Tussin) and Presque Isle: Thence up the river keeping north of, and near, the several Gallop Isles numbered on the Map 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 and also of Tick, Tibbet's and Chimney Islands and south of and near the Gallop Isles numbered 11, 12, & 13 and also of Duck, Drummond, and Sheep Islands: Thence along the middle of the river passing north of Island No. 14, South of 15 & 16 north of 17 South of 18, 19, 20, 21, 22, 23, 24, 25 & 28, and north of 26† & 27: Thence along the middle of the river north of Gull Island and of the islands No. 29, 32, 33, 34, 35 Bluff Island and No. 39, 44, & 45 and to the south of No. 30, 31, 36 Grenadier Island and No. 37, 38, 40, 41, 42, 43, 46, 47 & 48 until it approaches the east end of Well's Island: Thence to the north of Well's Island and along the Strait which divides it from Rowe's Island keeping to the north of the small islands No. 51, 52, 54, 58, 59 & 61 and to the south of the small islands numbered and marked 49, 50, 53, 55 57, 60 & X until it approaches the north east point of Grindstone Island: Thence to the north of Grindstone Island and keeping to the north also of the small islands No. 63, 65, 67, 68, 70, 72, 73, 74, 75, 76, 77 & 78 and to the south of No. 62, 64, 66, 69 & 71 until it approaches the southern point of Hickory Island: Thence passing to the south of Hickory Island and of the two small islands lying near its southern extremity numbered 79 & 80: Thence to the south of Grand or Long Island keeping near its southern shore and passing to the north of Carlton Island until it arrives opposite to the south western point of said Grand Island in lake Ontario: Thence passing to the North of Grenadier, Fox Stony and the Gallop Islands in lake Ontario and to the south of and near the Islands called The Ducks to the middle of said lake: Thence westerly along the middle of said lake to a point opposite the mouth of the Niagara River: Thence to and

* I on maps filed at Washington. W. J. S.
† Boundary line drawn south of 26 on maps filed in Washington. W.J.S.

up the middle of the said River to the Great Falls: Thence up the Falls through the point of the Horse Shoe, Keeping to the west of Iris or Goat Island and of the group of small islands at its head and following the bends of the River so as to enter the Strait between Navy and Grand Islands Thence along the middle of said strait to the head of Navy Island: Thence to the west and south of and near to Grand and Beaver Islands and to the west of Strawberry Squaw, and Bird Islands to Lake Erie; Thence southerly and westerly along the middle of Lake Erie in a direction to enter the Passage immediately south of Middle Island being one of the easternmost of the Group of Islands lying in the western part of said lake: Thence along the said Passage proceeding to the North of Cunningham's Island, of the Three Bass Islands and of the Western Sister and to the south of the islands called The Hen & Chickens, and of the Eastern and Middle Sisters: Thence to the middle of the mouth of the Detroit River in a direction to enter the channel which divides Bois Blanc and Sugar Islands: Thence up the said Channel to the west of Bois Blanc Island and to the east of Sugar, Fox and Stony Islands until it approaches Fighting or Great Turkey Island: Thence along the western side and near the shore of said last mentioned island to the middle of the river above the same: Thence along the middle of said river keeping to the south east of and near Hog Island and to the north west of and near the island called Isle a la Pache, to lake St. Clair: Thence through the middle of said lake in a direction to enter that mouth or Channel of the river St. Clair which is usually denominated The Old Ship Channel; Thence along the middle of said Channel between Squirril Island on the south east and Herson's Island on the north west, to the upper end of the last mentioned island which is nearly opposite to Point aux Chenes on the American Shore Thence along the middle of the river St. Clair keeping to the west of and near the islands called Belle Rivierè Isle and Isle aux Cerfs to lake Huron: Thence through the middle of Lake Huron in a direction to enter the strait or passage between Drummond's Island on the West, and the Little Manitou Island on the east: Thence through the middle of the passage which divides the two last mentioned islands: Thence, turning northerly and westerly around the eastern and northern shores of Drummond's island and proceeding in a direction to enter the passage between the island of St. Joseph's and the American shore passing to the north of the intermediate islands No. 61, 11, 10,

12, 9, 6, 4 & 2 and to the south of those numbered 15, 13, 5 & 1: Thence up the said last mentioned Passage keeping near to the Island St. Joseph's and passing to the North and east of Isle a la Crosse and of the small islands numbered 16, 17, 18, 19 & 20 and to the south and west of those numbered 21, 22 & 23 until it strikes a line (drawn on the Map with black ink and shaded on one side of the point of intersection with blue and on the other with red) passing across the river at the head of St. Joseph's Island, and at the foot of the Neebish Rapids: which line denotes the termination of the Boundery directed to be run by the Sixth Article of the Treaty of Ghent.

And the said Commissioners do further decide and declare that all the islands lying in the Rivers Lakes and Water Communications between the before described Boundary Line and the adjacent shores of Upper Canada Do and each of them does belong to his Britannic Majesty and that all the islands lying in the rivers Lakes and Water Communications between the said Boundary Lines and the adjacent shores of the United States or their Territories Do and each of them Does belong to the United States of America in conformity with the true intent of the second Article of the said Treaty of 1783 and of the Sixth Article of the Treaty of Ghent.

In faith whereof We the Commissioners aforesaid have signed this Declaration and thereunto affixed our Seals.

Done in Quadruplicate at Utica in the State of New York in the United States of America this eighteenth day of June in the year of our Lord One thousand eight hundred and twenty two.

ANTH. BARCLAY [Seal.]
PETER. B. PORTER [Seal.]

The Commission under Article VII of the Treaty of Ghent, for locating the boundary from Lake Huron to the Lake of the Woods, met June 22, 1822, and having disagreed held their final meeting December 24, 1827.

Certain portions of the boundary line between the Dominion of Canada and the United States described in the treaties of 1782 and 1783 had not been definitely ascertained and determined up to 1842. The completion was provided for in the Webster-Ashburton Treaty concluded August 9, 1842. This treaty, in Article 1, provided for settlement of the north-

eastern boundary between Canada and the United States and describes therein the point of intersection of the forty-fifth parallel of north latitude with the St. Lawrence River, or Iroquois, as formerly called.

WEBSTER-ASHBURTON TREATY.

ARTICLE I.

It is hereby agreed and declared that the line of boundary shall be as follows: Beginning at the monument at the source of the river St. Croix, as designated and agreed to by the Commissioners under the fifth article of the Treaty of 1794, between the Governments of Great Britain and the United States; thence, north, following the exploring line run and marked by the Surveyors of the two Governments in the years 1817 and 1818, under the fifth article of the Treaty of Ghent, to its intersection with the river St. John, and to the middle of the channel thereof; thence, up the middle of the main channel of the said river St. John, to the mouth of the river St. Francis; thence up the middle of the channel of the said river St. Francis, and of the lakes through which it flows, to the outlet of the Lake Pohenagamook; thence, southwesterly, in a straight line to a point on the northwest branch of the river St. John, which point shall be ten miles distant from the main branch of the St. John, in a straight line, and in the nearest direction; but if the said point shall be found to be less than seven miles from the nearest point of the summit or crest of the highlands that divide those rivers which empty themselves into the river Saint Lawrence from those which fall into the river St. John, then the said point shall be made to recede down the said northwest branch of the river St. John, to a point seven miles in a straight line from the said summit or crest; thence, in a straight line, in a course about South eight degrees west, to the point where the parallel of latitude of 46° 25′ north intersects the Southwest branch of the Saint Johns'; thence, southerly, by the said branch, to the source thereof in the highlands at the Metjarmette Portage; thence, down along the said highlands which divide the waters which empty themselves into the river St. Lawrence from those which fall into the Atlantic Ocean, to

the head of Hall's Stream; thence, down the middle of said Stream, till the line thus run intersects the old line of boundary surveyed and marked by Valentine and Collins previously to the year 1774, as the 45th degree of north latitude, and which has been known and understood to be the line of actual division between the States of New York and Vermont on one side, and the British Province of Canada on the other; and, from said point, of intersection, west, along the said dividing line as heretofore known and understood, to the Iroquois or St. Lawrence river.

This treaty in Article II also provided for the delimitation of the boundary line between Canada and the United States from the point in Neebish Channel, St. Marys River, where the Commissioners under the sixth article of the Treaty of Ghent terminated their labours, to the Lake of the Woods.

WEBSTER-ASHBURTON TREATY.

ARTICLE II.

It is moreover agreed that from the place where the joint Commissioners terminated their labors under the sixth article of the Treaty of Ghent, to wit: at a point in the Neebish Channel, near Muddy Lake, the line shall run into and along the ship channel between St. Joseph's and St. Tammany Islands, to the division of the channel at or near the head of St. Joseph's Island; thence, turning eastwardly and northwardly, around the lower end of St. George's or Sugar Island, and following the middle of the channel which divides St. George's from St. Joseph's Island; thence up the east Neebish Channel, nearest to St. George's Island, through the middle of Lake George; thence, west of Jonas' Island, into St. Mary's river, to a point in the middle of that river, about one mile above St. George's or Sugar Island, so as to appropriate and assign the said Island to the United States; thence, adopting the line traced on the maps by the Commissioners, through the river St. Mary and Lake Superior, to a point north of Ile Royale in said Lake, one hundred yards to the north and east of Ile Chapeau, which last mentioned Island lies near the northeastern point of Ile Royale, where the line marked by the Commissioners terminates; and from the last mentioned point, southwesterly, through the middle of the Sound between Ile Royale and the northwestern

main land, to the mouth of Pigeon river, and up the said river to, and through, the north and south Fowl Lakes, to the Lakes of the height of land between Lake Superior and the Lake of the Woods; thence, along the water-communications to Lake Saisaginaga, and through that Lake; thence, to and through Cypress Lake, Lac du Bois Blanc, Lac la Croix, Little Vermillion Lake, and Lake Namecan, and through the several smaller lakes, straights, or streams, connecting the lakes here mentioned, to that point in Lac la Pluie, or Rainy Lake, at the Chaudière Falls, from which the Commissioners traced the line to the most northwestern point of the Lake of the Woods; thence, along the said line to the said most northwestern point, being in latitude 49° 23′ 55″ north, and in longitude 95° 14′ 38″ west from the Observatory at Greenwich:—thence, according to existing Treaties, due south, to its intersection with the 49th parallel of north latitude, and along that parallel to the Rocky Mountains. It being understood that all the water-communications, and all the usual portages along the line from Lake Superior to the Lake of the Woods; and also Grand Portage, from the shore of Lake Superior to the Pigeon river, as now actually used, shall be free and open to the use of the subjects and citizens of both Countries.

On December 9, 1850, representatives of Great Britain and the United States signed, at the Foreign Office, a protocol of a conference ceding Horseshoe Reef, at the foot of Lake Erie, to the United States.

PROTOCOL OF A CONFERENCE HELD AT THE FOREIGN OFFICE, DECEMBER 9, 1850, CEDING HORSE-SHOE REEF TO THE UNITED STATES.

Viscount Palmerston, Her Britannick Majesty's Principal Secretary of State for Foreign Affairs, and Abbott Lawrence, Esquire, the Envoy Extraordinary and Minister Plenipotentiary of the United States of America at the Court of Her Britannick Majesty, having met together at the Foreign Office:—

Mr. Lawrence stated that he was instructed by his Government to call the attention of the British Government to the dangers to which the important Commerce of the great Lakes of the interior of America, and more particularly that concentrating at the Town of Buffalo near the entrance of the Niagara River from Lake Erie, and that passing through the

Welland Canal, is exposed from the want of a Lighthouse near the outlet of Lake Erie.—Mr. Lawrence stated that the Current of the Niagara River is at that spot very strong, and increases in rapidity as the River approaches the Falls; and as that part of the River is necessarily used for the purpose of a harbour, the Congress of the United States, in order to guard against the danger arising from the rapidity of the Current, and from other local causes, made an appropriation for the construction of a Lighthouse at the outlet of the Lake.—But on a local survey being made, it was found that the most eligible site for the erection of the Lighthouse was a Reef known by the name of the "Horse-shoe Reef," which is within the Dominions of Her Brittannick Majesty; and Mr. Lawrence was therefore instructed by the Government of the United States to ask whether the Government of Her Britannick Majesty will cede to the United States the Horse-Shoe Reef, or such part thereof as may be necessary for the purpose of erecting a Lighthouse; and if not, whether the British Government will itself erect and maintain a Lighthouse on the said Reef.

Viscount Palmerston stated to Mr. Lawrence in reply, that Her Majesty's Government concurs in opinion with the Government of the United States that the proposed Lighthouse would be of great advantage to all Vessels navigating the Lakes; and that Her Majesty's Government is prepared to advise Her Majesty to cede to the United States such portion of the Horse Shoe Reef as may be found requisite for the intended Lighthouse, provided the Government of the United States will engage to erect such Lighthouse, and to maintain a Light therein; and provided no fortification be erected on the said Reef.—

Viscount Palmerston and Mr. Lawrence, on the part of their respective Governments, accordingly agreed that the British Crown should make this Cession, and that the United States should accept it, on the above-mentioned conditions.

PALMERSTON.
ABBOTT LAURENCE.

INSTRUCTIONS FROM THE BRITISH AND UNITED STATES GOVERNMENTS TO THE INTERNATIONAL WATERWAYS COMMISSION, RELATING TO THE DEFINITION AND DEMARCATION OF THE BOUNDARY LINE BETWEEN THE DOMINION OF CANADA AND THE UNITED STATES.

On May 21, 1908, Hon. Elihu Root, Secretary of State of the United States, communicated with General O. H. Ernst, chairman, Mr. George Clinton and Mr. E. E. Haskell, United States members of the International Waterways Commission, inviting their attention to Article IV of the Boundary Treaty between Great Britain and the United States, signed at Washington, D.C., April 11, 1908, providing for a more complete definition and demarcation of the international boundary between the Dominion of Canada and the United States, and stating that in performance of their duties under this article they will act under, and report to, the Department of State.

In May, 1908, Sir Wilfrid Laurier, Premier of the Dominion of Canada, communicated with Sir George C. Gibbons, chairman of the Canadian section of the International Waterways Commission, enclosing letter from Mr. James Bryce, ambassador from His Britannic Majesty at Washington, to Earl Grey, Governor General of Canada, stating that the ascertaining and re-establishing of the boundary between the two countries through the St. Lawrence River and the Great Lakes had been assigned to the International Waterways Commission, and suggesting the desirability of the Commissioners starting work on the matter as speedily as possible.

LOCATION OF THE INTERNATIONAL BOUNDARY LINE BETWEEN CANADA AND THE UNITED STATES THROUGH THE ST. LAWRENCE RIVER, GREAT LAKES, AND COMMUNICATING WATERWAYS.

The Commission met at Buffalo, N.Y., on June 2, 1908, and appointed a committee, consisting of commissioners Haskell and

Stewart, to prepare plans for carrying out the provisions of Article IV of the treaty. This Committee reported at a meeting held in Toronto, Ontario, June 23, 1908, when a detailed project for carrying out the work was prepared and forwarded to the Secretary of State of the United States and the Minister of Public Works of Canada, as follows:

PROJECT FOR THE MORE COMPLETE DEFINITION AND DEMARCATION OF THE INTERNATIONAL BOUNDARY LINE, UNDER ARTICLE IV OF THE TREATY OF APRIL 11, 1908.

TORONTO, ONTARIO, June 23, 1908.

The Honourable the Secretary of State of the United States of America and,

The Honourable the Minister of Public Works of the Dominion of Canada:

The International Waterways Commission has the honour to submit the following report and preliminary estimate upon the work prescribed to it by Article IV of the treaty of April 11, 1908, relating to the more complete definition and demarcation of the international boundary line between the United States and the Dominion of Canada.

1. The Commission has decided that the series of charts be uniform in size.

That a scale of 1:20,000 be adopted for the delineation of the rivers and Pigeon Bay; that the head of the St. Lawrence River and foot of Lake Ontario, the east and west ends of Lake Erie, Lake St. Clair, False Detour Passage, and the east end of Lake Superior (Whitefish Bay) be delineated on a scale of 1:60,000; that Lakes Ontario, Erie, Huron, and Superior to be delineated on a scale of 1:300,000; and also that the Niagara River from Lewiston to La Salle, and the St. Marys River from Little Rapids to Point aux Pins, be delineated on a larger scale of 1:10,000.

The standard size of these charts to be 40 by 50 inches within the border.

Based upon the foregoing, there will be required:

Charts for the St. Lawrence River	7
Charts for Lake Ontario	2
Charts for Niagara River	2
Charts for Lake Erie	3
Charts for Detroit River	2
Chart for Lake St. Clair	1
Charts for St. Clair River	2
Charts for Lake Huron	2
Charts for St. Marys River	4
Charts for Lake Superior	3
Chart on 1:10,000 for Niagara Falls	1
Chart on 1:10,000 for St. Marys River	1
Total	30

That these charts be projected upon the new United States standard datum and show substantially the following:

The shore line of the lakes, rivers, islands, and the mouths of the more important tributary streams; the location of all the principal cities and towns, the location of all lighthouses, and all permanent aids to navigation; and all of the hydrography available from the Canadian and United States surveys; all of the geographical positions upon which the projections are based; the boundary line and all monuments, ranges, buoys, etc., used to mark it.

Our reasons for the foregoing recommendations are based upon a careful study of the Lake Survey charts. It was found that a series of charts based upon two scales, one for the lakes and one for the rivers, would not satisfy all of the conditions. Three scales, namely, 20, 60, and 300 thousand, cover every feature of the boundary in a fairly satisfactory manner with the possible exception of the immediate localities of Niagara Falls and the St. Marys Falls. For these localities, where large power interests are located, we have adopted a chart for each on a scale of 1:10,000. It is possible that there may be other localities where, after further consideration, it may be advisable to delineate them on a scale of 1:10,000 also. It should be understood that these charts on this scale are to be extras; that is, they will cover areas that will be delineated on the smaller scale charts. It will be seen at a glance that this method would be much cheaper than to produce all of the river charts on a scale of 1:10,000.

One of the difficulties of producing all of the river charts on a scale of 1:10,000 is that in certain localities they would not show enough of the territory adjacent to the river to permit of showing permanent marks and ranges.

2. Having, as above, determined upon the most suitable scales for the proposed charts there naturally follows the question of production, not only for delineating the boundary line, but for fulfilling the terms of the treaty by making four copies for the files of the two Governments.

For the charts, the Commission is of the opinion that the surveys of the United States Lake Survey can safely be taken, as they embrace all the United States shores and much of the Canadian, and most of the missing portions of the latter can be filled in from the work of the Canadian Hydrographic Survey.

The majority of the charts of the United States Lake Survey now in use were constructed prior to the connection between its triangulation and that of the Coast and Geodetic Survey, from which was derived the United States standard datum, and as a consequence these charts are not in accord with that datum.

In our opinion it would be quite improper for an international commission engaged in such an important work as the delineation of a boundary line to offer the public of two countries any charts not drawn from the latest information available.

It therefore becomes necessary to construct new charts for the special purpose upon nearly uniform scales.

The charts called for may be produced in three ways: (a) by drafting on paper, (b) by photolithography, and (c) by engraving.

(a) By Drafting.—In this method the projection, reduction, and drawing must all be carefully drawn on paper, and from the finished sheet four separate copies would be taken singly and independently. This process would be very laborious and costly, and would leave infinite chances for inaccuracies, inconsistencies, and omissions, to such an extent that it would be almost impossible to assert that any two copies were exactly alike. In addition, most of the accuracy obtained from redrawing would be sacrificed in the various necessary transfers.

(b) By Photolithography.—In this method one copy must be most carefully and neatly drawn in every particular for the photographer. The Commission does not feel that it would be justified in adopting this method, because of the distortion that usually accompanies the use of photography.

(c) By Engraving.—There are two kinds of engraving usually practised in the production of charts, that upon stone and that upon copper, the former being cheaper and more expeditious.

In this process the projection can be accurately drawn upon the stones and the details of shore line, hydrography, etc., placed directly there by reducing from the originals either by pantagraph or photography without any necessity for a finished drawing. The Commission has adopted this method of reproduction, because upon the stone the chart can be drawn more accurately than upon paper, and from this any number of charts can be printed immediately, each one exactly like all the others. In addition, if thought advisable, the charts can be preserved on these stones for all time; or they can be transferred to copper by the process now used by the Lake Survey, the copper plates preserved, and the stones sold.

An approximate estimate of the chart work by this method would be $60,000.

3. Field work required for the preparation of charts: In the construction of charts for navigation purposes, the two Governments have been engaged for several years. The survey of the United States shores has been completed in conjunction with a primary triangulation that extends into Canada in many places. Of the Canadian shores, those of Lakes Huron and Erie have been completed, while that of Lake Superior is practically done, and wherever possible connection has been made with the triangulation of the United States Lake Survey, so that the two surveys may be taken as giving an accurate delineation of the outlines of the lakes. For an accurate determination of the boundary line there remains to be surveyed the whole of the north shore of Lake Ontario from False Ducks to Port Dalhousie, a portion of Lake Superior in the vicinity of Otter Head, and a resurvey of Pigeon Bay on a larger scale than has been used by the Canadian Hydrographic Survey.

4. Placing of monuments, ranges, buoys, etc., to mark the boundary: The treaty calls upon the Commission to mark the international boundary by monuments, ranges, buoys, etc., wherever possible. The cost of this work will depend upon the number and character of marks established. A rough estimate of cost would be $100,000, making an approximate total estimate for doing the work $160,000.

A probable estimate for expenditures the first year is $15,000 for each Government.

All of which is respectfully submitted.

GEO. C. GIBBONS,
Chairman, Canadian Section.
LOUIS COSTE,
Member, Canadian Section.
WM. J. STEWART,
Member, Canadian Section.
O. H. ERNST,
Brigadier General, United States Army, Retired,
Chairman, American Section.
GEORGE CLINTON,
Member, American Section.
E. E. HASKELL,
Member, American Section.

Attest:

THOMAS COTÉ,
Secretary, Canadian Section.
W. EDWARD WILSON,
Secretary, American Section.

At the same meeting, the Commission authorized the continuance of the committee appointed at the meeting of June 2nd, as a permanent boundary committee, and instructed it to organize the necessary force and proceed with the work.

After the organization of the office staff and a further consideration of the method of producing the charts, it was decided to engrave the work on copper plates because stones of the required size could be obtained only with the greatest difficulty and at excessive cost and such plates could be duplicated by electrotyping if desired.

The preparation of the thirty boundary charts based on the North American datum (formerly United States Standard Datum) was begun in August, 1908. The Commission utilized the original Government surveys of the United States Engineer Bureau of the War Department, the Canadian Hydrographic Survey, United States Hydrographic Office, Canadian Depart-

ment of Militia and Defence, and the United States Geological Survey, besides several State, Province, Municipal, and Corporate Surveys. These original manuscript charts saved the Commission a vast amount of labour and time. It was necessary, however, to make many detached surveys to close up the gaps. These charts are 40 inches by 50 inches within the border and show the shore line of the lakes, rivers, islands, and the mouths of the more important tributary streams, the location of all the principal cities and towns, the hydrography, the location of all lighthouses and all permanent aids to navigation, the geographical positions upon which the projections are based,prominent points, the boundary line, and all monuments used to mark it. The soundings on the charts of the rivers, Lake St. Clair, and Pigeon Bay are expressed in feet, while those on the remainder are expressed in fathoms outside, and in feet inside, the four-fathom contour. They are referred to the Standard Low Water Datum adopted by the United States Lake Survey and the Canadian Hydrographic Survey in 1909. These elevations in feet above mean sea level are: Lake Ontario, 243.00; Lake Erie, 570.00; Lake Huron, 578.50; and Lake Superior, 600.50. The drafting and engraving of boundary charts was finally completed in November, 1914.

Early in 1909, the Commission discussed the general location of the boundary line as described in the treaties relating thereto and in the decision of the Commissioners acting under the sixth article of the Treaty of Ghent, and as shown on the maps accompanying it, and the Webster-Ashburton Treaty of 1842.

The location of the boundary line through these waters was tentatively drawn on United States Lake Survey charts and later transferred to copper-plate proofs of the Commission's own boundary maps as they were completed during the progress of the work. The tentative boundary line was adopted with a provision that either section was at liberty at any time to propose alterations in it. The final location was fixed and adopted by the Commissioners at Buffalo, N. Y., on August 15, 1913.

The initial point near St. Regis, Quebec, and the final point at the mouth of Pigeon River, in Lake Superior, of the boundary under Article IV of the Boundary Treaty, were agreed to jointly by this Commission and that composed of Dr. W. F. King, commissioner representing Great Britain, and Mr. O. H. Tittmann, commissioner representing the United States, acting under Articles III and V of the same treaty.

The boundary line as ascertained and re-established consists of a series of connecting straight lines, the intersections of which are called turning points. They are referenced by bearing and distance to concrete monuments and lighthouses. The number of monuments is 90 on the St. Lawrence River, including two azimuth monuments; 35 on the Niagara River; 58 on the Detroit and St. Clair Rivers; 44 on the St. Marys River, including one azimuth monument; and 4 on Pigeon Bay, including one azimuth monument, or 231 in all.

It was not deemed practicable to place buoys and monuments in the waterways or use permanent range marks on shore, as suggested in the Treaty, except in a few instances where permanent ranges were in existence and could be utilized.

The undersigned Commissioners authorized and empowered by the United Kingdom of Great Britain and Ireland and the United States of America do unanimously decide and declare that the following described line is the location of the international boundary line between the Dominion of Canada and the United States of America, beginning at the point of its intersection with the St. Lawrence River near the forty-fifth parallel of north latitude, as determined under Articles I and VI of the Treaty of August 9, 1842, between Great Britain and the United States, and thence through the Great Lakes and communicating waterways to the mouth of Pigeon River at the western shore of Lake Superior, which line is graphically shown in black on quadruplicate sets of charts certified and signed by the Commissioners and accompanying this report:

DESCRIPTION OF INTERNATIONAL BOUNDARY LINE BETWEEN CANADA AND THE UNITED STATES THROUGH THE ST. LAWRENCE RIVER, GREAT LAKES, AND COMMUNICATING WATERWAYS.

Beginning at the point of origin, the intersection of the international boundary line with the southeast shore of the St. Lawrence River near the forty-fifth parallel of north latitude, in

Latitude 44 degrees 59 minutes 58.23 seconds N.

Longitude 74 degrees 39 minutes 41.98 seconds W.

North American datum, and bearing N. 89 degrees 55 minutes 27.6 seconds W. 106.6 feet from boundary monument 774, near St. Regis, Quebec, erected jointly in 1902 by the Dominion of Canada and the State of New York, in

Latitude 44 degrees 59 minutes 58.23 seconds N.

Longitude 74 degrees 39 minutes 40.49 seconds W.

THENCE S. 68 degrees 28 minutes 30 seconds W. 511 feet into the river to the site of the stone monument erected by Andrew Ellicott, Esquire, in the year of Our Lord 1817, in

Latitude 44 degrees 59 minutes 56.38 seconds N.

Longitude 74 degrees 39 minutes 48.59 seconds W.

and bearing S. 74 degrees 45 minutes W. 1840 yards from the (spire) stone church in St. Regis, Quebec, in

Latitude 45 degrees 00 minutes 10.72 seconds N.

Longitude 74 degrees 38 minutes 34.48 seconds W.

and bearing S. 72 degrees 09 minutes W. 611 feet from boundary monument 774, heretofore described;

THENCE N. 35 degrees 45 minutes W. 3307 feet to Turning Point No. 1, near the east shore of Cornwall Island, in

Latitude 45 degrees 00 minutes 22.88 seconds N.

Longitude 74 degrees 40 minutes 15.48 seconds W.

and bearing S. 3 degrees 44 minutes E. 1097 feet from Monument No. 1, located near the east end of Cornwall Island, in

Latitude 45 degrees 00 minutes 33.68 seconds N.

Longitude 74 degrees 40 minutes 16.48 seconds W.

THENCE along the shore of said island S. 19 degrees 41 minutes 30 seconds W. 2108 feet to Turning Point No. 2, in

Latitude 45 degrees 00 minutes 03.28 seconds N.

Longitude 74 degrees 40 minutes 25.37 seconds W.

and bearing S. 25 degrees 07 minutes E. 780 feet from Monument No. 2, on the south side of Cornwall Island, in

Latitude 45 degrees 00 minutes 10.25 seconds N.
Longitude 74 degrees 40 minutes 29.98 seconds W.

THENCE along the south shore of said island S. 79 degrees 31 minutes 40 seconds W. 2703 feet to Turning Point No. 3, in
Latitude 44 degrees 59 minutes 58.43 seconds N.
Longitude 74 degrees 41 minutes 02.35 seconds W.
and bearing S. 25 degrees 27 minutes W. 453 feet from Monument No. 3, on the south side of Cornwall Island, in
Latitude 45 degrees 00 minutes 02.47 seconds N.
Longitude 74 degrees 40 minutes 59.64 seconds W.

THENCE along the south shore of said island N. 73 degrees 58 minutes 00 seconds W. 5041 feet to Turning Point No. 4, in
Latitude 45 degrees 00 minutes 12.17 seconds N.
Longitude 74 degrees 42 minutes 09.78 seconds W.
and bearing S. 2 degrees 05 minutes E. 314 feet from Monument No. 4, on the south side of Cornwall Island, in
Latitude 45 degrees 00 minutes 15.27 seconds N.
Longitude 74 degrees 42 minutes 09.93 seconds W.

THENCE along the south shore of said island S. 70 degrees 37 minutes 30 seconds W. 5351 feet to Turning Point No. 5, in
Latitude 44 degrees 59 minutes 54.63 seconds N.
Longitude 74 degrees 43 minutes 20.02 seconds W.
and bearing S. 16 degrees 30 minutes E. 483 feet from Monument No. 5, on the south side of Cornwall Island, in
Latitude 44 degrees 59 minutes 59.20 seconds N.
Longitude 74 degrees 43 minutes 21.93 seconds W.

THENCE along the south shore of said island S. 39 degrees 10 minutes 00 seconds W. 3751 feet to Turning Point No. 6, in
Latitude 44 degrees 59 minutes 25.91 seconds N.
Longitude 74 degrees 43 minutes 52.99 seconds W.
and bearing S. 27 degrees 52 minutes E. 484 feet from Monument No. 6, located on the south side of Cornwall Island and 650 feet east of the New York and Ottawa Railway track, in
Latitude 44 degrees 59 minutes 30.13 seconds N.
Longitude 74 degrees 43 minutes 56.13 seconds W.

THENCE along the south shore of said island N. 88 degrees 50 minutes 20 seconds W. 3506 feet to Turning Point No.7, in
Latitude 44 degrees 59 minutes 26.61 seconds N.
Longitude 74 degrees 44 minutes 41.77 seconds W.
and bearing S. 41 degrees 05 minutes W. 467 feet from Monument No. 7, on the south side of Cornwall Island, in
Latitude 44 degrees 59 minutes 30.09 seconds N.

Longitude 74 degrees 44 minutes 37.49 seconds W.

Thence along the south shore of said island N. 68 degrees 54 minutes 00 seconds W. 4393 feet to Turning Point No. 8, in

Latitude 44 degrees 59 minutes 42.22 seconds N.

Longitude 74 degrees 45 minutes 38.80 seconds W.

and bearing S. 61 degrees 55 minutes W. 551 feet from Monument No. 8, located on the southwest point of Cornwall Island, in

Latitude 44 degrees 59 minutes 44.79 seconds N.

Longitude 74 degrees 45 minutes 32.03 seconds W.

THENCE N. 10 degrees 25 minutes 40 seconds W. 3979 feet through Pollys Gut between Massena Point and Cornwall Island to Turning Point No. 9, in

Latitude 45 degrees 00 minutes 20.86 seconds N.

Longitude 74 degrees 45 minutes 48.82 seconds W.

and bearing S. 14 degrees 48 minutes E. 1175 feet from Monument No. 9 located on the Canadian side, about one-half mile below Lock 19, on the Cornwall Canal, in

Latitude 45 degrees 00 minutes 32.08 seconds N.

Longitude 74 degrees 45 minutes 53.00 seconds W.

THENCE S. 86 degrees 27 minutes 00 seconds W. 7708 feet along the middle of the river and near to Crab Island Shoal to Turning Point No. 10, east of Barnhart Island, in

Latitude 45 degrees 00 minutes 16.14 seconds N.

Longitude 74 degrees 47 minutes 35.90 seconds W.

and bearing N. 86 degrees 25 minutes E. 1719 feet from Monument No. 10, located on the easterly end of Barnhart Island, in

Latitude 45 degrees 00 minutes 15.08 seconds N.

Longitude 74 degrees 47 minutes 59.77 seconds W.

THENCE N. 37 degrees 41 minutes 00 seconds W. 2945 feet along the east shore of said island to Turning Point No. 11, east of Barnharts, New York, on Barnhart Island, in

Latitude 45 degrees 00 minutes 39.15 seconds N.

Longitude 74 degrees 48 minutes 00.95 seconds W.

and bearing S. 00 degrees 13 minutes W. 1383 feet from Monument No. 11, located on the south bank of the Cornwall Canal and about three-eighths of a mile southeast of Lock 20, in

Latitude 45 degrees 00 minutes 52.80 seconds N.

Longitude 74 degrees 48 minutes 00.88 seconds W.

THENCE N. 17 degrees 13 minutes 10 seconds W. 1431 feet along the east shore of Barnhart Island to Turning Point No. 12, in

Latitude 45 degrees 00 minutes 52.64 seconds N.

Longitude 74 degrees 48 minutes 06.88 seconds W.
and bearing S. 87 degrees 47 minutes W. 431 feet from Monument No. 11, heretofore described;

THENCE S. 83 degrees 06 minutes 30 seconds W. 3065 feet along the north shore of Barnhart Island to Turning Point No. 13, in

Latitude 45 degrees 00 minutes 49.00 seconds N.

Longitude 74 degrees 48 minutes 49.23 seconds W.
and bearing S. 47 degrees 43 minutes E. 1910 feet from Monument No. 12, located on the south bank of the Cornwall Canal and about five-eighths of a mile west of Lock 20, in

Latitude 45 degrees 01 minute 01.69 seconds N.

Longitude 74 degrees 49 minutes 08.90 seconds W.

THENCE S. 54 degrees 05 minutes 00 seconds W. 1224 feet along the north shore of Barnhart Island to Turning Point No. 14, in

Latitude 45 degrees 00 minutes 41.91 seconds N.

Longitude 74 degrees 49 minutes 03.03 seconds W.
and bearing S. 11 degrees 53 minutes E. 2047 feet from Monument No. 12, heretofore described;

THENCE N. 57 degrees 24 minutes 10 seconds W. 2903 feet along the north shore of Barnhart Island to Turning Point No. 15, in

Latitude 45 degrees 00 minutes 57.35 seconds N.

Longitude 74 degrees 49 minutes 37.08 seconds W.
and bearing N. 34 degrees 03 minutes E. 1371 feet from Monument No. 13, located on the north side of Barnhart Island, about 650 feet from shore, in

Latitude 45 degrees 00 minutes 46.14 seconds N.

Longitude 74 degrees 49 minutes 47.76 seconds W.

THENCE S. 78 degrees 06 minutes 40 seconds W. 2175 feet into the channel between Barnhart and Sheek Islands (locally called Little River) to Turning Point No. 16, in

Latitude 45 degrees 00 minutes 52.93 seconds N.

Longitude 74 degrees 50 minutes 06.71 seconds W.
and bearing N. 63 degrees 12 minutes W. 1525 feet from Monument No. 13, heretofore described;

THENCE S. 56 degrees 24 minutes 10 seconds W. 2210 feet along the middle of said channel between Barnhart and Sheek Islands to Turning Point No. 17, in

Latitude 45 degrees 00 minutes 40.85 seconds N.

Longitude 74 degrees 50 minutes 32.33 seconds W.
and bearing N. 14 degrees 27 minutes E. 1720 feet from Monu-

ment No. 14, located on the north side of Barnhart Island and about 1100 feet from shore, in

Latitude 45 degrees 00 minutes 24.41 seconds N.

Longitude 74 degrees 50 minutes 38.30 seconds W.

THENCE S. 72 degrees 00 minutes 20 seconds W. 1146 feet along the middle of said channel to Turning Point No. 18, in

Latitude 45 degrees 00 minutes 37.36 seconds N.

Longitude 74 degrees 50 minutes 47.50 seconds W.

and bearing N. 26 degrees 45 minutes W. 1469 feet from Monument No. 14, heretofore described;

THENCE S. 50 degrees 48 minutes 00 seconds W. 3362 feet along the middle of said channel to Turning Point No. 19, in

Latitude 45 degrees 00 minutes 16.38 seconds N.

Longitude 74 degrees 51 minutes 23.76 seconds W.

and bearing N. 43 degrees 45 minutes E. 1221 feet from Monument No. 15, located on the northwest point of Barnhart Island, about 600 feet from shore, in

Latitude 45 degrees 00 minutes 07.67 seconds N.

Longitude 74 degrees 51 minutes 35.51 seconds W.

THENCE N. 89 degrees 09 minutes 20 seconds W. 1663 feet along the middle of said channel to Turning Point No. 20, in

Latitude 45 degrees 00 minutes 16.62 seconds N.

Longitude 74 degrees 51 minutes 46.90 seconds W.

and bearing N. 42 degrees 04 minutes W. 1221 feet from Monument No. 15, heretofore described;

THENCE S. 33 degrees 05 minutes 00 seconds W. 1781 feet through said channel to Turning Point No. 21, in the Long Sault Rapids, in

Latitude 45 degrees 00 minutes 01.88 seconds N.

Longitude 74 degrees 52 minutes 00.43 seconds W.

and bearing S. 71 degrees 53 minutes W. 1884 feet from Monument No. 15, heretofore described;

THENCE N. 82 degrees 46 minutes 20 seconds W. 2825 feet up the Long Sault Rapids to Turning Point No. 22, located near the north shore of Long Sault Island, in

Latitude 45 degrees 00 minutes 05.39 seconds N.

Longitude 74 degrees 52 minutes 39.43 seconds W.

and bearing S. 16 degrees 43 minutes E. 989 feet from Monu-

ment No. 16, located on the south bank of the Cornwall Canal about one and one-eighth miles easterly of Lock 21, in

Latitude 45 degrees 00 minutes 14.74 seconds N.

Longitude 74 degrees 52 minutes 43.39 seconds W.

THENCE S. 79 degrees 35 minutes 00 seconds W. 2961 feet up the Long Sault Rapids and along the north shore of Long Sault Island to Turning Point No. 23, located near to said island, in

Latitude 45 degrees 00 minutes 00.10 seconds N.

Longitude 74 degrees 53 minutes 19.96 seconds W.

and bearing S. 10 degrees 23 minutes W. 963 feet from Monument No. 17, located on the south bank of the Cornwall Canal, about five-eighths of a mile northeasterly of Lock 21, in

Latitude 45 degrees 00 minutes 09.45 seconds N.

Longitude 74 degrees 53 minutes 17.55 seconds W.

THENCE S. 50 degrees 19 minutes 30 seconds W. 4230 feet up the Long Sault Rapids and along the north shore of Long Sault Island to Turning Point No. 24, located near the said island, in

Latitude 44 degrees 59 minutes 33.43 seconds N.

Longitude 74 degrees 54 minutes 05.26 seconds W.

and bearing N. 40 degrees 38 minutes W. 424 feet from Monument No. 18, located on the point on the north side of Long Sault Island and directly south of Lock 21, Cornwall Canal, in

Latitude 44 degrees 59 minutes 30.26 seconds N.

Longitude 74 degrees 54 minutes 01.42 seconds W.

THENCE S. 28 degrees 49 minutes 10 seconds W. 3764 feet along the north shore of Long Sault Island and between Long Sault and Grassy Islands to Turning Point No. 25, south of Grassy Island and near to Long Sault Island, in

Latitude 44 degrees 59 minutes 00.87 seconds N.

Longitude 74 degrees 54 minutes 30.50 seconds W.

and bearing N. 35 degrees 13 minutes W. 364 feet from Monument No. 19, on the north side of Long Sault Island, in

Latitude 44 degrees 58 minutes 57.93 seconds N.

Longitude 74 degrees 54 minutes 27.58 seconds W.

THENCE N. 87 degrees 12 minutes 20 seconds W. 10,151 feet along the north shore of Long Sault Island and south of Wagner Island to Turning Point No. 26, located near the northeast point of Croil Island, in

Latitude 44 degrees 59 minutes 05.73 seconds N.

Longitude 74 degrees 56 minutes 51.56 seconds W.

and bearing N. 13 degrees 29 minutes E. 529 feet from Monument No. 20, located on the northeast point of Croil Island, in

Latitude 44 degrees 59 minutes 00.65 seconds N.

Longitude 74 degrees 56 minutes 53.28 seconds W.

THENCE S. 85 degrees 36 minutes 00 seconds W. 6567 feet along the north shore of Croil Island to Turning Point No. 27, opposite Woodlands, Ontario, in

Latitude 44 degrees 59 minutes 00.75 seconds N.

Longitude 74 degrees 58 minutes 22.66 seconds W.

and bearing N. 1 degree 07 minutes W. 835 feet from Monument No. 21, located on the north side of Croil Island, in

Latitude 44 degrees 58 minutes 52.50 seconds N.

Longitude 74 degrees 58 minutes 22.43 seconds W.

THENCE S. 67 degrees 27 minutes 00 seconds W. 5678 feet along the north shore of said island to Turning Point No. 28, located opposite Farran Point, Ontario, in

Latitude 44 degrees 58 minutes 39.24 seconds N.

Longitude 74 degrees 59 minutes 35.61 seconds W.

and bearing N. 29 degrees 49 minutes W. 436 feet from Monument No. 22, on the northwest point of Croil Island, in

Latitude 44 degrees 58 minutes 35.51 seconds N.

Longitude 74 degrees 59 minutes 32.60 seconds W.

THENCE S. 38 degrees 48 minutes 50 seconds W. 2694 feet along the northwest shore of said island to Turning Point No. 29, opposite Farran Point Canal and about one-quarter mile above Lock 22, in

Latitude 44 degrees 58 minutes 18.51 seconds N.

Longitude 74 degrees 59 minutes 59.10 seconds W.

and bearing N. 55 degrees 51 minutes W. 625 feet from Monument No. 23, located on the west side of Croil Island, in

Latitude 44 degrees 58 minutes 15.05 seconds N.

Longitude 74 degrees 59 minutes 51.91 seconds W.

THENCE S. 00 degrees 40 minutes 30 seconds W. 2049 feet along the west shore of said island to Turning Point No. 30, located opposite Farran Point Canal, in

Latitude 44 degrees 57 minutes 58.29 seconds N.

Longitude 74 degrees 59 minutes 59.43 seconds W.

and bearing N. 88 degrees 35 minutes W. 377 feet from Monument No. 24, located on the west side of Croil Island, in

Latitude 44 degrees 57 minutes 58.19 seconds N.

Longitude 74 degrees 59 minutes 54.19 seconds W.

THENCE S. 33 degrees 43 minutes 50 seconds W. 1617 feet along the west shore of said island to Turning Point No. 31, in

Latitude 44 degrees 57 minutes 45.01 seconds N.

Longitude 75 degrees 00 minutes 11.92 seconds W.

and bearing S. 43 degrees 41 minutes W. 1846 feet from Monument No. 24, heretofore described, and also bearing N. 5 degrees 42 minutes W. 1463 feet from Monument No. 25, located on the southwest point of Croil Island, in

Latitude 44 degrees 57 minutes 30.64 seconds N.

Longitude 75 degrees 00 minutes 09.90 seconds W.

THENCE S. 20 degrees 27 minutes 40 seconds W. 1573 feet along the west shore of said island to Turning Point No. 32, opposite the southwest end of Croil Island, in

Latitude 44 degrees 57 minutes 30.45 seconds N.

Longitude 75 degrees 00 minutes 19.57 seconds W.

and bearing S. 88 degrees 27 minutes W. 696 feet from Monument No. 25, heretofore described;

THENCE S. 52 degrees 35 minutes 20 seconds W. 7064 feet along the north shore of Cat Island and the south shore of Steen Island to Turning Point No. 33, opposite the south end of Steen Island, in

Latitude 44 degrees 56 minutes 48.07 seconds N.

Longitude 75 degrees 01 minute 37.58 seconds W.

and bearing S. 10 degrees 37 minutes E. 515 feet from Monument No. 26, on the southern point of Steen Island, in

Latitude 44 degrees 56 minutes 53.07 seconds N.

Longitude 75 degrees 01 minute 38.90 seconds W.

THENCE S. 62 degrees 45 minutes 40 seconds W. 9681 feet along the middle of the river to Turning Point No. 34, opposite East Williamsburg, Ontario, in

Latitude 44 degrees 56 minutes 04.31 seconds N.

Longitude 75 degrees 03 minutes 37.22 seconds W.

and bearing N. 85 degrees 29 minutes E. 2073 feet from Monument No. 27, located on Weavers Point, on the Canadian side, in

Latitude 44 degrees 56 minutes 02.70 seconds N.

Longitude 75 degrees 04 minutes 05.95 seconds W.

THENCE S. 34 degrees 03 minutes 40 seconds W. 2192 feet along the middle of the river to Turning Point No. 35, located southeast of Weavers Point, in

Latitude 44 degrees 55 minutes 46.37 seconds N.

Longitude 75 degrees 03 minutes 54.29 seconds W.
and bearing S. 26 degrees 54 minutes E. 1854 feet from Monument No. 27, heretofore described;

THENCE S. 83 degrees 51 minutes 00 seconds W. 8270 feet along the middle of the river to Turning Point No. 36, located near to and north of Crysler Island, in

Latitude 44 degrees 55 minutes 37.61 seconds N.
Longitude 75 degrees 05 minutes 48.57 seconds W.
and bearing N. 20 degrees 09 minutes W. 644 feet from Monument No. 28, on the north side of Crysler Island, in

Latitude 44 degrees 55 minutes 31.64 seconds N.
Longitude 75 degrees 05 minutes 45.49 seconds W.

THENCE S. 38 degrees 38 minutes 30 seconds W. 3460 feet along the northwest shore of said island to Turning Point No. 37, located northwest of Strawberry Island, in

Latitude 44 degrees 55 minutes 10.92 seconds N.
Longitude 75 degrees 06 minutes 18.60 seconds W.
and bearing N. 19 degrees 29 minutes W. 644 feet from Monument No. 29, on Strawberry Island, in

Latitude 44 degrees 55 minutes 04.92 seconds N.
Longitude 75 degrees 06 minutes 15.62 seconds W.

THENCE N. 80 degrees 59 minutes 10 seconds W. 3360 feet to Turning Point No. 38, north of and near to Goose Neck Island, in

Latitude 44 degrees 55 minutes 16.12 seconds N.
Longitude 75 degrees 07 minutes 04.72 seconds W.
and bearing N. 6 degrees 43 minutes W. 568 feet from Monument No. 30, located on the north side of Goose Neck Island, in

Latitude 44 degrees 55 minutes 10.55 seconds N.
Longitude 75 degrees 07 minutes 03.80 seconds W.

THENCE S. 63 degrees 33 minutes 10 seconds W. 4941 feet along the north shore of said island to Turning Point No. 39, in

Latitude 44 degrees 54 minutes 54.38 seconds N.
Longitude 75 degrees 08 minutes 06.19 seconds W.
and bearing N. 31 degrees 25 minutes W. 453 feet from Monument No. 31, located on the northwest end of Goose Neck Island, in

Latitude 44 degrees 54 minutes 50.57 seconds N.
Longitude 75 degrees 08 minutes 02.91 seconds W.

THENCE S. 11 degrees 49 minutes 10 seconds W. 6745 feet along the west shore of said island to Turning Point No. 40, located southeast of Indian and Doran Islands, in

Latitude 44 degrees 53 minutes 49.20 seconds N.

Longitude 75 degrees 08 minutes 25.38 seconds W.

and bearing S. 52 degrees 41 minutes E. 1241 feet from Monument No. 32, located on the south end of Indian Island, in

Latitude 44 degrees 53 minutes 56.63 seconds N.

Longitude 75 degrees 08 minutes 39.10 seconds W.

THENCE S. 79 degrees 10 minutes 30 seconds W. 6593 feet along the south shore of Indian and Doran Islands and the north shore of Murphy Island to Turning Point No. 41, north of Murphy Island, in

Latitude 44 degrees 53 minutes 36.96 seconds N.

Longitude 75 degrees 09 minutes 55.32 seconds W.

and bearing N. 18 degrees 55 minutes W. 337 feet from Monument No. 33, on the north side of Murphy Island, in

Latitude 44 degrees 53 minutes 33.82 seconds N.

Longitude 75 degrees 09 minutes 53.81 seconds W.

THENCE S. 58 degrees 38 minutes 10 seconds W. 7257 feet along the northwest shore of Dry Island and between Clark and Canada Islands to Turning Point No. 42, in

Latitude 44 degrees 52 minutes 59.66 seconds N.

Longitude 75 degrees 11 minutes 21.38 seconds W.

and bearing N. 29 degrees 14 minutes W. 644 feet from Monument No. 34, located on the northwest side of Clark Island, in

Latitude 44 degrees 52 minutes 54.10 seconds N.

Longitude 75 degrees 11 minutes 17.01 seconds W.

THENCE S. 82 degrees 16 minutes 40 seconds W. 1382 feet to Turning Point No. 43, near the northeast point of Ogden Island, in

Latitude 44 degrees 52 minutes 57.82 seconds N.

Longitude 75 degrees 11 minutes 40.40 seconds W.

and bearing N. 20 degrees 38 minutes W. 376 feet from Monument No. 35, on the northeast point of Ogden Island, in

Latitude 44 degrees 52 minutes 54.35 seconds N.

Longitude 75 degrees 11 minutes 38.56 seconds W.

THENCE S. 52 degrees 07 minutes 50 seconds W. 2868 feet along the north shore of said island to Turning Point No. 44, in

Latitude 44 degrees 52 minutes 40.44 seconds N.

Longitude 75 degrees 12 minutes 11.84 seconds W.

and bearing S. 12 degrees 19 minutes W. 1280 feet from Monument No. 36, located on the south bank of the Morrisburg Canal, in

Latitude 44 degrees 52 minutes 52.79 seconds N.

Longitude 75 degrees 12 minutes 08.05 seconds W.

THENCE S. 89 degrees 36 minutes 10 seconds W. 4014 feet along the north shore of Ogden Island to Turning Point No. 45, in

Latitude 44 degrees 52 minutes 40.16 seconds N.

Longitude 75 degrees 13 minutes 07.58 seconds W.

and bearing N. 19 degrees 53 minutes W. 515 feet from Monument No. 37, on the north side of Ogden Island, in

Latitude 44 degrees 52 minutes 35.38 seconds N.

Longitude 75 degrees 13 minutes 05.15 seconds W.

THENCE S. 36 degrees 35 minutes 40 seconds W. 4287 feet along the north shore of said island to Turning Point No. 46, in

Latitude 44 degrees 52 minutes 06.17 seconds N.

Longitude 75 degrees 13 minutes 43.07 seconds W.

and bearing N. 9 degrees 40 minutes W. 400 feet from Monument No. 38, on the north side of Ogden Island, in

Latitude 44 degrees 52 minutes 02.28 seconds N.

Longitude 75 degrees 13 minutes 42.14 seconds W.

THENCE S. 82 degrees 38 minutes 00 seconds W. 3344 feet along the north shore of said island to Turning Point No. 47, in

Latitude 44 degrees 52 minutes 01.93 seconds N.

Longitude 75 degrees 14 minutes 29.12 seconds W.

and bearing N. 36 degrees 16 minutes W. 423 feet from Monument No. 39, located on the northwest end of Ogden Island, in

Latitude 44 degrees 51 minutes 58.57 seconds N.

Longitude 75 degrees 14 minutes 25.65 seconds W.

THENCE S. 47 degrees 29 minutes 00 seconds W. 5293 feet along the middle of the river to Turning Point No. 48, in

Latitude 44 degrees 51 minutes 26.61 seconds N.

Longitude 75 degrees 15 minutes 23.28 seconds W.

and bearing S. 10 degrees 58 minutes E. 1243 feet from Monument No. 40, located on the Canadian side about one-half mile westerly of Leishman Point, in

Latitude 44 degrees 51 minutes 38.66 seconds N.

Longitude 75 degrees 15 minutes 26.56 seconds W.

THENCE S. 74 degrees 21 minutes 50 seconds W. 3292 feet along the middle of the river to Turning Point No. 49, in

Latitude 44 degrees 51 minutes 17.85 seconds N.
Longitude 75 degrees 16 minutes 07.29 seconds W.
and bearing N. 19 degrees 34 minutes W. 600 feet from Monument No. 41, located on the United States side, in
Latitude 44 degrees 51 minutes 12.26 seconds N.
Longitude 75 degrees 16 minutes 04.50 seconds W.

THENCE S. 60 degrees 46 minutes 40 seconds W. 4922 feet along the middle of the river to Turning Point No. 50, in
Latitude 44 degrees 50 minutes 54.12 seconds N.
Longitude 75 degrees 17 minutes 06.91 seconds W.
and bearing N. 53 degrees 13 minutes W. 1533 feet from Monument No. 42, located on the United States side, in
Latitude 44 degrees 50 minutes 45.05 seconds N.
Longitude 75 degrees 16 minutes 49.86 seconds W.

THENCE S. 53 degrees 57 minutes 00 seconds W. 7237 feet along the middle of the river to Turning Point No. 51, located opposite Iroquois, Ontario, and Rockway Point, on the United States side, in
Latitude 44 degrees 50 minutes 12.06 seconds N.
Longitude 75 degrees 18 minutes 28.10 seconds W.
and bearing N. 58 degrees 57 minutes E. 993 feet from Monument No. 43, located on the Canadian side about one-quarter mile south of Lock 25, Galop Canal, in
Latitude 44 degrees 50 minutes 07.00 seconds N.
Longitude 75 degrees 18 minutes 39.91 seconds W.

THENCE S. 21 degrees 14 minutes 10 seconds E. 3970 feet along the middle of the river to Turning Point No. 52, opposite Iroquois Point, in
Latitude 44 degrees 49 minutes 35.52 seconds N.
Longitude 75 degrees 18 minutes 08.15 seconds W.
and bearing S. 54 degrees 40 minutes W. 1006 feet from Monument No. 44, located on the United States side opposite Iroquois Point, in
Latitude 44 degrees 49 minutes 41.26 seconds N.
Longitude 75 degrees 17 minutes 56.76 seconds W.

THENCE S. 48 degrees 07 minutes 10 seconds W.11,039 feet along the middle of the river to Turning Point No. 53, opposite the south end of Toussaint Island, in
Latitude 44 degrees 48 minutes 22.73 seconds N.
Longitude 75 degrees 20 minutes 02.15 seconds W.
and bearing S. 14 degrees 00 minutes W. 726 feet from Monument No. 45, located on the south end of Toussaint Island, in

Latitude 44 degrees 48 minutes 29.69 seconds N.
Longitude 75 degrees 19 minutes 59.71 seconds W.

THENCE N. 70 degrees 14 minutes 40 seconds W. 2995 feet along the middle of the river to Turning Point No. 54, opposite Sparrowhawk Point, on the United States side, in

Latitude 44 degrees 48 minutes 32.73 seconds N.
Longitude 75 degrees 20 minutes 41.24 seconds W.

and bearing S. 43 degrees 40 minutes E. 1028 feet from Monument No. 46 on the southeasterly bank of the Galop Canal, north of Sparrowhawk Point, in

Latitude 44 degrees 48 minutes 40.06 seconds N.
Longitude 75 degrees 20 minutes 51.09 seconds W.

THENCE S. 40 degrees 07 minutes 10 seconds W. 10,143 feet along the middle of the river to Turning Point No. 55, located near to Lotus Island, and opposite Cardinal, Ontario, in

Latitude 44 degrees 47 minutes 16.12 seconds N.
Longitude 75 degrees 22 minutes 11.87 seconds W.

and bearing N. 24 degrees 37 minutes W. 981 feet from Monument No. 47, located on the west side of Lotus Island, in

Latitude 44 degrees 47 minutes 07.32 seconds N.
Longitude 75 degrees 22 minutes 06.20 seconds W.

THENCE S. 3 degrees 05 minutes 50 seconds W. 1748 feet along the west shore of said island to Turning Point No. 56, near the north shore of Lalone Island, in

Latitude 44 degrees 46 minutes 58.89 seconds N.
Longitude 75 degrees 22 minutes 13.18 seconds W.

and bearing S. 30 degrees 31 minutes W. 991 feet from Monument No. 47, heretofore described;

THENCE S. 75 degrees 07 minutes 10 seconds W. 4817 feet along the north shore of Lalone Island and north of Baycraft, Sears, and Dixon Islands to Turning Point No. 57, located north of Dixon Island, in

Latitude 44 degrees 46 minutes 46.67 seconds N.
Longitude 75 degrees 23 minutes 17.72 seconds W.

and bearing S. 60 degrees 50 minutes E. 1074 feet from Monument No. 48, located on the south bank of the Galop Canal, about one-half mile northeasterly of Lock No. 27, in

Latitude 44 degrees 46 minutes 51.84 seconds N.
Longitude 75 degrees 23 minutes 30.72 seconds W.

THENCE S. 45 degrees 24 minutes 20 seconds W. 3158 feet along the north shore of Galop Island to Turning Point No. 58, at the foot of the Galop Rapids, in

Latitude 44 degrees 46 minutes 24.78 seconds N.
Longitude 75 degrees 23 minutes 48.90 seconds W.
and bearing S. 30 degrees 57 minutes E. 1377 feet from Monument No. 49, located on the south bank of the Galop Canal at Lock 27, in

Latitude 44 degrees 46 minutes 36.44 seconds N.
Longitude 75 degrees 23 minutes 58.72 seconds W.

THENCE S. 83 degrees 50 minutes 10 seconds W. 4493 feet along the north shore of Galop Island and up the Galop Rapids to Turning Point No. 59, located at the foot of "The Gut" Channel, in

Latitude 44 degrees 46 minutes 20.01 seconds N.
Longitude 75 degrees 24 minutes 50.81 seconds W.
and bearing S. 34 degrees 00 minutes E. 297 feet from Monument No. 50, located on the east end of Adams Island, in

Latitude 44 degrees 46 minutes 22.44 seconds N.
Longitude 75 degrees 24 minutes 53.12 seconds W.

THENCE S. 23 degrees 43 minutes 10 seconds W. 6403 feet up "The Gut" Channel and across "The Gut" dam to Turning Point No. 60, located between Butternut and Lame Squaw Islands, in

Latitude 44 degrees 45 minutes 22.12 seconds N.
Longitude 75 degrees 25 minutes 26.51 seconds W.
and bearing N. 71 degrees 10 minutes E. 3049 feet from Monument No. 51, located on the east side of Drummond Island, in

Latitude 44 degrees 45 minutes 12.40 seconds N.
Longitude 75 degrees 26 minutes 06.50 seconds W.

THENCE S. 46 degrees 39 minutes 00 seconds W. 18,758 feet along the middle of the river and between Drummond and Chimney Islands to Turning Point No. 61, in

Latitude 44 degrees 43 minutes 14.93 seconds N.
Longitude 75 degrees 28 minutes 35.41 seconds W.
and bearing S. 40 degrees 21 minutes E. 1755 feet from Monument No. 52, located on the Canadian side, about three-eights mile northeast of Windmill Point Light, in

Latitude 44 degrees 43 minutes 28.14 seconds N.
Longitude 75 degrees 28 minutes 51. 15 seconds W.

THENCE S. 53 degrees 07 minutes 20 seconds W. 9365 feet along the middle of the river to Turning Point No. 62, located opposite Prescott, Ontario, and Ogdensburg, New York, in

Latitude 44 degrees 42 minutes 19.42 seconds N.

Longitude 75 degrees 30 minutes 19.13 seconds W.
and bearing N. 45 degrees 48 minutes W. 3008 feet from Monument No. 53, located on the United States side about one-quarter mile northeasterly of the mouth of the Oswegatchie River, Ogdensburg, New York, in

Latitude 44 degrees 41 minutes 58.71 seconds N.

Longitude 75 degrees 29 minutes 49.28 seconds W.

THENCE S. 42 degrees 30 minutes 50 seconds W. 43,531 feet along the middle of the river to Turning Point No. 63, opposite Brooks Point, and about one-quarter mile northerly of Catamaran Shoal, in

Latitude 44 degrees 37 minutes 07.48 seconds N.

Longitude 75 degrees 37 minutes 13.49 seconds W.
and bearing S. 54 degrees 41 minutes E. 2780 feet from Monument No. 54, located on the Canadian side about one and one-quarter miles southwest of Maitland, Ontario, in

Latitude 44 degrees 37 minutes 23.34 seconds N.

Longitude 75 degrees 37 minutes 44.84 seconds W.

THENCE S. 48 degrees 39 minutes 10 seconds W. 14,339 feet along the middle of the river to Turning Point No. 64, located opposite Morristown, New York, in

Latitude 44 degrees 35 minutes 33.91 seconds N.

Longitude 75 degrees 39 minutes 42.24 seconds W.
and bearing S. 41 degrees 50 minutes E. 403 feet from Monument No. 55, located on Murray Island, on the Canadian side, in

Latitude 44 degrees 35 minutes 36.87 seconds N.

Longitude 75 degrees 39 minutes 45.96 seconds W.

THENCE S. 45 degrees 10 minutes 30 seconds W. 13,969 feet along the middle of the river to Turning Point No. 65, located opposite Delack Point, on the United States side, and south of Conran Island, on the Canadian side, in

Latitude 44 degrees 33 minutes 56.64 seconds N.

Longitude 75 degrees 41 minutes 59.09 seconds W.
and bearing S. 16 degrees 20 minutes E. 864 feet from Monument No. 56, located on the southerly point of Conran Island, in

Latitude 44 degrees 34 minutes 04.83 seconds N.

Longitude 75 degrees 42 minutes 02.45 seconds W.

THENCE S. 40 degrees 10 minutes 30 seconds W. 8461 feet along the middle of the river to Turning Point No. 66, located easterly of Sheaffe Island, on the Canadian side, in

Latitude 44 degrees 32 minutes 52.80 seconds N.

Longitude 75 degrees 43 minutes 14.46 seconds W.

and bearing N. 77 degrees 53 minutes E. 696 feet from Monument No. 57, located on the southerly end of Sheaffe Island, in

Latitude 44 degrees 32 minutes 51.36 seconds N.

Longitude 75 degrees 43 minutes 23.86 seconds W.

THENCE S. 50 degrees 12 minutes 30 seconds W. 1026 feet along the channel between Sheaffe Island, on the Canadian side, and American Island, on the United States side, to Turning Point No. 67, located north of and near to American Island, in

Latitude 44 degrees 32 minutes 46.32 seconds N.

Longitude 75 degrees 43 minutes 25.35 seconds W.

and bearing S. 11 degrees 54 minutes W. 522 feet from Monument No. 57, heretofore described;

THENCE S. 38 degrees 04 minutes 00 seconds W. 1085 feet along the westerly shore of American Island to Turning Point No. 68, in

Latitude 44 degrees 32 minutes 37.88 seconds N.

Longitude 75 degrees 43 minutes 34.59 seconds W.

and bearing S. 2 degrees 00 minutes W. 422 feet from Monument No. 58, located on the southerly of the Twin Sisters Islands, situated between American and Meyers Islands, in

Latitude 44 degrees 32 minutes 42.05 seconds N.

Longitude 75 degrees 43 minutes 34.38 seconds W.

THENCE S. 45 degrees 48 minutes 10 seconds W. 14,940 feet along the middle of the river to Turning Point No. 69, located about five-eighths of a mile westerly from Oak Point, on the United States side, in

Latitude 44 degrees 30 minutes 55.01 seconds N.

Longitude 75 degrees 46 minutes 02.40 seconds W.

and bearing N. 79 degrees 01 minute W. 3375 feet from Monument No. 59, located on the westerly end of Oak Point, in

Latitude 44 degrees 30 minutes 48·66 seconds N.

Longitude 75 degrees 45 minutes 16.67 seconds W.

THENCE S. 33 degrees 45 minutes 00 seconds W. 19,101 feet along the middle of the river and between the Amateur Islands, on the Canadian side, and Bilberry and Big Islands, on the United States side, to Turning Point No. 70, in

Latitude 44 degrees 28 minutes 18.15 seconds N.

Longitude 75 degrees 48 minutes 28.74 seconds W.

and bearing S. 68 degrees 57 minutes W. 2292 feet from Monument No. 60, located on the westerly side of Middle Island, situated opposite Chippewa Point, on the United States side, in

Latitude 44 degrees 28 minutes 26.28 seconds N.
Longitude 75 degrees 47 minutes 59.24 seconds W.

THENCE S. 13 degrees 59 minutes 30 seconds W. 14,904 feet along the middle of the river, passing near to the western shore of Dark Island, to Turning Point No. 71, located between Grenadier Island, on the Canadian side, and Oak Island, on the United States side, in

Latitude 44 degrees 25 minutes 55.34 seconds N.
Longitude 75 degrees 49 minutes 18.40 seconds W.

and bearing S. 32 degrees 10 minutes E. 3463 feet from Monument No. 61, located on the southeasterly point of Peel Island, on the Canadian side, in

Latitude 44 degrees 26 minutes 24.28 seconds N.
Longitude 75 degrees 49 minutes 43.80 seconds W.

THENCE S. 44 degrees 08 minutes 50 seconds W. 18,221 feet along the southeasterly shore of Grenadier Island, to Turning Point No. 72, located opposite Round Island, on the Canadian side, in

Latitude 44 degrees 23 minutes 46.19 seconds N.
Longitude 75 degrees 52 minutes 13.18 seconds W.

and bearing S. 45 degrees 35 minutes E. 496 feet from Monument No. 62, located on the easterly side of Round Island, in

Latitude 44 degrees 23 minutes 49.62 seconds N.
Longitude 75 degrees 52 minutes 18.06 seconds W.

THENCE S. 47 degrees 19 minutes 50 seconds W. 15,258 feet along the southeasterly shore of Grenadier Island and the northwesterly shores of Sport, Little Lehigh and Idlewild Islands to Turning Point No. 73, located about one-quarter of a mile northwest of Deer Island, in

Latitude 44 degrees 22 minutes 04.04 seconds N.
Longitude 75 degrees 54 minutes 47.61 seconds W.

and bearing S. 8 degrees 22 minutes E. 578 feet from Monument No. 63, located on the easterly side of Aspasia Island, in

Latitude 44 degrees 22 minutes 09.69 seconds N.
Longitude 75 degrees 54 minutes 48.77 seconds W.

THENCE N. 81 degrees 27 minutes 00 seconds W. 2334 feet along the south shore of Aspasia and Bull Islands, on the Canadian side, and north of the northeast point of Wells Island to Turning Point No. 74, in

Latitude 44 degrees 22 minutes 07.47 seconds N.
Longitude 75 degrees 55 minutes 19.39 seconds W.

and bearing N. 27 degrees 25 minutes W. 651 feet from Monu-

ment No. 64 located on the northwesterly side of the northeast point of Wells Island, in

Latitude 44 degrees 22 minutes 01.76 seconds N.

Longitude 75 degrees 55 minutes 15.27 seconds W.

THENCE S. 30 degrees 46 minutes 20 seconds W. 4017 feet along the westerly shore of the northeast end of Wells Island to Turning Point No. 75, in

Latitude 44 degrees 21 minutes 33.39 seconds N .

Longitude 75 degrees 55 minutes 47.68 seconds W.

and bearing N. 68 degrees 36 minutes W. 437 feet from Monument No. 65, located on the westerly side of the northeast end of Wells Island, about one-quarter of a mile north of Westminster Park, in

Latitude 44 degrees 21 minutes 31.81 seconds N.

Longitude 75 degrees 55 minutes 42.08 seconds W.

THENCE S. 60 degrees 23 minutes 00 seconds W. 3409 feet along the channel between Wells Island, on the United States side, and Hill Island, on the Canadian side, to Turning Point No. 76, in

Latitude 44 degrees 21 minutes 16.75 seconds N .

Longitude 75 degrees 56 minutes 28.47 seconds W.

and bearing S. 26 degrees 02 minutes W. 707 feet from Monument No. 66, located on the point on the easterly end of Hill Island, directly west of Westminster Park, in

Latitude 44 degrees 21 minutes 23.02 seconds N.

Longitude 75 degrees 56 minutes 24.20 seconds W.

THENCE S. 48 degrees 12 minutes 50 seconds W. 3113 feet along the middle of the channel between Wells and Hill Islands to Turning Point No. 77, located at the foot of the Lake of the Isles, in

Latitude 44 degrees 20 minutes 56.26 seconds N.

Longitude 75 degrees 57 minutes 00.41 seconds W.

and bearing N. 4 degrees 36 minutes E. 217 feet from Monument No. 67, located on the northwesterly side of Wells Island near the foot of the Lake of the Isles, in

Latitude 44 degrees 20 minutes 54.13 seconds N.

Longitude 75 degrees 57 minutes 00.65 seconds W.

THENCE S. 66 degrees 18 minutes 00 seconds W. 5845 feet through the Lake of the Isles and north of Islands (51) and (52) to Turning Point No. 78, midway between Island (52), on the United States side, and the southerly point of Hill Island, on the Canadian side, in

Latitude 44 degrees 20 minutes 33.05 seconds N.
Longitude 75 degrees 58 minutes 14.06 seconds W.
and bearing S. 63 degrees 20 minutes E. 577 feet from Monument No. 68, located on the southwest end of the southerly point of Hill Island, in

Latitude 44 degrees 20 minutes 35.61 seconds N.
Longitude 75 degrees 58 minutes 21.16 seconds W.

THENCE N. 75 degrees 42 minutes 50 seconds W. 742 feet along and near to the south shore of Hill Island to Turning Point No. 79, located at the head of the Lake of the Isles, in

Latitude 44 degrees 20 minutes 34.86 seconds N.
Longitude 75 degrees 58 minutes 23.95 seconds W.
and bearing S. 69 degrees 24 minutes W. 217 feet from Monument No. 68, heretofore described;

THENCE N. 27 degrees 05 minutes 10 seconds W. 1210 feet along the channel between Wells and Hill Islands to Turning Point No. 80, in

Latitude 44 degrees 20 minutes 45.50 seconds N.
Longitude 75 degrees 58 minutes 31.53 seconds W.
and bearing N. 4 degrees 05 minutes W. 210 feet from Monument No. 69, located on the north side of Wells Island, in

Latitude 44 degrees 20 minutes 43.43 seconds N.
Longitude 75 degrees 58 minutes 31.32 seconds W.

THENCE N. 78 degrees 33 minutes 50 seconds W. 913 feet along the channel between Wells and Hill Islands to Turning Point No. 81, in

Latitude 44 degrees 20 minutes 47.28 seconds N.
Longitude 75 degrees 58 minutes 43.84 seconds W.
and bearing N. 77 degrees 53 minutes E. 363 feet from Monument No. 70, located on the southerly point of the island between Wells and Hill Islands and about one-half mile easterly of The Rift, in

Latitude 44 degrees 20 minutes 46.53 seconds N.
Longitude 75 degrees 58 minutes 48.72 seconds W.

THENCE S. 69 degrees 17 minutes 40 seconds W. 492 feet along the channel between Wells and Hill Islands to Turning Point No. 82, in

Latitude 44 degrees 20 minutes 45.56 seconds N.
Longitude 75 degrees 58 minutes 50.18 seconds W.
and bearing S. 47 degrees 15 minutes W. 144 feet from Monument No. 70, heretofore described;

THENCE N. 40 degrees 21 minutes 30 seconds W. 693 feet along the channel between Wells and Hill Islands to Turning Point No. 83, in

Latitude 44 degrees 20 minutes 50.78 seconds N.

Longitude 75 degrees 58 minutes 56.36 seconds W.

and bearing N. 87 degrees 39 minutes E. 476 feet from Mounment No. 71, located on the southerly side of Hill Island and about three-eighths of a mile easterly of The Rift, in

Latitude 44 degrees 20 minutes 50.59 seconds N.

Longitude 75 degrees 59 minutes 02.90 seconds W.

THENCE S. 79 degrees 10 minutes 30 seconds W. 1106 feet along the channel between Wells and Hill Islands to Turning Point No. 84, in

Latitude 44 degrees 20 minutes 48.73 seconds N.

Longitude 75 degrees 59 minutes 11.31 seconds W.

and bearing S. 72 degrees 53 minutes W. 640 feet from Monument 71, heretofore described;

THENCE N. 77 degrees 37 minutes 50 seconds W. 534 feet along the channel between Wells and Hill Islands to Turning Point No. 85, located about one-eighth of a mile easterly of The Rift, in

Latitude 44 degrees 20 minutes 49.86 seconds N.

Longitude 75 degrees 59 minutes 18.48 seconds W.

and bearing N. 83 degrees 43 minutes E. 587 feet from Monument No. 72, located on the north side of Wells Island at The Rift, in

Latitude 44 degrees 20 minutes 49.22 seconds N.

Longitude 75 degrees 59 minutes 26.52 seconds W.

THENCE S. 87 degrees 13 minutes 40 seconds W. 584 feet along The Rift to Turning Point No. 86, in

Latitude 44 degrees 20 minutes 49.58 seconds N.

Longitude 75 degrees 59 minutes 26.52 seconds W.

and bearing North 36 feet from Monument No. 72 heretofore described;

THENCE S. 77 degrees 34 minutes 00 seconds W. 93 feet through The Rift to Turning Point No. 87, in

Latitude 44 degrees 20 minutes 49.38 seconds N.

Longitude 75 degrees 59 minutes 27.76 seconds W.

and bearing N. 79 degrees 54 minutes W. 92 feet from Monument No. 72, heretofore described;

THENCE N. 78 degrees 28 minutes 10 seconds W. 470 feet along the channel between Wells and Hill Islands to Turning Point No. 88, in

Latitude 44 degrees 20 minutes 50.31 seconds N.
Longitude 75 degrees 59 minutes 34.10 seconds W.
and bearing N. 78 degrees 42 minutes W. 562 feet from Monument No. 72, heretofore described;

THENCE N. 85 degrees 04 minutes 30 seconds W. 2282 feet along the channel between Wells and Hill Islands to Turning Point No. 89, located about 500 feet south of the island directly east of Lindoe Island, in

Latitude 44 degrees 20 minutes 52.24 seconds N.
Longitude 76 degrees 00 minutes 05.39 seconds W.
and bearing S. 29 degrees 31 minutes E. 542 feet from Monument No. 73, located on the southerly end of the island directly east of Lindoe Island, in

Latitude 44 degrees 20 minutes 56.90 seconds N.
Longitude 76 degrees 00 minutes 09.06 seconds W.

THENCE S. 53 degrees 28 minutes 30 seconds W. 2245 feet along the northwest shore of Wells Island and the southeast shore of Bingham Island, to Turning Point No. 90, in

Latitude 44 degrees 20 minutes 39.05 seconds N.
Longitude 76 degrees 00 minutes 30.21 seconds W.
and bearing N. 11 degrees 58 minutes W. 303 feet from Monument No. 74, located on the northwest side of Wells Island, in

Latitude 44 degrees 20 minutes 36.12 seconds N.
Longitude 76 degrees 00 minutes 29.34 seconds W.

THENCE S. 65 degrees 15 minutes 00 seconds W. 10,806 feet along the northwest shore of Wells Island to Turning Point No. 91, located north of and near to Grand View Park, on the northwest point of said island, in

Latitude 44 degrees 19 minutes 54.35 seconds N.
Longitude 76 degrees 02 minutes 45.22 seconds W.
and bearing N. 31 degrees 28 minutes W. 413 feet from Monument No. 75, located on the northwest side of Wells Island, directly north of Grand View Park, in

Latitude 44 degrees 19 minutes 50.87 seconds N.
Longitude 76 degrees 02 minutes 42.25 seconds W.

THENCE S. 49 degrees 02 minutes 40 seconds W. 17,838 feet along the northwest shore of Wells Island and the north shore of Grindstone Island to Turning Point No. 92, located on the north side of Grindstone Island and opposite Endymion Island, in

Latitude 44 degrees 17 minutes 58.86 seconds N.
Longitude 76 degrees 05 minutes 50.44 seconds W.

and bearing N. 21 degrees 42 minutes E. 844 feet from Monument No. 76, located on the north side of Grindstone Island, in

Latitude 44 degrees 17 minutes 51.11 seconds N.

Longitude 76 degrees 05 minutes 54.74 seconds W.

THENCE S. 81 degrees 18 minutes 10 seconds W. 3936 feet along the north shore of Grindstone Island to Turning Point No. 93, located southeast of Netley Island, on the Canadian side, in

Latitude 44 degrees 17 minutes 52.98 seconds N.

Longitude 76 degrees 06 minutes 43.94 seconds W.

and bearing S. 30 degrees 55 minutes E. 363 feet from Monument No. 77, located on the southeast side of Netley Island, in

Latitude 44 degrees 17 minutes 56.05 seconds N.

Longitude 76 degrees 06 minutes 46.50 seconds W.

THENCE S. 55 degrees 23 minutes 20 seconds W. 2022 feet along the north shore of Grindstone Island to Turning Point No. 94, located southeast of Deathdealer Island, on the Canadian side, in

Latitude 44 degrees 17 minutes 41.63 seconds N.

Longitude 76 degrees 07 minutes 06.81 seconds W.

and bearing N. 30 degrees 42 minutes W. 812 feet from Monument No. 78, located on the north side of Grindstone Island and opposite Deathdealer Island, in

Latitude 44 degrees 17 minutes 34.74 seconds N.

Longitude 76 degrees 07 minutes 01.12 seconds W.

THENCE N. 88 degrees 33 minutes 20 seconds W. 2951 feet along the north shore of Grindstone Island to Turning Point No. 95, located south of and near to Gig Island, on the Canadian side, in

Latitude 44 degrees 17 minutes 42.37 seconds N.

Longitude 76 degrees 07 minutes 47.37 seconds W.

and bearing S. 79 degrees 56 minutes E. 278 feet from Monument No. 79, located on the northeast end of the island on the United States side midway between Jolly and Gig Islands, in

Latitude 44 degrees 17 minutes 42.84 seconds N.

Longitude 76 degrees 07 minutes 51.12 seconds W.

THENCE N. 44 degrees 49 minutes 30 seconds W. 639 feet along the southwest shore of Gig Island to Turning Point No. 96, located one-eighth of a mile westerly of said island, in

Latitude 44 degrees 17 minutes 46.84 seconds N.

Longitude 76 degrees 07 minutes 53.56 seconds W.

and bearing N. 25 degrees 40 minutes W. 442 feet from Monument No. 79, heretofore described;

THENCE S. 54 degrees 34 minutes 40 seconds W. 9846 feet along the northwest shore of Grindstone Island and the southeast shore of Thwartway Island to Turning Point No. 97, in

Latitude 44 degrees 16 minutes 50.48 seconds N.

Longitude 76 degrees 09 minutes 43.85 seconds W.

and bearing N. 87 degrees 52 minutes W. 2157 feet from Monument No. 80, located on a small island about 500 feet west of Grindstone Island and about one-half mile south of the south end of Thwartway Island, in

Latitude 44 degrees 16 minutes 49.69 seconds N.

Longitude 76 degrees 09 minutes 14.21 seconds W.

THENCE S. 2 degrees 30 minutes 20 seconds W. 14,924 feet along the west shore of Grindstone Island and the east shores of Francis and Arabella Islands, on the Canadian side, to Turning Point No. 98, located about three-eighths of a mile southeast of Arabella Island, in

Latitude 44 degrees 14 minutes 23.25 seconds N.

Longitude 76 degrees 09 minutes 52.80 seconds W.

and bearing S. 40 degrees 22 minutes E. 1704 feet from Monument No. 81, located on the southeast side of Arabella Island, in

Latitude 44 degrees 14 minutes 36.07 seconds N.

Longitude 76 degrees 10 minutes 07.96 seconds W.

THENCE S. 46 degrees 59 minutes 30 seconds W. 9828 feet along the southeast shore of Wolfe Island to Turning Point No. 99, in

Latitude 44 degrees 13 minutes 17.03 seconds N.

Longitude 76 degrees 11 minutes 31.49 seconds W.

and bearing S. 37 degrees 29 minutes E. 994 feet from Monument No. 82, located on the southeast side of Wolfe Island, in

Latitude 44 degrees 13 minutes 24.82 seconds N.

Longitude 76 degrees 11 minutes 39.79 seconds W.

THENCE S. 59 degrees 21 minutes 10 seconds W. 4603 feet along the southeast shore of Wolfe Island to Turning Point No. 100, in

Latitude 44 degrees 12 minutes 53.86 seconds N.

Longitude 76 degrees 12 minutes 25.85 seconds W.

and bearing S. 39 degrees 35 minutes E. 528 feet from Monument No. 83, located on the southeast side of Wolfe Island, in

Latitude 44 degrees 12 minutes 57.88 seconds N.

Longitude 76 degrees 12 minutes 30.48 seconds W.

THENCE S. 68 degrees 11 minutes 30 seconds W. 10,914 feet along the south shore of Wolfe Island to Turning Point No. 101, in

Latitude 44 degrees 12 minutes 13.79 seconds N.

Longitude 76 degrees 14 minutes 44.96 seconds W.

and bearing S. 2 degrees 51 minutes E. 881 feet from Monument No. 84, located on the southerly side of Wolfe Island, in

Latitude 44 degrees 12 minutes 22.48 seconds N.

Longitude 76 degrees 14 minutes 45.56 seconds W.

THENCE S. 89 degrees 54 minutes 50 seconds W. 10,805 feet along the south shore of Wolfe Island to Turning Point No. 102, in

Latitude 44 degrees 12 minutes 13.61 seconds N.

Longitude 76 degrees 17 minutes 13.28 seconds W.

and bearing S. 3 degrees 38 minutes E. 722 feet from Monument No. 85, located on the south side of Wolfe Island, in

Latitude 44 degrees 12 minutes 20.72 seconds N.

Longitude 76 degrees 17 minutes 13.90 seconds W.

THENCE S. 75 degrees 45 minutes 00 seconds W. 7045 feet along the south shore of Wolfe Island to Turning Point No. 103, in

Latitude 44 degrees 11 minutes 56.47 seconds N.

Longitude 76 degrees 18 minutes 47.01 seconds W.

and bearing S. 32 degrees 46 minutes W. 1454 feet from Monument No. 86, located on the south side of Wolfe Island, in

Latitude 44 degrees 12 minutes 08.54 seconds N.

Longitude 76 degrees 18 minutes 36.20 seconds W.

THENCE S. 24 degrees 04 minutes 10 seconds W. 25,833 feet along the southeast shore of Wolfe Island and between Mud Island, on the Canadian side, and Carleton Island, on the United States side, to Turning Point No. 104, located near to and opposite Hinckley Point, on Wolfe Island, and opposite Cape Vincent, New York, in

Latitude 44 degrees 08 minutes 03.51 seconds N.

Longitude 76 degrees 21 minutes 11.47 seconds W.

and bearing S. 39 degrees 53 minutes E. 846 feet from Monument No. 87, located on the easterly end of Hinckley Point, on Wolfe Island, in

Latitude 44 degrees 08 minutes 09.93 seconds N.

Longitude 76 degrees 21 minutes 18.91 seconds W.

THENCE S. 57 degrees 02 minutes 20 seconds W. 26,957 feet along the south shore of Wolfe Island to Turning Point

No. 105, located opposite Bear Point, on the southwest end of Wolfe Island, in

Latitude 44 degrees 05 minutes 38.56 seconds N.

Longitude 76 degrees 26 minutes 21.38 seconds W.

and bearing S. 22 degrees 56 minutes E. 897 feet from Monument No. 88, located on the southeast side of Bear Point, on Wolfe Island, in

Latitude 44 degrees 05 minutes 46.72 seconds N.

Longitude 76 degrees 26 minutes 26.17 seconds W.

THENCE S. 29 degrees 19 minutes 59 seconds W. 193,346 feet into Lake Ontario, passing southeast of the Duck Islands to Turning Point No. 106, located between Peter Point, on the Canadian side, and Oswego, New York, in

Latitude 43 degrees 37 minutes 51.91 seconds N.

Longitude 76 degrees 47 minutes 49.19 seconds W.

and bearing N. 51 degrees 01 minute 12 seconds W. 96,450 feet from Oswego Light, located at Oswego, New York, in

Latitude 43 degrees 27 minutes 53.95 seconds N.

Longitude 76 degrees 30 minutes 49.77 seconds W.

THENCE due West 501,388 feet along the middle of Lake Ontario to Turning Point No. 107, in

Latitude 43 degrees 37 minutes 51.91 seconds N.

Longitude 78 degrees 41 minutes 26.26 seconds W.

and bearing N. 30 degrees 04 minutes 12 seconds W. 107,985 feet from Thirtymile Point Light, located on Thirtymile Point, New York, about thirty miles east of the mouth of Niagara River, in

Latitude 43 degrees 22 minutes 29.60 seconds N.

Longitude 78 degrees 29 minutes 10.61 seconds W.

THENCE S. 64 degrees 13 minutes 24 seconds W. 150,480 feet along the middle of Lake Ontario to Turning Point No. 108, located opposite the mouth of Niagara River and approximately midway between the mouth of the said river and Toronto, Ontario, in

Latitude 43 degrees 27 minutes 01.51 seconds N.

Longitude 79 degrees 12 minutes 03.18 seconds W.

and bearing N. 28 degrees 23 minutes 49 seconds W. 78,240 feet from Fort Niagara Light, at Fort Niagara, on the United States side of Niagara River, in

Latitude 43 degrees 15 minutes 42.05 seconds N.

Longitude 79 degrees 03 minutes 38.77 seconds W.

THENCE S. 26 degrees 51 minutes 30 seconds E. 76,813 feet in a direction to enter the mouth of Niagara River to Turning Point No. 109, in

Latitude 43 degrees 15 minutes 44.43 seconds N.

Longitude 79 degrees 04 minutes 14.20 seconds W.

and bearing N. 84 degrees 45 minutes W. 2633 feet from Fort Niagara Light, heretofore described;

THENCE S. 53 degrees 48 minutes 10 seconds E. 4770 feet along the middle of the Niagara River to Turning Point No. 110, in

Latitude 43 degrees 15 minutes 16.60 seconds N.

Longitude 79 degrees 03 minutes 22.18 seconds W.

and bearing N. 32 degrees 43 minutes E. 1353 feet from Monument No. 1, located on the Canadian side about one-eighth of a mile easterly of Fort George, Niagara-on-the-Lake, Ontario, in

Latitude 43 degrees 15 minutes 05.36 seconds N .

Longitude 79 degrees 03 minutes 32.06 seconds W.

THENCE S. 8 degrees 48 minutes 30 seconds E. 2182 feet along the middle of the river to Turning Point No. 111, located opposite Youngstown, New York, in

Latitude 43 degrees 14 minutes 55.30 seconds N.

Longitude 79 degrees 03 minutes 17.67 seconds W.

and bearing S. 46 degrees 18 minutes E. 1474 feet from Monument No. 1, heretofore described;

THENCE S. 4 degrees 48 minutes 10 seconds W. 3535 feet along the middle of the river to Turning Point No. 112, in

Latitude 43 degrees 14 minutes 20.51 seconds N.

Longitude 79 degrees 03 minutes 21.67 seconds W.

and bearing N. 79 degrees 56 minutes W. 1091 feet from Monument No. 2, located on the United States side about three-quarters of a mile south of Youngstown, New York, in

Latitude 43 degrees 14 minutes 18.63 seconds N.

Longitude 79 degrees 03 minutes 07.16 seconds W.

THENCE S. 7 degrees 19 minutes 00 seconds E. 5745 feet along the middle of the river to Turning Point No. 113, located opposite Point Elinor, on the Canadian side, in

Latitude 43 degrees 13 minutes 24.22 seconds N.

Longitude 79 degrees 03 minutes 11.79 seconds W.

and bearing S. 80 degrees 44 minutes E. 1184 feet from Monument No. 3, located on the Canadian side on Point Elinor, in

Latitude 43 degrees 13 minutes 26.11 seconds N.

Longitude 79 degrees 03 minutes 27.57 seconds W.

THENCE S. 11 degrees 03 minutes 20 seconds W. 4881 feet along the middle of the river to Turning Point No. 114, in
Latitude 43 degrees 12 minutes 36.91 seconds N.
Longitude 79 degrees 03 minutes 24.43 seconds W.
and bearing S. 86 degrees 28 minutes W. 1230 feet from Monument No. 4, located on the United States side, in
Latitude 43 degrees 12 minutes 37.66 seconds N.
Longitude 79 degrees 03 minutes 07.85 seconds W.

THENCE S. 29 degrees 31 minutes 40 seconds W. 4255 feet along the middle of the river to Turning Point No. 115, in
Latitude 43 degrees 12 minutes 00.34 seconds N.
Longitude 79 degrees 02 minutes 56.11 seconds W.
and bearing N. 87 degrees 32 minutes E. 996 feet from Monument No. 5, located on the Canadian side, in
Latitude 43 degrees 11 minutes 59.91 seconds N.
Longitude 79 degrees 03 minutes 09.55 seconds W.

THENCE S. 10 degrees 21 minutes 10 seconds W. 5965 feet along the middle of the river to Turning Point No. 116, located about three-quarters of a mile north of Lewiston, New York, in
Latitude 43 degrees 11 minutes 02.38 seconds N.
Longitude 79 degrees 03 minutes 10.58 seconds W.
and bearing N. 77 degrees 49 minutes W. 1402 feet from Monument No. 6, located on the United States side about five- eighths of a mile north of Lewiston, New York, in
Latitude 43 degrees 10 minutes 59.46 seconds N.
Longitude 79 degrees 02 minutes 52.08 seconds W.

THENCE S. 2 degrees 26 minutes 30 seconds W. 3704 feet along the middle of the river to Turning Point No. 117, located opposite Lewiston, New York, in
Latitude 43 degrees 10 minutes 25.82 seconds N.
Longitude 79 degrees 03 minutes 12.71 seconds W.
and bearing N. 33 degrees 11 minutes E. 1636 feet from Monument No. 7, located on the Canadian side about three-eighths of a mile north of Queenston, Ontario, in
Latitude 43 degrees 10 minutes 12.30 seconds N.
Longitude 79 degrees 03 minutes 24.80 seconds W.

THENCE S. 14 degrees 35 minutes 40 seconds E. 2368 feet along the middle of the river to Turning Point No. 118, located opposite Queenston, Ontario, in
Latitude 43 degrees 10 minutes 03.19 seconds N.
Longitude 79 degrees 03 minutes 04.66 seconds W.
and bearing S. 58 degrees 17 minutes E. 1755 feet from Monument No. 7, heretofore described;

THENCE S. 31 degrees 47 minutes 50 seconds E. 2248 feet along the middle of the river to Turning Point No. 119, in
Latitude 43 degrees 09 minutes 44.32 seconds N.
Longitude 79 degrees 02 minutes 48.68 seconds W.
and bearing S. 88 degrees 00 minutes W. 499 feet from Monument No. 8, located about 150 feet south of the east anchorage of the Suspension Bridge, in
Latitude 43 degrees 09 minutes 44.49 seconds N.
Longitude 79 degrees 02 minutes 41.95 seconds W.

THENCE S. 10 degrees 48 minutes 50 seconds E. 2394 feet along the middle of the river to Turning Point No. 120, in
Latitude 43 degrees 09 minutes 21.09 seconds N.
Longitude 79 degrees 02 minutes 42.62 seconds W.
and bearing N. 42 degrees 01 minute W. 1013 feet from Monument No. 9, located on the United States side about five-eighths of a mile south of the Suspension Bridge, in
Latitude 43 degrees 09 minutes 13.66 seconds N.
Longitude 79 degrees 02 minutes 33.47 seconds W.

THENCE S. 7 degrees 32 minutes 20 seconds E. 1487 feet along the middle of the river to Turning Point No. 121, in
Latitude 43 degrees 09 minutes 06.53 seconds N.
Longitude 79 degrees 02 minutes 39.98 seconds W.
and bearing S. 33 degrees 47 minutes W. 869 feet from Monument No. 9, heretofore described;

THENCE S. 21 degrees 24 minutes 10 seconds E. 1019 feet along the middle of the river to Turning Point No. 122, in
Latitude 43 degrees 08 minutes 57.16 seconds N.
Longitude 79 degrees 02 minutes 34.97 seconds W.
and bearing S. 88 degrees 13 minutes E. 753 feet from Monument No. 10, located on the Canadian side, in
Latitude 43 degrees 08 minutes 57.39 seconds N.
Longitude 79 degrees 02 minutes 45.12 seconds W.

THENCE S. 3 degrees 55 minutes 40 seconds E. 2051 feet along the middle of the river to Turning Point No. 123, in
Latitude 43 degrees 08 minutes 36.95 seconds N.
Longitude 79 degrees 02 minutes 33.07 seconds W.
and bearing S. 67 degrees 06 minutes W. 655 feet from Monument No. 11, located on the United States side directly east of the New York Central & Hudson River Railroad tracks and about three-eighths of a mile north of Niagara University, in
Latitude 43 degrees 08 minutes 39.47 seconds N.
Longitude 79 degrees 02 minutes 24.94 seconds W.

THENCE S. 10 degrees 49 minutes 50 seconds W. 1951 feet along the middle of the river to Turning Point No. 124, in

Latitude 43 degrees 08 minutes 18.02 seconds N.

Longitude 79 degrees 02 minutes 38.02 seconds W.

and bearing S. 70 degrees 23 minutes E. 780 feet from Monument No. 12, located on the Canadian side directly east of the International Railway tracks and opposite Niagara University, in

Latitude 43 degrees 08 minutes 20.60 seconds N.

Longitude 79 degrees 02 minutes 47.93 seconds W.

THENCE S. 52 degrees 35 minutes 30 seconds W. 1955 feet along the middle of the river to Turning Point No. 125, in

Latitude 43 degrees 08 minutes 06.29 seconds N.

Longitude 79 degrees 02 minutes 58.96 seconds W.

and bearing N. 10 degrees 06 minutes W. 928 feet from Monument No. 13, located on the United States side about five-eighths of a mile southwest of Niagara University, in

Latitude 43 degrees 07 minutes 57.26 seconds N.

Longitude 79 degrees 02 minutes 56.76 seconds W.

THENCE S. 32 degrees 32 minutes 30 seconds W. 1518 feet along the middle of the river to Turning Point No. 126, in

Latitude 43 degrees 07 minutes 53.65 seconds N.

Longitude 79 degrees 03 minutes 09.97 seconds W.

and bearing S. 69 degrees 32 minutes W. 1045 feet from Monument No. 13, heretofore described;

THENCE S. 26 degrees 55 minutes 20 seconds W. 928 feet along the middle of the river to Turning Point No. 127, in

Latitude 43 degrees 07 minutes 45.47 seconds N.

Longitude 79 degrees 03 minutes 15.64 seconds W.

and bearing S. 87 degrees 09 minutes E. 1018 feet from Monument No. 14, located on the Canadian side about seven-eighths of a mile northeast of the Whirlpool, in

Latitude 43 degrees 07 minutes 45.97 seconds N.

Longitude 79 degrees 03 minutes 29.35 seconds W.

THENCE S. 42 degrees 57 minutes 20 seconds W. 1162 feet along the middle of the river to Turning Point No. 128, in

Latitude 43 degrees 07 minutes 37.08 seconds N.

Longitude 79 degrees 03 minutes 26.31 seconds W.

and bearing S. 14 degrees 01 minute E. 928 feet from Monument No. 14, heretofore described;

THENCE S. 71 degrees 44 minutes 30 seconds W. 653 feet along the middle of the river to Turning Point No. 129, in

Latitude 43 degrees 07 minutes 35.06 seconds N.

Longitude 79 degrees 03 minutes 34.67 seconds W.

and bearing S. 19 degrees 40 minutes W. 1174 feet from Monument No. 14, heretofore described;

THENCE S. 50 degrees 37 minutes 50 seconds W. 3537 feet along the middle of the river to Turning Point No. 130, located in the Whirlpool, in

Latitude 43 degrees 07 minutes 12.89 seconds N.

Longitude 79 degrees 04 minutes 11.54 seconds W.

and bearing S. 87 degrees 35 minutes W. 954 feet from Monument No. 15, located on DeVeaux Point, on the United States side, opposite the Whirlpool, in

Latitude 43 degrees 07 minutes 13.29 seconds N.

Longitude 79 degrees 03 minutes 58.68 seconds W.

THENCE S. 50 degrees 49 minutes 50 seconds E. 2441 feet up the middle of the Whirlpool Rapids to Turning Point No. 131, in

Latitude 43 degrees 06 minutes 57.67 seconds N.

Longitude 79 degrees 03 minutes 46.03 seconds W.

and bearing N. 1 degree 46 minutes W. 699 feet from Monument No. 16, located on the Canadian side about five-eighths of a mile southeast of the Whirlpool, in

Latitude 43 degrees 06 minutes 50.77 seconds N.

Longitude 79 degrees 03 minutes 45.74 seconds W.

THENCE S. 38 degrees 59 minutes 30 seconds E. 1044 feet up the middle of the Whirlpool Rapids to Turning Point No. 132, in

Latitude 43 degrees 06 minutes 49.66 seconds N.

Longitude 79 degrees 03 minutes 37.17 seconds W.

and bearing S. 79 degrees 57 minutes E. 645 feet from Monument No. 16, heretofore described;

THENCE S. 19 degrees 56 minutes 00 seconds E. 1142 feet up the middle of the Whirlpool Rapids to Turning Point No. 133, in

Latitude 43 degrees 06 minutes 39.05 seconds N.

Longitude 79 degrees 03 minutes 31.92 seconds W.

and bearing N. 61 degrees 12 minutes W. 419 feet from Monument No. 17, located on the United States side about 300 feet north of the east end of the Grand Trunk Railway bridge, in

Latitude 43 degrees 06 minutes 37.06 seconds N.
Longitude 79 degrees 03 minutes 26.97 seconds W.

THENCE S. 8 degrees 27 minutes 00 seconds E. 1409 feet up the middle of the Whirlpool Rapids to Turning Point No. 134, located near the head of the Whirlpool Rapids, in

Latitude 43 degrees 06 minutes 25.28 seconds N.
Longitude 79 degrees 03 minutes 29.13 seconds W.

and bearing S. 7 degrees 40 minutes W. 1202 feet from Monument No. 17, heretofore described;

THENCE S. 21 degrees 09 minutes 20 seconds W. 6158 feet along the middle of the river to Turning Point No. 135, located about 1000 feet northeast of the Upper Steel Arch Bridge, in

Latitude 43 degrees 05 minutes 28.56 seconds N.
Longitude 79 degrees 03 minutes 59.08 seconds W.

and bearing S. 66 degrees 17 minutes E. 645 feet from Monument No. 18, located on the Canadian side about 800 feet northeast of the Canadian end of the Upper Steel Arch Bridge, in

Latitude 43 degrees 05 minutes 31.12 seconds N.
Longitude 79 degrees 04 minutes 07.05 seconds W.

THENCE S. 43 degrees 03 minutes 20 seconds W. 1398 feet along the middle of the river to Turning Point No. 136, located opposite the American Falls, in

Latitude 43 degrees 05 minutes 18.47 seconds N.
Longitude 79 degrees 04 minutes 11.94 seconds W.

and bearing N. 14 degrees 15 minutes W. 1024 feet from Monument No. 19, located on the United States side at Prospect Point, near the crest of the American Falls, in

Latitude 43 degrees 05 minutes 08.67 seconds N.
Longitude 79 degrees 04 minutes 08.55 seconds W.

THENCE S. 30 degrees 36 minutes 00 seconds W. 2931 feet along the middle of the river to Turning Point No. 137, in

Latitude 43 degrees 04 minutes 53.55 seconds N.
Longitude 79 degrees 04 minutes 32.05 seconds W.

and bearing N. 39 degrees 58 minutes E. 1242 feet from Monument No. 20, located on the Canadian side near the crest of the Horseshoe Falls, in

Latitude 43 degrees 04 minutes 44.15 seconds N.
Longitude 79 degrees 04 minutes 42.80 seconds W.

and also bearing N. 46 degrees 15 minutes W. 1199 feet from Monument No. 21, located on the southwest side of Goat Island, in

Latitude 43 degrees 04 minutes 45.36 seconds N.
Longitude 79 degrees 04 minutes 20.38 seconds W.

THENCE S. 13 degrees 59 minutes 00 seconds E. 1416 feet up the Horseshoe Falls to Turning Point No. 138, in
Latitude 43 degrees 04 minutes 39.98 seconds N.
Longitude 79 degrees 04 minutes 27.44 seconds W.
and bearing S. 69 degrees 42 minutes E. 1215 feet from Monument No. 20, heretofore described, and also bearing S. 43 degrees 54 minutes W. 756 feet from Monument No. 21, heretofore described;

THENCE S. 76 degrees 18 minutes 20 seconds E. 18,340 feet, passing the south side of Goat Island and the Three Sister Islands, and along the middle of the river to Turning Point No. 139, located north of Navy Island and about 1500 feet westerly of the west end of Buckhorn Island, in
Latitude 43 degrees 03 minutes 57.03 seconds N.
Longitude 79 degrees 00 minutes 27.42 seconds W.
and bearing N. 3 degrees 31 minutes W. 2305 feet from Monument No. 22, located on the northeast side of Navy Island, in
Latitude 43 degrees 03 minutes 34.30 seconds N.
Longitude 79 degrees 00 minutes 25.51 seconds W.

THENCE S. 29 degrees 48 minutes 50 seconds E. 4170 feet along the channel between Navy Island, on the Canadian side, and Buckhorn and Grand Islands, on the United States side, to Turning Point No. 140, located between Navy and Grand Islands, in
Latitude 43 degrees 03 minutes 21.29 seconds N.
Longitude 78 degrees 59 minutes 59.49 seconds W.
and bearing N. 77 degrees 27 minutes W. 820 feet from Monument No. 23, located on the northwest end of Grand Island about three-eighths of a mile south of the mouth of Burnt Ship Creek, in
Latitude 43 degrees 03 minutes 19.53 seconds N.
Longitude 78 degrees 59 minutes 48.71 seconds W.

THENCE S. 25 degrees 22 minutes 50 seconds W. 3528 feet along the middle of the channel between Navy and Grand Islands to Turning Point No. 141, in
Latitude 43 degrees 02 minutes 49.81 seconds N.
Longitude 79 degrees 00 minutes 19.86 seconds W.
and bearing S. 64 degrees 19 minutes E. 1339 feet from Monument No. 24, located on the south end of Navy Island, in

Latitude 43 degrees 02 minutes 55.54 seconds N.
Longitude 79 degrees 00 minutes 36.10 seconds W.

THENCE S. 14 degrees 49 minutes 40 seconds W. 6818 feet along the west shore of Grand Island to Turning Point No. 142, located about 1000 feet north of the mouth of Big Sixth Creek, in

Latitude 43 degrees 01 minute 44.71 seconds N.
Longitude 79 degrees 00 minutes 43.35 seconds W.

and bearing N. 49 degrees 32 minutes W. 504 feet from Monument No. 25, located on the west side of Grand Island, about 150 feet southwest of the mouth of Little Sixth Creek, in

Latitude 43 degrees 01 minute 41.48 seconds N.
Longitude 79 degrees 00 minutes 38.19 seconds W.

THENCE S. 33 degrees 28 minutes 30 seconds W. 5624 feet along the west shore of Grand Island to Turning Point No. 143, located near to and opposite Cook Point, on Grand Island, in

Latitude 43 degrees 00 minutes 58.37 seconds N.
Longitude 79 degrees 01 minute 25.10 seconds W.

and bearing N. 85 degrees 31 minutes E. 2169 feet from Monument No. 26, located on the Canadian side about one mile north of the mouth of Snake Creek, in

Latitude 43 degrees 00 minutes 56.70 seconds N.
Longitude 79 degrees 01 minute 54.20 seconds W.

THENCE S. 6 degrees 19 minutes 50 seconds E. 7871 feet along the west shore of Grand Island, to Turning Point No. 144, located opposite Sheenwater, Grand Island, New York, in

Latitude 42 degrees 59 minutes 41.10 seconds N.
Longitude 79 degrees 01 minute 13.42 seconds W.

and bearing S. 70 degrees 03 minutes W. 715 feet from Monument No. 27, located on the west side of Grand Island, at Sheenwater, New York, in

Latitude 42 degrees 59 minutes 43.51 seconds N.
Longitude 79 degrees 01 minute 04.38 seconds W.

THENCE S. 33 degrees 16 minutes 00 seconds E. 4155 feet along the west shore of Grand Island to Turning Point No. 145, located opposite Black Creek, Ontario, in

Latitude 42 degrees 59 minutes 06.78 seconds N.
Longitude 79 degrees 00 minutes 42.76 seconds W.

and bearing N. 43 degrees 38 minutes E. 3493 feet from Monument No. 28, located on the Canadian side about one-quarter mile southeast of the mouth of Black Creek, in

Latitude 42 degrees 58 minutes 41.81 seconds N.
Longitude 79 degrees 01 minute 15.19 seconds W.

THENCE S. 58 degrees 29 minutes 10 seconds E. 11,505 feet along the southwest shore of Grand Island to Turning Point No. 146, located about three-quarters of a mile northwest of Beaver Island, in

Latitude 42 degrees 58 minutes 07.36 seconds N.

Longitude 78 degrees 58 minutes 30.84 seconds W.

and bearing S. 68 degrees 13 minutes W. 570 feet from Monument No. 29, located on the southwest side of Grand Island about three-quarters of a mile northwest of the lower end of Beaver Island, in

Latitude 42 degrees 58 minutes 09.45 seconds N.

Longitude 78 degrees 58 minutes 23.72 seconds W.

THENCE S. 41 degrees 42 minutes 40 seconds E. 5336 feet along the southwest shore of Grand and Beaver Islands to Turning Point No. 147, located near to and opposite Beaver Island, on the United States side, in

Latitude 42 degrees 57 minutes 28.02 seconds N.

Longitude 78 degrees 57 minutes 43.10 seconds W.

and bearing N. 15 degrees 50 minutes E. 3026 feet from Monument No. 30, located on the Canadian side directly opposite Beaver Island and about one-quarter mile east of Shipyard, Ontario, in

Latitude 42 degrees 56 minutes 59.26 seconds N.

Longitude 78 degrees 57 minutes 54.20 seconds W.

THENCE S. 85 degrees 05 minutes 30 seconds E. 7795 feet along the south shores of Beaver and Grand Islands to Turning Point No. 148, located at the head of the channel between Grand and Strawberry Islands, in

Latitude 42 degrees 57 minutes 21.41 seconds N.

Longitude 78 degrees 55 minutes 58.66 seconds W.

and bearing N. 8 degrees 15 minutes E. 2967 feet from Monument No. 31, located on the Candian side about one-half mile northwest of the mouth of Frenchmans Creek, in

Latitude 42 degrees 56 minutes 52.41 seconds N.

Longitude 78 degrees 56 minutes 04.39 seconds W.

THENCE S. 48 degrees 00 minutes 40 seconds E. 4869 feet along the southwest shore of Strawberry Island to Turning Point No. 149, located near the head of Strawberry Island, in

Latitude 42 degrees 56 minutes 49.24 seconds N.

Longitude 78 degrees 55 minutes 10.00 seconds W.

and bearing N. 47 degrees 30 minutes E. 2576 feet from

Monument No. 32, located on the Canadian side about 300 feet southeast of the mouth of Frenchmans Creek, in

Latitude 42 degrees 56 minutes 32.05 seconds N.

Longitude 78 degrees 55 minutes 35.53 seconds W.

THENCE S. 28 degrees 09 minutes 10 seconds E. 5529 feet along the middle of the river to Turning Point No. 150, located near the lower end of Squaw Island, in

Latitude 42 degrees 56 minutes 01.09 seconds N.

Longitude 78 degrees 54 minutes 34.94 seconds W.

and bearing S. 55 degrees 11 minutes E. 5490 feet from Monument No. 32, heretofore described; and also bearing N. 12 degrees 14 minutes E. 3952 feet from Monument No. 33, located on the Canadian side about three-eighths of a mile south of the west end of the International Bridge, in

Latitude 42 degrees 55 minutes 22.94 seconds N.

Longitude 78 degrees 54 minutes 46.19 seconds W.

THENCE S. 14 degrees 12 minutes 10 seconds E. 3739 feet along the west shore of Squaw Island and through the center of the draw pier of the International Bridge to Turning Point No. 151, located near the head of Squaw Island, in

Latitude 42 degrees 55 minutes 25.29 seconds N.

Longitude 78 degrees 54 minutes 22.61 seconds W.

and bearing N. 82 degrees 16 minutes E. 1770 feet from Monument No. 33, heretofore described;

THENCE S. 0 degrees 14 minutes 50 seconds E. 8554 feet along the middle of the river to Turning Point No. 152, located near the angle in the Bird Island Pier, in

Latitude 42 degrees 54 minutes 00.80 seconds N.

Longitude 78 degrees 54 minutes 22.12 seconds W.

and bearing S. 58 degrees 46 minutes W. 1667 feet from Monument No. 34, located on the United States side at Fort Porter, Buffalo, New York, in

Latitude 42 degrees 54 minutes 09.34 seconds N.

Longitude 78 degrees 54 minutes 02.97 seconds W.

and bearing S. 79 degrees 03 minutes E. 3108 feet from Monument No. 35, located on the Canadian side about one-half mile north of Limekiln Reef, in

Latitude 42 degrees 54 minutes 06.63 seconds N.

Longitude 78 degrees 55 minutes 03.11 seconds W.

THENCE S. 20 degrees 18 minutes 00 seconds W. 7384 feet along the middle of the river to Turning Point No. 153,

located 100 feet west of Horseshoe Reef Light, at the head of Niagara River, in

Latitude 42 degrees 52 minutes 52.39 seconds N.

Longitude 78 degrees 54 minutes 56.52 seconds W.

and bearing W. 100 feet from the Horseshoe Reef Light, in

Latitude 42 degrees 52 minutes 52.39 seconds N.

Longitude 78 degrees 54 minutes 55.18 seconds W.

THENCE S. 10 degrees 04 minutes 20 seconds W. 978 feet into Lake Erie to Turning Point No. 154, in

Latitude 42 degrees 52 minutes 42.88 seconds N.

Longitude 78 degrees 54 minutes 58.82 seconds W.

and bearing S. 15 degrees 43 minutes W. 1000 feet from Horseshoe Reef Light, heretofore described;

THENCE S. 15 degrees 43 minutes 00 seconds W. 19,064 feet along the middle of Lake Erie to Turning Point No. 155, in

Latitude 42 degrees 49 minutes 41.62 seconds N.

Longitude 78 degrees 56 minutes 08.13 seconds W.

and bearing S. 15 degrees 43 minutes 00 seconds W. 20,064 feet from Horseshoe Reef Light, heretofore described;

THENCE S. 63 degrees 10 minutes 28 seconds W. 346,460 feet along the middle of Lake Erie to Turning Point No. 156, located between Long Point, on the Canadian side, and Erie, Pennsylvania, on the United States side, in

Latitude 42 degrees 33 minutes 36·53 seconds N.

Longitude 80 degrees 04 minutes 48.33 seconds W.

and bearing S. 6 degrees 35 minutes 46 seconds W. 57,442 feet from Long Point Light, located on the easterly end of Long Point, Ontario, in

Latitude 42 degrees 33 minutes 00.20 seconds N.

Longitude 80 degrees 03 minutes 20.40 seconds W.

and bearing N. 6 degrees 33 minutes 21 seconds E. 83,580 feet from Presque Isle Light, located on the northwest side of Presque Isle, at Erie, Pennsylvania, in

Latitude 42 degrees 09 minutes 56.30 seconds N.

Longitude 80 degrees 06 minutes 55.50 seconds W.

THENCE S. 78 degrees 15 minutes 49 seconds W. 322,577 feet along the middle of the lake to Turning Point No. 157, located on a line between Fairport, Ohio, and Port Stanley, Ontario, in

Latitude 42 degrees 12 minutes 26.97 seconds N.

Longitude 81 degrees 14 minutes 44.92 seconds W.

and bearing N. 2 degrees 59 minutes 14 seconds E. 164,452 feet from Fairport Light, located at Fairport, Ohio, in

Latitude 41 degrees 45 minutes 24.57 seconds N.

Longitude 81 degrees 16 minutes 38.79 seconds W.

THENCE S. 58 degrees 41 minutes 21 seconds W. 368,279 feet along the middle of the lake to Turning Point No. 158, in

Latitude 41 degrees 40 minutes 35.31 seconds N.

Longitude 82 degrees 23 minutes 51.10 seconds W.

and bearing S. 38 degrees 23 minutes 17 seconds E. 81,642 feet from Pelee Passage Light, located in Pelee Passage between Pelee Island and Pelee Point, in

Latitude 41 degrees 51 minutes 08.07 seconds N.

Longitude 82 degrees 34 minutes 59.17 seconds W.

THENCE due West 77,106 feet along the middle of the lake and in a direction to enter the passage immediately south of Middle Island to Turning Point No. 159, located about one-half mile south of Middle Island, in

Latitude 41 degrees 40 minutes 35.31 seconds N.

Longitude 82 degrees 40 minutes 47.15 seconds W.

and bearing South 2,500 feet from Middle Island Light, located on the southeast end of Middle Island, in

Latitude 41 degrees 41 minutes 00.01 seconds N.

Longitude 82 degrees 40 minutes 47.15 seconds W.

THENCE N. 57 degrees 11 minutes 18 seconds W. 126,206 feet, passing the southwest shore of Middle Island and along the passage between the Bass Islands and West Sister Island, on the United States side, and the Hen and Chickens Islands, East Sister, and Middle Sister Islands, on the Canadian side, to Turning Point No. 160, in

Latitude 41 degrees 51 minutes 48.58 seconds N.

Longitude 83 degrees 04 minutes 08.93 seconds W.

and bearing S. 62 degrees 35 minutes 35 seconds W. 54,351 feet from Colchester Reef Light, located on Colchester Reef, about four miles southeast of Colchester, Ontario, in

Latitude 41 degrees 55 minutes 56.24 seconds N.

Longitude 82 degrees 53 minutes 31.28 seconds W.

and bearing N. 62 degrees 18 minutes 06 seconds E. 79,941 feet from Toledo Harbour Light, located near the northeast entrance to the straight channel through Maumee Bay, and about three and one-half miles north of Cedar Point, Ohio, in

Latitude 41 degrees 45 minutes 42.54 seconds N.

Longitude 83 degrees 19 minutes 44.33 seconds W.

THENCE N. 18 degrees 41 minutes 52 seconds W. 68,262 feet to Turning Point No. 161, located at the mouth of Detroit River, in

Latitude 42 degrees 02 minutes 27.25 seconds N.

Longitude 83 degrees 08 minutes 58.93 seconds W.

and bearing N. 60 degrees 53 minutes 00 seconds E. 10,468 feet from Monument No. 1, located on the United States side at Pointe Mouillée, Michigan, in

Latitude 42 degrees 01 minute 36.96 seconds N.

Longitude 83 degrees 11 minutes 00.14 seconds W.

and also bearing S. 60 degrees 56 minutes 00 seconds W. 10,468 feet from Monument No. 2, located on the Canadian side at Bar Point, Ontario, in

Latitude 42 degrees 03 minutes 17.51 seconds N.

Longitude 83 degrees 06 minutes 57.68 seconds W.

THENCE N. 13 degrees 51 minutes 30 seconds E. 31,696 feet along the middle of Detroit River and passing the west shore of Bois Blanc Island and the east shore of Grosse Isle to Turning Point No. 162, located about 1700 feet east of Stony Island, on the United States side, in

Latitude 42 degrees 07 minutes 31.25 seconds N.

Longitude 83 degrees 07 minutes 18.20 seconds W.

and bearing S. 75 degrees 00 minutes W. 2080 feet from Monument No. 3, located on the Canadian side opposite Stony Island and about one and three-quarters miles north of Amherstburg, Ontario, in

Latitude 42 degrees 07 minutes 36.57 seconds N.

Longitude 83 degrees 06 minutes 51.54 seconds W.

THENCE N. 10 degrees 27 minutes 00 seconds W. 18,294 feet along the middle of the channel east of Grosse Isle, on the United States side, to Turning Point No. 163, in

Latitude 42 degrees 10 minutes 28.98 seconds N.

Longitude 83 degrees 08 minutes 02.26 seconds W.

and bearing N. 81 degrees 37 minutes E. 2740 feet from Monument No. 4, located on the east side of and near the north end of Grosse Isle and directly opposite the foot of Fighting Island, in

Latitude 42 degrees 10 minutes 25.03 seconds N.

Longitude 83 degrees 08 minutes 38.26 seconds W.

THENCE N. 3 degrees 57 minutes 10 seconds E. 23,339 feet along the west shore of Fighting Island and the east shore of Grassy Island to Turning Point No. 164, in

Latitude 42 degrees 14 minutes 18.99 seconds N.

Longitude 83 degrees 07 minutes 40.87 seconds W.
and bearing N. 42 degrees 46 minutes W. 940 feet from Monument No. 5, located on the west side of Fighting Island and directly opposite Ecorse, Michigan, in

Latitude 42 degrees 14 minutes 12.17 seconds N.

Longitude 83 degrees 07 minutes 32.39 seconds W.

THENCE N. 29 degrees 33 minutes 10 seconds E. 8985 feet along the middle of the river to Turning Point No. 165, located about one and one-eighth miles north of the north end of Fighting Island, in

Latitude 42 degrees 15 minutes 36.19 seconds N.

Longitude 83 degrees 06 minutes 41.94 seconds W.
and bearing N. 63 degrees 05 minutes W. 1885 feet from Monument No. 6, located on the Canadian side about three-eighths of a mile south of Ojibwa, Ontario, and about one mile north of the mouth of Turkey Creek, in

Latitude 42 degrees 15 minutes 27.76 seconds N.

Longitude 83 degrees 06 minutes 19.59 seconds W.

THENCE N. 20 degrees 17 minutes 00 seconds E. 11,591 feet along the middle of the river to Turning Point No. 166, located about three-eighths of a mile northeast of the mouth of River Rouge, in

Latitude 42 degrees 17 minutes 23.59 seconds N.

Longitude 83 degrees 05 minutes 48.48 seconds W.
and bearing N. 78 degrees 37 minutes W. 1482 feet from Monument No. 7, located on the Canadian side about one mile south of Sandwich Courthouse, Sandwich, Ontario, in

Latitude 42 degrees 17 minutes 20.70 seconds N.

Longitude 83 degrees 05 minutes 29.15 seconds W.

THENCE N. 34 degrees 23 minutes 50 seconds E. 8277 feet along the middle of the river to Turning Point No. 167, located between Detroit, Michigan, and Sandwich, Ontario, in

Latitude 42 degrees 18 minutes 31.05 seconds N.

Longitude 83 degrees 04 minutes 46.25 seconds W.
and bearing N. 55 degrees 43 minutes W. 1395 feet from Monument No. 8, located on the Canadian side about one-half mile north of Sandwich Courthouse, Sandwich, Ontario, in

Latitude 42 degrees 18 minutes 23.29 seconds N.

Longitude 83 degrees 04 minutes 30.91 seconds W.

THENCE N. 52 degrees 41 minutes 40 seconds E. 5467 feet along the middle of the river to Turning Point No. 168, located between Detroit, Michigan, and Windsor, Ontario, in

Latitude 42 degrees 19 minutes 03.78 seconds N.
Longitude 83 degrees 03 minutes 48.38 seconds W.
and bearing N. 33 degrees 32 minutes W. 1393 feet from Monument No. 9, located on the Canadian side about one-quarter mile below the Detroit River Tunnels, in
Latitude 42 degrees 18 minutes 52.31 seconds N.
Longitude 83 degrees 03 minutes 38.14 seconds W.

THENCE N. 70 degrees 36 minutes 50 seconds E. 12,725 feet along the middle of the river to Turning Point No. 169, located between Detroit, Michigan, and Walkerville, Ontario, in
Latitude 42 degrees 19 minutes 45.48 seconds N.
Longitude 83 degrees 01 minute 08.58 seconds W.
and bearing N. 34 degrees 11 minutes W. 1609 feet from Monument No. 10, located on the Canadian side at Walkerville, Ontario, in
Latitude 42 degrees 19 minutes 32.33 seconds N.
Longitude 83 degrees 00 minutes 56.54 seconds W.

THENCE N. 82 degrees 13 minutes 40 seconds E. 8255 feet to Turning Point No. 170, located near to and south of Belle Isle Park, on the United States side, in
Latitude 42 degrees 19 minutes 56.49 seconds N.
Longitude 82 degrees 59 minutes 19.69 seconds W.
and bearing S. 11 degrees 50 minutes E. 409 feet from Monument No. 11, located on the southwest end of Belle Isle Park, Detroit, Michigan, in
Latitude 42 degrees 20 minutes 00.45 seconds N.
Longitude 82 degrees 59 minutes 20.81 seconds W.

THENCE N. 72 degrees 20 minutes 40 seconds E. 8405 feet along the south shore of Belle Isle Park to Turning Point No. 171, located near the southeast end of Belle Isle Park, in
Latitude 42 degrees 20 minutes 21.66 seconds N.
Longitude 82 degrees 57 minutes 33.05 seconds W.
and bearing S. 50 degrees 57 minutes E. 361 feet from Monument No. 12, located on the southeast point of Belle Isle Park, in
Latitude 42 degrees 20 minutes 23.90 seconds N.
Longitude 82 degrees 57 minutes 36.78 seconds W.

THENCE N. 53 degrees 41 minutes 20 seconds E. 4619 feet to Turning Point No. 172, located about one-quarter mile west of the lower end of Peach Island, in
Latitude 42 degrees 20 minutes 48.68 seconds N.

Longitude 82 degrees 56 minutes 43.48 seconds W.
and bearing N. 87 degrees 10 minutes W. 1809 feet from Monument No. 13, located on the south side of the west end of Peach Island, in

Latitude 42 degrees 20 minutes 47.79 seconds N.
Longitude 82 degrees 56 minutes 19.42 seconds W.

THENCE N. 73 degrees 01 minute 30 seconds E. 33,111 feet along the middle of the river, passing the north shore of Peach Island, into Lake St. Clair to Turning Point No. 173, in

Latitude 42 degrees 22 minutes 23.96 seconds N.
Longitude 82 degrees 49 minutes 41.60 seconds W.
and bearing N. 27 degrees 40 minutes W. 28,839 feet from Monument No. 14, located on the Canadian side of Lake St. Clair near the mouth of Rivière aux Puces, in

Latitude 42 degrees 18 minutes 11.69 seconds N.
Longitude 82 degrees 46 minutes 43.21 seconds W.
and also bearing S. 20 degrees 14 minutes E. 31,309 feet from Monument No. 15, located on Milk River Point, on the United States side, in

Latitude 42 degrees 27 minutes 14.16 seconds N.
Longitude 82 degrees 52 minutes 05.89 seconds W.

THENCE N. 36 degrees 32 minutes 09 seconds E. 72,617 feet through the middle of Lake St. Clair to Turning Point No. 174, located near the head of, and east of, St. Clair Flats Canal, in

Latitude 42 degrees 31 minutes 59.92 seconds N.
Longitude 82 degrees 40 minutes 04.22 seconds W.
and bearing S. 80 degrees 27 minutes E. 346 feet from Monument No. 16, located on the upper end of the east wall of St. Clair Flats Canal; in

Latitude 42 degrees 32 minutes 00.48 seconds N.
Longitude 82 degrees 40 minutes 08.77 seconds W.

THENCE N. 27 degrees 19 minutes 00 seconds E. 3307 feet along the middle of South Channel of St. Clair River to Turning Point No. 175, located about five-eighths of a mile northeast of the head of St. Clair Flats Canal, in

Latitude 42 degrees 32 minutes 28.94 seconds N.
Longitude 82 degrees 39 minutes 43.95 seconds W.
and bearing N. 42 degrees 03 minutes W. 888 feet from Monument No. 17, located on the Canadian side about five-eighths of a mile northeast of St. Clair Flats Canal Upper Light, in

Latitude 42 degrees 32 minutes 22.42 seconds N.
Longitude 82 degrees 39 minutes 36.00 seconds W.

THENCE N. 46 degrees 06 minutes 30 seconds E. 2927 feet along the middle of South Channel to Turning Point No. 176, in
Latitude 42 degrees 32 minutes 48.98 seconds N.
Longitude 82 degrees 39 minutes 15.76 seconds W.
and bearing N. 50 degrees 43 minutes W. 896 feet from Monument No. 18, located on the Canadian side about one and one-quarter miles northeast of St. Clair Flats Canal Upper Light, in
Latitude 42 degrees 32 minutes 43.38 seconds N.
Longitude 82 degrees 39 minutes 06.50 seconds W.

THENCE N. 51 degrees 02 minutes 10 seconds E. 4580 feet along the middle of South Channel to Turning Point No. 177, in
Latitude 42 degrees 33 minutes 17.43 seconds N.
Longitude 82 degrees 38 minutes 28.18 seconds W.
and bearing N. 44 degrees 33 minutes W. 677 feet from Monument No. 19, located on the Canadian side directly opposite Maybury Highway, in
Latitude 42 degrees 33 minutes 12.67 seconds N.
Longitude 82 degrees 38 minutes 21.84 seconds W.

THENCE N. 70 degrees 06 minutes 20 seconds E. 2332 feet along the middle of South Channel to Turning Point No. 178, in
Latitude 42 degrees 33 minutes 25.27 seconds N.
Longitude 82 degrees 37 minutes 58.89 seconds W.
and bearing N. 8 degrees 02 minutes W. 675 feet from Monument No. 20, located on the Canadian side about one mile below the head of Little Bassett Channel, in
Latitude 42 degrees 33 minutes 18.67 seconds N.
Longitude 82 degrees 37 minutes 57.63 seconds W.

THENCE S. 89 degrees 33 minutes 20 seconds E. 2461 feet along the middle of South Channel to Turning Point No. 179, in
Latitude 42 degrees 33 minutes 25.08 seconds N.
Longitude 82 degrees 37 minutes 26.01 seconds W.
and bearing N. 16 degrees 36 minutes E. 702 feet from Monument No. 21, located on the Canadian side about five-eighths of a mile below the head of Little Bassett Channel, in
Latitude 42 degrees 33 minutes 18.43 seconds N.
Longitude 82 degrees 37 minutes 28.69 seconds W.

THENCE S. 64 degrees 02 minutes 30 seconds E. 2151 feet along the middle of South Channel to Turning Point No. 180, in

Latitude 42 degrees 33 minutes 15.78 seconds N.
Longitude 82 degrees 37 minutes 00.17 seconds W.
and bearing N. 38 degrees 43 minutes E. 524 feet from Monument No. 22, located on the Canadian side about one-quarter mile below the head of Little Bassett Channel, in
Latitude 42 degrees 33 minutes 11.74 seconds N.
Longitude 82 degrees 37 minutes 04.55 seconds W.

THENCE S. 44 degrees 25 minutes 10 seconds E. 2283 feet along the middle of South Channel to Turning Point No. 181, located about one-quarter mile above the head of Little Bassett Channel, in
Latitude 42 degrees 32 minutes 59.68 seconds N.
Longitude 82 degrees 36 minutes 38.83 seconds W.
and bearing N. 28 degrees 00 minutes E. 795 feet from Monument No. 23, located on the Canadian side about one-quarter mile above the head of Little Bassett Channel, in
Latitude 42 degrees 32 minutes 52.74 seconds N.
Longitude 82 degrees 36 minutes 43.81 seconds W.

THENCE S. 69 degrees 18 minutes 50 seconds E. 1498 feet along the middle of South Channel to Turning Point No. 182, located about one-half mile above the head of Little Bassett Channel, in
Latitude 42 degrees 32 minutes 54.45 seconds N.
Longitude 82 degrees 36 minutes 20.11 seconds W.
and bearing N. 4 degrees 33 minutes E. 794 feet from Monument No. 24, located on the Canadian side about one-half mile above the head of Little Bassett Channel, in
Latitude 42 degrees 32 minutes 46.63 seconds N.
Longitude 82 degrees 36 minutes 20.95 seconds W.

THENCE N. 82 degrees 12 minutes 40 seconds E. 3978 feet along the middle of South Channel to Turning Point No. 183, located about one-quarter mile west of the head of Bassett Channel, in
Latitude 42 degrees 32 minutes 59.77 seconds N.
Longitude 82 degrees 35 minutes 27.46 seconds W.
and bearing N. 18 degrees 03 minutes W. 692 feet from Monument No. 25, located on the Canadian side about one-quarter mile below the head of Bassett Channel, in
Latitude 42 degrees 32 minutes 53.27 seconds N.
Longitude 82 degrees 35 minutes 24.60 seconds W.

THENCE N. 53 degrees 09 minutes 20 seconds E. 2376 feet along the middle of South Channel to Turning Point No. 184, located near the head of Bassett Channel, in

Latitude 42 degrees 33 minutes 13.84 seconds N.
Longitude 82 degrees 35 minutes 02.06 seconds W.
and bearing S. 48 degrees 09 minutes E. 1141 feet from Monument No. 26, located on the United States side about one-eighth mile above Muirs, Michigan, in
Latitude 42 degrees 33 minutes 21.36 seconds N.
Longitude 82 degrees 35 minutes 13.41 seconds W.
THENCE N. 14 degrees 39 minutes 30 seconds E. 3849 feet along the middle of South Channel to Turning Point No. 185, in
Latitude 42 degrees 33 minutes 50.63 seconds N.
Longitude 82 degrees 34 minutes 49.04 seconds W.
and bearing N. 73 degrees 20 minutes W. 459 feet from Monument No. 27, located on the southwest end of a small island on the Canadian side near Squirrel Island and about three-quarters of a mile northeast of Muirs, Michigan, in
Latitude 42 degrees 33 minutes 49.33 seconds N.
Longitude 82 degrees 34 minutes 43.17 seconds W.
THENCE N. 40 degrees 37 minutes 00 seconds E. 4839 feet along the middle of South Channel to Turning Point No. 186, located opposite Maple Leaf, Michigan, in
Latitude 42 degrees 34 minutes 26.91 seconds N.
Longitude 82 degrees 34 minutes 06.94 seconds W.
and bearing N. 50 degrees 05 minutes W. 1081 feet from Monument No. 28, located on the northwest side of Squirrel Island, on the Canadian side, and opposite Maple Leaf, Michigan, in
Latitude 42 degrees 34 minutes 20.06 seconds N.
Longitude 82 degrees 33 minutes 55.85 seconds W.
THENCE N. 50 degrees 48 minutes 10 seconds E. 2909 feet along the middle of South Channel to Turning Point No. 187, located opposite Sans Souci, Michigan, in
Latitude 42 degrees 34 minutes 45.07 seconds N.
Longitude 82 degrees 33 minutes 36.81 seconds W.
and bearing N. 51 degrees 04 minutes W. 903 feet from Monument No. 29, located on the northwest side of Squirrel Island, on the Canadian side, directly opposite Sans Souci, Michigan, in
Latitude 42 degrees 34 minutes 39.46 seconds N.
Longitude 82 degrees 33 minutes 27.42 seconds W.
THENCE N. 40 degrees 36 minutes 00 seconds E. 2806 feet along the middle of South Channel to Turning Point No. 188, in
Latitude 42 degrees 35 minutes 06.11 seconds N.
Longitude 82 degrees 33 minutes 12.40 seconds W.
and bearing N. 56 degrees 00 minutes W. 903 feet from Monument No. 30, located on the northwest side of Squirrel Island,

on the Canadian side, about one-half mile above Sans Souci, Michigan, in

Latitude 42 degrees 35 minutes 01.12 seconds N.

Longitude 82 degrees 33 minutes 02.40 seconds W.

THENCE N. 26 degrees 54 minutes 20 seconds E. 2489 feet along the middle of South Channel to Turning Point No. 189, in

Latitude 42 degrees 35 minutes 28.04 seconds N.

Longitude 82 degrees 32 minutes 57.34 seconds W.

and bearing N. 51 degrees 12 minutes W. 976 feet from Monument No. 31, located on the northwest side of Squirrel Island, on the Canadian side, and about one mile below the head of Chematogan Channel, in

Latitude 42 degrees 35 minutes 22.00 seconds N.

Longitude 82 degrees 32 minutes 47.17 seconds W.

THENCE N. 49 degrees 43 minutes 30 seconds E. 9099 feet along the middle of South Channel to Turning Point No. 190, located opposite Russell Island, on the United States side, in

Latitude 42 degrees 36 minutes 26.13 seconds N.

Longitude 82 degrees 31 minutes 24.52 seconds W.

and bearing S. 62 degrees 40 minutes E. 886 feet from Monument No. 32, located on the southeast side of Russell Island, on the United States side, in

Latitude 42 degrees 36 minutes 30.15 seconds N.

Longitude 82 degrees 31 minutes 35.04 seconds W.

THENCE N. 27 degrees 27 minutes 50 seconds E. 2626 feet along the middle of South Channel to Turning Point No. 191, located near the head of South Channel and opposite the northeast end of Russell Island, in

Latitude 42 degrees 36 minutes 49.15 seconds N.

Longitude 82 degrees 31 minutes 08.32 seconds W.

and bearing S. 81 degrees 12 minutes E. 761 feet from Monument No. 33, located on the northeast end of Russell Island, in

Latitude 42 degrees 36 minutes 50.30 seconds N.

Longitude 82 degrees 31 minutes 18.38 seconds W.

THENCE N. 15 degrees 39 minutes 40 seconds E. 9250 feet along the middle of St. Clair River to Turning Point No. 192, located at the head of Chenal Ecarté, in

Latitude 42 degrees 38 minutes 17.13 seconds N.

Longitude 82 degrees 30 minutes 34.92 seconds W.

and bearing S. 69 degrees 21 minutes E. 1560 feet from Monu-

ment No. 34, located on the United States side about one-half mile above Locust Point, Michigan, and opposite the head of Chenal Ecarté, on the Canadian side, in

Latitude 42 degrees 38 minutes 22.56 seconds N.

Longitude 82 degrees 30 minutes 54.45 seconds W.

THENCE N. 1 degree 20 minutes 30 seconds W. 9791 feet along the middle of the river to Turning Point No. 193, located about three-eighths of a mile above Roberts Landing, Michigan, and about one-half mile above Port Lambton, Ontario, in

Latitude 42 degrees 39 minutes 53.81 seconds N.

Longitude 82 degrees 30 minutes 37.99 seconds W.

and bearing N. 77 degrees 13 minutes W. 1143 feet from Monument No. 35, located on the Canadian side about one-half mile north of Port Lambton, Ontario, in

Latitude 42 degrees 39 minutes 51.31 seconds N.

Longitude 82 degrees 30 minutes 23.07 seconds W.

THENCE N. 18 degrees 16 minutes 30 seconds E. 13,276 feet along the middle of the river to Turning Point No. 194, located near to and opposite Woodtick Island, on the Canadian side, in

Latitude 42 degrees 41 minutes 58.33 seconds N.

Longitude 82 degrees 29 minutes 42.24 seconds W.

and bearing N. 71 degrees 55 minutes W. 411 feet from Monument No. 36, located on the west side of Woodtick Island, in

Latitude 42 degrees 41 minutes 57.07 seconds N.

Longitude 82 degrees 29 minutes 37.00 seconds W.

THENCE N. 24 degrees 00 minutes 20 seconds E. 7509 feet along the middle of the river to Turning Point No. 195 located opposite Marine City, Michigan, in

Latitude 42 degrees 43 minutes 06.09 seconds N.

Longitude 82 degrees 29 minutes 01.32 seconds W.

and bearing N. 81 degrees 26 minutes W. 1699 feet from Monument No. 37, located on the Canadian side about one-quarter mile north of Sombra, Ontario, in

Latitude 42 degrees 43 minutes 03.59 seconds N.

Longitude 82 degrees 28 minutes 38.81 seconds W.

THENCE N. 0 degrees 43 minutes 50 seconds W. 5451 feet along the middle of the river to Turning Point No. 196, in

Latitude 42 degrees 43 minutes 59.93 seconds N.

Longitude 82 degrees 29 minutes 02.25 seconds W.

and bearing S. 74 degrees 28 minutes E. 1581 feet from Mon-

ment No. 38, located on the United States side about one and one-eighth miles north of Marine City, Michigan, in

Latitude 42 degrees 44 minutes 04.11 seconds N.

Longitude 82 degrees 29 minutes 22.66 seconds W.

THENCE N. 22 degrees 47 minutes 50 seconds E. 11,470 feet along the middle of the river to Turning Point No. 197, located about one-half mile northeast of Recors Point, on the United States side, in

Latitude 42 degrees 45 minutes 44.37 seconds N.

Longitude 82 degrees 28 minutes 02.67 seconds W.

and bearing N. 83 degrees 04 minutes W. 1257 feet from Monument No. 39, located on the Canadian side about five-eighths of a mile north of the mouth of Clay Creek, in

Latitude 42 degrees 45 minutes 42.88 seconds N.

Longitude 82 degrees 27 minutes 45.95 seconds W.

THENCE N. 2 degrees 29 minutes 00 seconds W. 2872 feet along the middle of the river to Turning Point No. 198, located about three-eighths of a mile southeast of China, Michigan, in

Latitude 42 degrees 46 minutes 12.71 seconds N.

Longitude 82 degrees 28 minutes 04.34 seconds W.

and bearing S. 84 degrees 44 minutes E. 997 feet from Monument No. 40, located on the United States side about one-quarter mile south of China, Michigan, in

Latitude 42 degrees 46 minutes 13.62 seconds N.

Longitude 82 degrees 28 minutes 17.64 seconds W.

THENCE N. 10 degrees 48 minutes 00 seconds W. 5889 feet along the middle of the river to Turning Point No. 199, in

Latitude 42 degrees 47 minutes 09.86 seconds N.

Longitude 82 degrees 28 minutes 19.14 seconds W.

and bearing S. 75 degrees 32 minutes W. 950 feet from Monument No. 41, located on the Canadian side about seven-eighths of a mile north of the mouth of Bowens Creek, in

Latitude 42 degrees 47 minutes 12.20 seconds N.

Longitude 82 degrees 28 minutes 06.80 seconds W.

THENCE N. 21 degrees 42 minutes 00 seconds W. 6372 feet along the middle of the river to Turning Point No. 200, in

Latitude 42 degrees 48 minutes 08.33 seconds N.

Longitude 82 degrees 28 minutes 50.74 seconds W.

and bearing S. 71 degrees 30 minutes W. 949 feet from Monument No. 42, located on the Canadian side about one and one-quarter miles south of Courtright, Ontario, in

Latitude 42 degrees 48 minutes 11.31 seconds N.
Longitude 82 degrees 28 minutes 38.66 seconds W.

THENCE N. 9 degrees 25 minutes 30 seconds W. 2158 feet along the middle of the river to Turning Point No. 201, located about seven-eighths of a mile south of the mouth of Pine River, in

Latitude 42 degrees 48 minutes 29.36 seconds N.
Longitude 82 degrees 28 minutes 55.48 seconds W.

and bearing S. 83 degrees 49 minutes E. 1064 feet from Monument No. 43, located on the United States side about three-quarters of a mile south of the mouth of Pine River, in

Latitude 42 degrees 48 minutes 30.49 seconds N.
Longitude 82 degrees 29 minutes 09.66 seconds W.

THENCE N. 7 degrees 46 minutes 20 seconds E. 6292 feet along the middle of the river to Turning Point No. 202, located opposite St. Clair, Michigan, in

Latitude 42 degrees 49 minutes 30.94 seconds N.
Longitude 82 degrees 28 minutes 44.06 seconds W.

and bearing N. 73 degrees 19 minutes W. 1867 feet from Monument No. 44, located on the Canadian side about one-quarter mile north of Courtright, Ontario, in

Latitude 42 degrees 49 minutes 25.64 seconds N.
Longitude 82 degrees 28 minutes 20.05 seconds W.

THENCE N. 21 degrees 33 minutes 40 seconds E. 4463 feet along the middle of the river to Turning Point No. 203, in

Latitude 42 degrees 50 minutes 11.94 seconds N.
Longitude 82 degrees 28 minutes 22.04 seconds W.

and bearing S. 65 degrees 22 minutes E. 1507 feet from Monument No. 45, located on the United States side about one mile north of St. Clair, Michigan, in

Latitude 42 degrees 50 minutes 18.14 seconds N.
Longitude 82 degrees 28 minutes 40.43 seconds W.

THENCE N. 9 degrees 53 minutes 00 seconds E. 7006 feet along the middle of the river to Turning Point No. 204, in

Latitude 42 degrees 51 minutes 20.11 seconds N.
Longitude 82 degrees 28 minutes 05.90 seconds W.

and bearing N. 81 degrees 05 minutes W. 1304 feet from Monument No. 46, located on the Canadian side about one and three-eighths miles south of the lower end of Stag Island, in

Latitude 42 degrees 51 minutes 18.12 seconds N.
Longitude 82 degrees 27 minutes 48.61 seconds W.

THENCE N. 2 degrees 46 minutes 20 seconds W. 11,581 feet along the middle of the river and near to the west shore of Stag Island to Turning Point No. 205, located near to and opposite Stag Island, in

Latitude 42 degrees 53 minutes 14.37 seconds N.

Longitude 82 degrees 28 minutes 13.42 seconds W.

and bearing N. 87 degrees 33 minutes E. 1318 feet from Monument No. 47, located on the United States side about one-quarter mile south of the mouth of Cuttle Creek and directly opposite Stag Island, in

Latitude 42 degrees 53 minutes 13.81 seconds N.

Longitude 82 degrees 28 minutes 31.11 seconds W.

THENCE N. 17 degrees 58 minutes 30 seconds E. 6977 feet along the west shore of Stag Island and the middle of the river to Turning Point No. 206, located opposite Marysville, Michigan, in

Latitude 42 degrees 54 minutes 19.92 seconds N.

Longitude 82 degrees 27 minutes 44.50 seconds W.

and bearing N. 78 degrees 17 minutes W. 1271 feet from Monument No. 48, located on the Canadian side about one-eighth mile north of the mouth of Talford Creek, in

Latitude 42 degrees 54 minutes 17.37 seconds N.

Longitude 82 degrees 27 minutes 27.77 seconds W.

THENCE N. 13 degrees 40 minutes 10 seconds E. 7924 feet along the middle of the river to Turning Point No. 207, located about seven-eighths of a mile south of South Park, Michigan, in

Latitude 42 degrees 55 minutes 35.97 seconds N.

Longitude 82 degrees 27 minutes 19.33 seconds W.

and bearing S. 65 degrees 49 minutes E. 1162 feet from Monument No. 49, located on the United States side about one-quarter of a mile north of the mouth of Bunce Creek, in

Latitude 42 degrees 55 minutes 40.67 seconds N.

Longitude 82 degrees 27 minutes 33.58 seconds W.

THENCE N. 26 degrees 52 minutes 50 seconds E. 4463 feet along the middle of the river to Turning Point No. 208, located opposite South Park, Michigan, in

Latitude 42 degrees 56 minutes 15.28 seconds N.

Longitude 82 degrees 26 minutes 52.20 seconds W.

and bearing N. 61 degrees 34 minutes W. 1083 feet from Monument No. 50, located on the Canadian side directly opposite South Park, Michigan, in

Latitude 42 degrees 56 minutes 10.19 seconds N.

Longitude 82 degrees 26 minutes 39.40 seconds W.

THENCE N. 44 degrees 03 minutes 10 seconds E. 7286 feet along the middle of the river to Turning Point No. 209, located about one-half mile south of the west end of St. Clair Tunnel, in

Latitude 42 degrees 57 minutes 07.00 seconds N.

Longitude 82 degrees 25 minutes 44.09 seconds W.

and bearing S. 56 degrees 35 minutes E. 1028 feet from Monumen No. 51, located on the United States side about one-half mile southwest of the west end of St. Clair Tunnel, in

Latitude 42 degrees 57 minutes 12.59 seconds N.

Longitude 82 degrees 25 minutes 55.62 seconds W.

THENCE N. 31 degrees 00 minutes 10 seconds E. 6275 feet along the middle of the river to Turning Point No. 210, located opposite Port Huron, Michigan, and Sarnia, Ontario, and about one-half mile southeast of the mouth of Black River, in

Latitude 42 degrees 58 minutes 00.12 seconds N.

Longitude 82 degrees 25 minutes 00.62 seconds W.

and bearing N. 36 degrees 41 minutes W. 1457 feet from Monument No. 52, located on the Canadian side about five-eighths of a mile south of the Custom House at Sarnia, Ontario, in

Latitude 42 degrees 57 minutes 48.57 seconds N.

Longitude 82 degrees 24 minutes 48.91 seconds W.

THENCE N. 14 degrees 17 minutes 20 seconds E. 3981 feet along the middle of the river to Turning Point No. 211, located opposite Port Huron, Michigan, and Sarnia, Ontario, and about one-half mile northeast of the mouth of Black River, in

Latitude 42 degrees 58 minutes 38.22 seconds N.

Longitude 82 degrees 24 minutes 47.40 seconds W.

and bearing N. 69 degrees 29 minutes W. 1574 feet from Monument No. 53, located on the Canadian side and about one-quarter mile north of the Custom House at Sarnia, Ontario, in

Latitude 42 degrees 58 minutes 32.77 seconds N.

Longitude 82 degrees 24 minutes 27.57 seconds W.

THENCE N. 36 degrees 59 minutes 20 seconds W. 3699 feet along the middle of the river to Turning Point No. 212, located opposite Port Huron, Michigan, and Bay Point, on the Canadian side, in

Latitude 42 degrees 59 minutes 07.40 seconds N.

Longitude 82 degrees 25 minutes 17.34 seconds W.

and bearing N. 85 degrees 10 minutes E. 736 feet from Monument No. 54, located on the United States side at Port Huron, Michigan, and opposite Bay Point, on the Canadian side, in

Latitude 42 degrees 59 minutes 06.79 seconds N.
Longitude 82 degrees 25 minutes 27.21 seconds W.

THENCE N. 18 degrees 48 minutes 40 seconds W. 2622 feet along the middle of the river to Turning Point No. 213, located opposite Port Huron, Michigan, in

Latitude 42 degrees 59 minutes 31.91 seconds N.
Longitude 82 degrees 25 minutes 28.72 seconds W.

and bearing N. 56 degrees 02 minutes W. 1094 feet from Monument No. 55, located on the Canadian side about three-eighths of a mile north of the lower end of Bay Point, in

Latitude 42 degrees 59 minutes 25.87 seconds N.
Longitude 82 degrees 25 minutes 16.50 seconds W.

THENCE N. 3 degrees 26 minutes 50 seconds E. 2025 feet along the middle of the river to Turning Point No. 214, located opposite Port Huron, Michigan, in

Latitude 42 degrees 59 minutes 51.88 seconds N.
Longitude 82 degrees 25 minutes 27.08 seconds W.

and bearing S. 44 degrees 25 minutes E. 683 feet from Monument No. 56, located on the United States side at Port Huron, Michigan, about one-half mile south of Fort Gratiot Light, in

Latitude 42 degrees 59 minutes 56.70 seconds N.
Longitude 82 degrees 25 minutes 33.51 seconds W.

THENCE N. 29 degrees 26 minutes 00 seconds E. 5643 feet along the middle of the St. Clair River into Lake Huron to Turning Point No. 215, located at the foot of Lake Huron, in

Latitude 43 degrees 00 minutes 40.42 seconds N.
Longitude 82 degrees 24 minutes 49.76 seconds W.

and bearing N. 21 degrees 32 minutes W. 3006 feet from Monument No. 57, located on the Canadian side of Lake Huron directly north of Point Edward, Ontario, in

Latitude 43 degrees 00 minutes 12.80 seconds N.
Longitude 82 degrees 24 minutes 34.91 seconds W.

and also bearing S. 76 degrees 51 minutes E. 3095 feet from Monument No. 58, located on the United States side of Lake Huron about one-half mile north of Fort Gratiot Light, in

Latitude 43 degrees 00 minutes 47.38 seconds N.
Longitude 82 degrees 25 minutes 30.32 seconds W.

THENCE N. 20 degrees 01 minute 52 seconds E. 225,118 feet along the middle of Lake Huron to Turning Point No. 216, located on a line between Port Sanilac, Michigan, and Goderich, Ontario, in

Latitude 43 degrees 35 minutes 28.03 seconds N.
Longitude 82 degrees 07 minutes 22.05 seconds W.
and bearing N. 61 degrees 47 minutes 44 seconds E. 125,400 feet from Port Sanilac Light, located on the United States side at Port Sanilac, Michigan, in
Latitude 43 degrees 25 minutes 45.43 seconds N.
Longitude 82 degrees 32 minutes 23.61 seconds W.

THENCE N. 9 degrees 04 minutes 17 seconds W. 645,430 feet along the middle of Lake Huron to Turning Point No. 217, located on a line between Thunder Bay Island, Michigan, on the United States side, and South Baymouth, Ontario, on the Canadian side, in
Latitude 45 degrees 20 minutes 19.35 seconds N.
Longitude 82 degrees 31 minutes 06.40 seconds W.
and bearing N. 57 degrees 31 minutes 41 seconds E. 205,920 feet from Thunder Bay Island Light, located on Thunder Bay Island, Michigan, in
Latitude 45 degrees 02 minutes 14.95 seconds N.
Longitude 83 degrees 11 minutes 38.39 seconds W.

THENCE N. 57 degrees 06 minutes 19 seconds W. 327,499 feet along the middle of Lake Huron to Turning Point No. 218, located opposite the entrance to False Detour Channel, in
Latitude 45 degrees 49 minutes 17.13 seconds N.
Longitude 83 degrees 35 minutes 49.19 seconds W.
and bearing S. 41 degrees 40 minutes 53 seconds W. 41,515 feet from Monument No. 1, located on the north end of Smith Point, on Cockburn Island, Ontario, on the Canadian side, and directly east of Kitchener Island, in
Latitude 45 degrees 54 minutes 23.41 seconds N.
Longitude 83 degrees 29 minutes 19.40 seconds W.
and also bearing S. 26 degrees 38 minutes 10 seconds W. 39,564 feet from Monument No. 2, located on the southeast end of Drummond Island, Michigan, on the United States side, in
Latitude 45 degrees 55 minutes 06.34 seconds N.
Longitude 83 degrees 31 minutes 38.75 seconds W.

THENCE N. 32 degrees 45 minutes 24 seconds E. 76,756 feet in a direction to enter False Detour Channel and through the middle of said channel to Turning Point No. 219, located in North Channel of Lake Huron, in
Latitude 45 degrees 59 minutes 53.96 seconds N.
Longitude 83 degrees 26 minutes 00.94 seconds W.
and bearing N. 67 degrees 31 minutes 00 seconds E. 10,923 feet

from Monument No. 3, located at Marblehead, on the east end of Drummond Island, in

Latitude 45 degrees 59 minutes 12.74 seconds N.

Longitude 83 degrees 28 minutes 23.90 seconds W.

THENCE N. 41 degrees 44 minutes 27 seconds W. 52,641 feet along North Channel and following the northeast shore of Drummond Island to Turning Point No. 220, located opposite Raynolds Point, Drummond Island, in

Latitude 46 degrees 06 minutes 21.42 seconds N.

Longitude 83 degrees 34 minutes 18.32 seconds W.

and bearing N. 21 degrees 17 minutes 00 seconds E. 6512 feet from Monument No. 4, located on Raynolds Point, Drummond Island, in

Latitude 46 degrees 05 minutes 21.52 seconds N.

Longitude 83 degrees 34 minutes 51.86 seconds W.

THENCE N. 74 degrees 34 minutes 42 seconds W. 21,848 feet along North Channel and following the north shore of Drummond Island to Turning Point No. 221, located opposite Poe Point, Drummond Island, in

Latitude 46 degrees 07 minutes 18.66 seconds N.

Longitude 83 degrees 39 minutes 17.31 seconds W.

and bearing N. 20 degrees 45 minutes 00 seconds W. 6968 feet from Monument No. 5, located on the north side of Drummond Island on point about three-quarters of a mile west of Poe Point, in

Latitude 46 degrees 06 minutes 14.33 seconds N.

Longitude 83 degrees 38 minutes 42.26 seconds W.

THENCE S. 75 degrees 28 minutes 20 seconds W. 27,483 feet along North Channel and following the north shore of Drummond Island to Turning Point No. 222, located about one-half mile south of Maple Island, in Potagannissing Bay, in

Latitude 46 degrees 06 minutes 10.43 seconds N.

Longitude 83 degrees 45 minutes 34.86 seconds W.

and bearing S. 18 degrees 34 minutes 00 seconds E. 2669 feet from Monument No. 6, located on the south end of Maple Island, on the Canadian side, in

Latitude 46 degrees 06 minutes 35.40 seconds N.

Longitude 83 degrees 45 minutes 46.92 seconds W.

THENCE N. 70 degrees 45 minutes 10 seconds W. 17,850 feet along the channel between Cedar, Wilson, and Burnt Islands, on the United States side, and Maple, South Seine, and Salt Islands, on the Canadian side, to Turning Point No. 223, located in Potagannissing Bay, in

Latitude 46 degrees 07 minutes 08.44 seconds N.
Longitude 83 degrees 49 minutes 34.08 seconds W.
and bearing S. 39 degrees 38 minutes W. 4915 feet from Monument No. 7, located on the south end of Koshkawong Point, St. Joseph Island, Ontario, in
Latitude 46 degrees 07 minutes 45.81 seconds N.
Longitude 83 degrees 48 minutes 49.58 seconds W.

THENCE S. 42 degrees 38 minutes 40 seconds W. 28,932 feet along the northwest shores of Burnt, Butterfield, Macomb, Cass, and Little Cass Islands, on the United States side, and the southeast shores of St. Joseph, Duncan, Archibald, Janden, and Pirate Islands, on the Canadian side, to Turning Point No. 224, located about one-quarter mile southeast of Pirate Island, on the Canadian side, and three-eighths mile west of Little Cass Island, on the United States side, in
Latitude 46 degrees 03 minutes 38.26 seconds N.
Longitude 83 degrees 54 minutes 12.02 seconds W.
and bearing S. 26 degrees 47 minutes E. 1728 feet from Monument No. 8, located on the south end of Pirate Island, in
Latitude 46 degrees 03 minutes 53.48 seconds N.
Longitude 83 degrees 54 minutes 23.06 seconds W.

THENCE S. 84 degrees 10 minutes 40 seconds W. 13,260 feet along the south shore of St. Joseph Island, Ontario, to Turning Point No. 225, located at the mouth of St. Marys River and about one-half mile southwest of Old Fort St. Joe Point, on the south end of St. Joseph Island, Ontario, in
Latitude 46 degrees 03 minutes 24.94 seconds N.
Longitude 83 degrees 57 minutes 19.06 seconds W.
and bearing S. 35 degrees 48 minutes W. 2866 feet from Monument No. 9, located on the west side of Old Fort St. Joe Point, in
Latitude 46 degrees 03 minutes 47.89 seconds N.
Longitude 83 degrees 56 minutes 55.29 seconds W.

THENCE N. 17 degrees 37 minutes 30 seconds W. 17,470 feet along the channel in the St. Marys River between St. Joseph Island, on the Canadian side, and Lime, Hart, and Edward Islands, on the United States side, to Turning Point No. 226, located about one-eighth mile northeast of the north end of Edward Island, in
Latitude 46 degrees 06 minutes 09.30 seconds N.
Longitude 83 degrees 58 minutes 34.12 seconds W.
and bearing N. 31 degrees 06 minutes E. 1112 feet from

Monument No. 10, located on the west side of Edward Island, in

Latitude 46 degrees 05 minutes 59.89 seconds N.

Longitude 83 degrees 58 minutes 42.27 seconds W.

THENCE N. 52 degrees 40 minutes 10 seconds W. 9561 feet along the west shore of St. Joseph Island to Turning Point No. 227, located about one-half mile southwest of Hay Point, St. Joseph Island, in

Latitude 46 degrees 07 minutes 06.52 seconds N.

Longitude 84 degrees 00 minutes 22.04 seconds W.

and bearing S. 56 degrees 36 minutes W. 1677 feet from Monument No. 11, located on the small island about one-eighth mile southwest of Hay Point, in

Latitude 46 degrees 07 minutes 15.63 seconds N.

Longitude 84 degrees 00 minutes 02.17 seconds W.

THENCE N. 0 degrees 25 minutes 20 seconds E. 11,360 feet along the west shore of St. Joseph Island into Mud Lake to Turning Point No. 228, located about one and three-eighths miles north of Hay Point, in

Latitude 46 degrees 08 minutes 58.66 seconds N.

Longitude 84 degrees 00 minutes 20.85 seconds W.

and bearing N. 69 degrees 35 minutes W. 3011 feet from Monument No. 12, located on the west side of St. Joseph Island about one and one-quarter miles north of Hay Point, in

Latitude 46 degrees 08 minutes 48.29 seconds N.

Longitude 83 degrees 59 minutes 40.77 seconds W.

THENCE N. 52 degrees 31 minutes 10 seconds W. 22,715 feet along the west shore of St. Joseph Island to Turning Point No. 229, located about three-eighths of a mile southwest of Richardson Point, St. Joseph Island, in

Latitude 46 degrees 11 minutes 15.03 seconds N.

Longitude 84 degrees 04 minutes 37.05 seconds W.

and bearing S. 45 degrees 21 minutes W. 1974 feet from Monument No. 13, located on Richardson Point, St. Joseph Island, in

Latitude 46 degrees 11 minutes 28.72 seconds N.

Longitude 84 degrees 04 minutes 17.09 seconds W.

THENCE N. 14 degrees 46 minutes 40 seconds W. 8599 feet along the west shore of St. Joseph Island, on the Canadian side, and east of Two Tree Island, on the United States side, to Turning Point No. 230, in

Latitude 46 degrees 12 minutes 37.11 seconds N.

Longitude 84 degrees 05 minutes 08.24 seconds W.

and bearing N. 15 degrees 04 minutes E. 1444 feet from Monument No. 14, located on the north end of Two Tree Island, in

Latitude 46 degrees 12 minutes 23.34 seconds N.

Longitude 84 degrees 05 minutes 13.57 seconds W.

THENCE N. 26 degrees 27 minutes 30 seconds W. 12,749 feet along the west shore of St. Joseph Island and through Mud Lake to Turning Point No. 231, located about one-quarter mile northwest of Everens Point, St. Joseph Island, in

Latitude 46 degrees 14 minutes 29.77 seconds N.

Longitude 84 degrees 06 minutes 29.05 seconds W.

and bearing N. 79 degrees 30 minutes W. 1348 feet from Monument No. 15, located on the west side of St. Joseph Island about one-eighth mile north of Everens Point, in

Latitude 46 degrees 14 minutes 27.34 seconds N.

Longitude 84 degrees 06 minutes 10.19 seconds W.

THENCE N. 26 degrees 15 minutes 20 seconds E. 6072 feet along the channel between St. Joseph Island, on the Canadian side, and Neebish and Rains Islands, on the United States side, to Turning Point No. 232, located about one-quarter mile northeast of Johnson Point, on Rains Island, in

Latitude 46 degrees 15 minutes 23.52 seconds N.

Longitude 84 degrees 05 minutes 50.83 seconds W.

and bearing N. 63 degrees 58 minutes E. 1256 feet from Monument No. 16, located on Johnson Point, on the east side of Rains Island, in

Latitude 46 degrees 15 minutes 18.08 seconds N.

Longitude 84 degrees 06 minutes 06.88 seconds W.

THENCE N. 46 degrees 35 minutes 30 seconds W. 6192 feet along the channel between St. Joseph Island, on the Canadian side, and Rains Island, on the United States side, to Turning Point No. 233, located about one-eighth mile east of Mirre Point, on the east side of Neebish Island, in

Latitude 46 degrees 16 minutes 05.52 seconds N.

Longitude 84 degrees 06 minutes 54.85 seconds W.

and bearing S. 62 degrees 18 minutes E. 1239 feet from Monument No. 17, located on the east side of Neebish Island, about one-eighth mile north of Mirre Point, in

Latitude 46 degrees 16 minutes 11.21 seconds N.

Longitude 84 degrees 07 minutes 10.47 seconds W.

THENCE N. 3 degrees 24 minutes 20 seconds W. 17,113 feet along the channel through Little Mud Lake, between St. Joseph

Island, on the Canadian side, and Neebish Island, on the United States side, to Turning Point No. 234, located about three-eighths of a mile south of the south end of Sugar Island, in

Latitude 46 degrees 18 minutes 54.15 seconds N.

Longitude 84 degrees 07 minutes 09.33 seconds W.

and bearing N. 67 degrees 22 minutes W. 1814 feet from Monument No. 18, located on Stribling Point, St. Joseph Island, in

Latitude 46 degrees 18 minutes 47.26 seconds N.

Longitude 84 degrees 06 minutes 45.48 seconds W.

THENCE N. 52 degrees 48 minutes 40 seconds E. 4284 feet along the channel between St. Joseph Island, on the Canadian side, and Sugar Island, on the United States side, to Turning Point No. 235, located about three-eighths of a mile east of Harwood Point, on Sugar Island, in

Latitude 46 degrees 19 minutes 19.71 seconds N.

Longitude 84 degrees 06 minutes 20.71 seconds W.

and bearing N. 19 degrees 29 minutes W. 1917 feet from Monument No. 19, located on the north end of St. Joseph Island, about one-half mile east of Stribling Point, in

Latitude 46 degrees 19 minutes 01.87 seconds N.

Longitude 84 degrees 06 minutes 11.60 seconds W.

THENCE N. 30 degrees 51 minutes 10 seconds W. 6962 feet along the channel on the east side of Sugar Island to Turning Point No. 236, located between Sugar Island, on the United States side, and East Neebish Island, on the Canadian side, in

Latitude 46 degrees 20 minutes 18.71 seconds N.

Longitude 84 degrees 07 minutes 11.59 seconds W.

and bearing S. 36 degrees 53 minutes W. 1020 feet from Monument No. 20, located on the southwest side of East Neebish Island, directly opposite Point Augustus, on Sugar Island, in

Latitude 46 degrees 20 minutes 26.76 seconds N.

Longitude 84 degrees 07 minutes 02.87 seconds W.

THENCE N. 21 degrees 01 minute 30 seconds W. 13,315 feet along the channel between Sugar and Duck Islands, on the United States side, and East Neebish Island and the mainland, on the Canadian side, to Turning Point No. 237, located about three-eighths of a mile west of Birch Point, on the Canadian side, in

Latitude 46 degrees 22 minutes 21.39 seconds N.

Longitude 84 degrees 08 minutes 19.72 seconds W.

and bearing N. 56 degrees 47 minutes E. 1010 feet from Monument No. 21, located on the northeast end of Duck Island, in

Latitude 46 degrees 22 minutes 15.92 seconds N.

Longitude 84 degrees 08 minutes 31.77 seconds W.

THENCE N. 6 degrees 00 minutes 00 seconds W. 16,992 feet into Lake George to Turning Point No. 238, located about one and one-half miles northwest of Pumpkin Point, on the Canadian side, in

Latitude 46 degrees 25 minutes 08.20 seconds N.

Longitude 84 degrees 08 minutes 45.07 seconds W.

and bearing S. 85 degrees 15 minutes E. 10,955 feet from Monument No. 22, located on Whipple Point, on the east side of Sugar Island, in

Latitude 46 degrees 25 minutes 17.19 seconds N.

Longitude 84 degrees 11 minutes 20.89 seconds W.

THENCE N. 15 degrees 45 minutes 40 seconds E. 32,380 feet along the middle of Lake George to Turning Point No. 239, located about seven-eighths of a mile southeast of Churchville Point, on Sugar Island, in

Latitude 46 degrees 30 minutes 15.80 seconds N.

Longitude 84 degrees 06 minutes 39.34 seconds W.

and bearing S. 61 degrees 18 minutes W. 3659 feet from Monument No. 23, located on the southwest side of Sand Island, on the Canadian side, in

Latitude 46 degrees 30 minutes 33.15 seconds N.

Longitude 84 degrees 05 minutes 53.47 seconds W.

THENCE N. 19 degrees 32 minutes 00 seconds W. 5308 feet through Lake George to the foot of the channel between Squirrel Island, on the Canadian side, and Sugar Island, on the United States side, to Turning Point No. 240, in

Latitude 46 degrees 31 minutes 05.18 seconds N.

Longitude 84 degrees 07 minutes 04.72 seconds W.

and bearing S. 22 degrees 07 minutes E. 936 feet from Monument No. 24, located on the southwest side of Squirrel Island, in

Latitude 46 degrees 31 minutes 13.74 seconds N.

Longitude 84 degrees 07 minutes 09.76 seconds W.

THENCE N. 48 degrees 29 minutes 00 seconds W. 1735 feet along the channel between Squirrel Island, on the Canadian side, and Sugar Island, on the United States side, to Turning Point No. 241, in

Latitude 46 degrees 31 minutes 16.53 seconds N.
Longitude 84 degrees 07 minutes 23.29 seconds W.
and bearing N. 73 degrees 23 minutes W. 988 feet from Monument No. 24, heretofore described;

THENCE N. 22 degrees 32 minutes 10 seconds W. 3713 feet to Turning Point No. 242, located about three-eighths of a mile northwest of the northwest end of Squirrel Island, in
Latitude 46 degrees 31 minutes 50.38 seconds N.
Longitude 84 degrees 07 minutes 43.65 seconds W.
and bearing S. 55 degrees 41 minutes W. 757 feet from Monument No. 25, located on the Canadian side about three-eighths of a mile northwest of Squirrel Island, in
Latitude 46 degrees 31 minutes 54.60 seconds N.
Longitude 84 degrees 07 minutes 34.70 seconds W.

THENCE N. 74 degrees 44 minutes 20 seconds W. 2732 feet to Turning Point No. 243, in
Latitude 46 degrees 31 minutes 57.48 seconds N.
Longitude 84 degrees 08 minutes 21.35 seconds W.
and bearing N. 53 degrees 48 minutes E. 1128 feet from Monument No. 26, located on the north side of Sugar Island about one-eighth of a mile west of Payment, Michigan, in
Latitude 46 degrees 31 minutes 50.91 seconds N.
Longitude 84 degrees 08 minutes 34.37 seconds W.

THENCE S. 74 degrees 15 minutes 50 seconds W. 1928 feet to Turning Point No. 244, in
Latitude 46 degrees 31 minutes 52.32 seconds N.
Longitude 84 degrees 08 minutes 47.90 seconds W.
and bearing N. 81 degrees 24 minutes W. 957 feet from Monument No. 26, heretofore described;

THENCE S. 59 degrees 49 minutes 20 seconds W. 1986 feet to Turning Point No. 245, located opposite the mouth of Garden River, in
Latitude 46 degrees 31 minutes 42.46 seconds N.
Longitude 84 degrees 09 minutes 12.46 seconds W.
and bearing N. 31 degrees 07 minutes W. 379 feet from Monument No. 27, located on the north side of Sugar Island, directly opposite the mouth of Garden River, in
Latitude 46 degrees 31 minutes 39.26 seconds N.
Longitude 84 degrees 09 minutes 09.66 seconds W.

THENCE S. 77 degrees 43 minutes 00 seconds W. 3390 feet to Turning Point No. 246, in
Latitude 46 degrees 31 minutes 35.34 seconds N.

Longitude 84 degrees 09 minutes 59.83 seconds W.
and bearing N. 48 degrees 16 minutes E. 1911 feet from Monument No. 28, located on the north side of Sugar Island directly south of Point Charles, on the Canadian side, in

Latitude 46 degrees 31 minutes 22.78 seconds N.

Longitude 84 degrees 10 minutes 20.22 seconds W.

THENCE N. 84 degrees 04 minutes 00 seconds W. 2754 feet along the channel between Sugar Island, on the United States side, and the Canadian mainland to Turning Point No. 247, located at the foot of Little Lake George, in

Latitude 46 degrees 31 minutes 38.15 seconds N.

Longitude 84 degrees 10 minutes 39.01 seconds W.
and bearing N. 40 degrees 10 minutes W. 2037 feet from Monument No. 28, heretofore described;

THENCE N. 39 degrees 58 minutes 30 seconds W. 6255 feet into Little Lake George to Turning Point No. 248, located about three-quarters of a mile east of Bells Point, on the Canadian side, in

Latitude 46 degrees 32 minutes 25.46 seconds N.

Longitude 84 degrees 11 minutes 36.49 seconds W.
and bearing N. 23 degrees 45 minutes E. 2708 feet from Monument No. 29, located about three-eighths of a mile east of Palmers Point, on the north side of Sugar Island, in

Latitude 46 degrees 32 minutes 00.99 seconds N.

Longitude 84 degrees 11 minutes 52.09 seconds W.

THENCE S. 74 degrees 29 minutes 30 seconds W. 8415 feet through Little Lake George and along the middle of the channel between Palmers Point, on the United States side, and Bells Point, on the Canadian side, to Turning Point No. 249, in

Latitude 46 degrees 32 minutes 03.23 seconds N.

Longitude 84 degrees 13 minutes 32.47 seconds W.
and bearing N. 52 degrees 17 minutes W. 1717 feet from Monument No. 30, located on the northwest side of Sugar Island about one and one-half miles northeast of Point Lewis, in

Latitude 46 degrees 31 minutes 52.86 seconds N.

Longitude 84 degrees 13 minutes 13.04 seconds W.

THENCE S. 30 degrees 59 minutes 20 seconds W. 14,148 feet along the channel between Sugar Island and the Canadian mainland to Turning Point No. 250, located about one-quarter mile west of Cass Point, on Sugar Island, in

Latitude 46 degrees 30 minutes 03.50 seconds N.

Longitude 84 degrees 15 minutes 16.60 seconds W.
and bearing S. 40 degrees 45 minutes E. 1370 feet from Monu-

ment No. 31, located on the Canadian side opposite Cass Point, on Sugar Island, in

Latitude 46 degrees 30 minutes 13.74 seconds N.

Longitude 84 degrees 15 minutes 29.38 seconds W.

THENCE S. 49 degrees 07 minutes 40 seconds W. 3560 feet to Turning Point No. 251, located about 200 feet southeast of Cook Island, on the Canadian side, in

Latitude 46 degrees 29 minutes 40.50 seconds N.

Longitude 84 degrees 15 minutes 55.06 seconds W.

and bearing S. 19 degrees 37 minutes E. 190 feet from Monument No. 32, located on the east end of Cook Island, in

Latitude 46 degrees 29 minutes 42.27 seconds N.

Longitude 84 degrees 15 minutes 55.98 seconds W.

THENCE S. 78 degrees 42 minutes 50 seconds W. 2763 feet to Turning Point No. 252, located about one-quarter mile southwest of Point Nolan, on the Canadian side, in

Latitude 46 degrees 29 minutes 35.16 seconds N.

Longitude 84 degrees 16 minutes 33.79 seconds W.

and bearing N. 74 degrees 45 minutes W. 967 feet from Monument No. 33, located on the west end of a small island about 400 feet northwest of Hog Island, near Black Point, on Sugar Island, in

Latitude 46 degrees 29 minutes 32.65 seconds N.

Longitude 84 degrees 16 minutes 20.46 seconds W.

THENCE S. 89 degrees 49 minutes 20 seconds W. 4410 feet to Turning Point No. 253, located about one-quarter mile southeast of Topsail Island, on the Canadian side, in

Latitude 46 degrees 29 minutes 35.02 seconds N.

Longitude 84 degrees 17 minutes 36.82 seconds W.

and bearing S. 44 degrees 52 minutes E. 1306 feet from Monument No. 34, located on the south end of Topsail Island, in

Latitude 46 degrees 29 minutes 44.16 seconds N.

Longitude 84 degrees 17 minutes 49.99 seconds W.

THENCE N. 72 degrees 15 minutes 50 seconds W. 8309 feet along the middle of St. Marys River to Turning Point No. 254, in

Latitude 46 degrees 29 minutes 59.99 seconds N.

Longitude 84 degrees 19 minutes 29.94 seconds W.

and bearing S. 5 degrees 12 minutes W. 1987 feet from Monument No. 35, located on the Canadian side at Sault Ste. Marie. Ontario, in

Latitude 46 degrees 30 minutes 19.52 seconds N.
Longitude 84 degrees 19 minutes 27.37 seconds W.

THENCE N. 56 degrees 22 minutes 10 seconds W. 5058 feet along the middle of the river to Turning Point No. 255, located at the foot of St. Marys Falls, in

Latitude 46 degrees 30 minutes 27.64 seconds N.
Longitude 84 degrees 20 minutes 30.15 seconds W.

and bearing N. 2 degrees 22 minutes E. 2457 feet from Monument No. 36, located on the United States side at Sault Ste. Marie, Michigan, in

Latitude 46 degrees 30 minutes 03.42 seconds N.
Longitude 84 degrees 20 minutes 31.61 seconds W.

THENCE N. 85 degrees 45 minutes 30 seconds W. 8143 feet up the St. Marys Falls and near to Whitefish Island, on the Canadian side, and through the pier between the third and fourth spans of the International Bridge to Turning Point No. 256, located about five-eighths of a mile west of said bridge, in

Latitude 46 degrees 30 minutes 33.57 seconds N.
Longitude 84 degrees 22 minutes 26.25 seconds W.

and bearing N. 6 degrees 44 minutes W. 2936 feet from Monument No. 37, located on the west end of South Pier, at Sault Ste. Marie, Michigan, in

Latitude 46 degrees 30 minutes 04.79 seconds N.
Longitude 84 degrees 22 minutes 21.33 seconds W.

THENCE S. 54 degrees 28 minutes 50 seconds W. 6614 feet along the middle of the river to Turning Point No. 257, located opposite Algonquin, Michigan, in

Latitude 46 degrees 29 minutes 55.63 seconds N.
Longitude 84 degrees 23 minutes 43.20 seconds W.

and bearing S. 13 degrees 03 minutes E. 3049 feet from Monument No. 38, located on the Canadian side about 800 feet northeast of Old Vessel Point, in

Latitude 46 degrees 30 minutes 24.95 seconds N.
Longitude 84 degrees 23 minutes 53.04 seconds W.

THENCE N. 83 degrees 41 minutes 20 seconds W. 6494 feet along the middle of the river to Turning Point No. 258, in

Latitude 46 degrees 30 minutes 02.67 seconds N.
Longitude 84 degrees 25 minutes 15.46 seconds W.

and bearing N. 14 degrees 32 minutes W. 4634 feet from Monument No. 39, located on the United States side at Big Point, Michigan, in

Latitude 46 degrees 29 minutes 18.39 seconds N.
Longitude 84 degrees 24 minutes 58.83 seconds W.

THENCE S. 55 degrees 21 minutes 30 seconds W. 7374 feet along the middle of the river to Turning Point No. 259, in

Latitude 46 degrees 29 minutes 21.28 seconds N.

Longitude 84 degrees 26 minutes 42.16 seconds W.

and bearing N. 25 degrees 34 minutes W. 4352 feet from Monument No. 40, located on the United States side about one mile northeast of Brush Point, Michigan, in

Latitude 46 degrees 28 minutes 42.53 seconds N.

Longitude 84 degrees 26 minutes 15.31 seconds W.

THENCE S. 30 degrees 08 minutes 00 seconds W. 15,272 feet along the middle of the river to Turning Point No. 260, located in Mosquito Bay, in

Latitude 46 degrees 27 minutes 10.89 seconds N.

Longitude 84 degrees 28 minutes 31.65 seconds W.

and bearing South 4277 feet from Monument No. 41, located on the south side of Pointe aux Pins, on the Canadian side, in

Latitude 46 degrees 27 minutes 53.11 seconds N.

Longitude 84 degrees 28 minutes 31.65 seconds W.

THENCE N. 81 degrees 54 minutes 50 seconds W. 20,662 feet along the middle of the river to Turning Point No. 261, located about one-half mile east of the southeast end of Point Iroquois Shoals, in

Latitude 46 degrees 27 minutes 39.47 seconds N.

Longitude 84 degrees 33 minutes 23.86 seconds W.

and bearing S. 52 degrees 41 minutes W. 9490 feet from Monument No. 42, located on the Canadian side at Pointe aux Chênes, Ontario, in

Latitude 46 degrees 28 minutes 36.28 seconds N.

Longitude 84 degrees 31 minutes 36.05 seconds W.

THENCE N. 39 degrees 15 minutes 15 seconds W. 81,796 feet through the St. Marys River and into Whitefish Bay, Lake Superior, to Turning Point No. 262, located about two miles westerly of the south end of Ile Parisienne, on the Canadian side, in

Latitude 46 degrees 38 minutes 04.03 seconds N.

Longitude 84 degrees 45 minutes 45.51 seconds W.

and bearing S. 67 degrees 37 minutes 00 seconds W. 10,598 feet from Monument No. 43, located on the southwest point of Ile Parisienne, in

Latitude 46 degrees 38 minutes 43.89 seconds N.

Longitude 84 degrees 43 minutes 25.08 seconds W.

THENCE N. 14 degrees 40 minutes 49 seconds W. 96,014 feet along the west shore of Ile Parisienne and through Whitefish Bay to Turning Point No. 263, located between Whitefish Point, on the United States side, and Coppermine Point, on the Canadian side, in

Latitude 46 degrees 53 minutes 20.67 seconds N.

Longitude 84 degrees 51 minutes 35.83 seconds W.

and bearing N. 29 degrees 30 minutes 30 seconds E. 49,368 feet from Whitefish Point Light, located on the United States side at Whitefish Point, Michigan, in

Latitude 46 degrees 46 minutes 16.74 seconds N.

Longitude 84 degrees 57 minutes 25.91 seconds W.

and also bearing S. 27 degrees 40 minutes 35 seconds W. 39,210 feet from Coppermine Point Light, located on the Canadian side at Coppermine Point, Ontario, in

Latitude 46 degrees 59 minutes 03.49 seconds N.

Longitude 84 degrees 47 minutes 13.63 seconds W.

THENCE N. 57 degrees 52 minutes 49 seconds W. 1,008,035 feet along the middle of Lake Superior, passing about two and one-half statute miles southwest of Caribou Island, on the Canadian side, and about 100 yards northeast of Gull Island, formerly known as Ile Chapeau, on the United States side, to Turning Point No. 264, in

Latitude 48 degrees 18 minutes 20.36 seconds N.

Longitude 88 degrees 22 minutes 06.60 seconds W.

and bearing N. 1 degree 21 minutes 48 seconds E. 29,906 feet from Passage Island Light, located on the southwest end of Passage Island, on the United States side, in

Latitude 48 degrees 13 minutes 25.32 seconds N.

Longitude 88 degrees 21 minutes 56.07 seconds W.

THENCE S. 73 degrees 33 minutes 13 seconds W. 78,915 feet to Turning Point No. 265, in

Latitude 48 degrees 14 minutes 38.37 seconds N.

Longitude 88 degrees 40 minutes 44.73 seconds W.

and bearing N. 84 degrees 21 minutes 00 seconds W. 76,772 feet from Passage Island Light, heretofore described;

THENCE S. 58 degrees 46 minutes 04 seconds W. 188,545 feet along the middle of the channel between Isle Royal, on the United States side, and the Canadian mainland to Turning Point No. 266, in

Latitude 47 degrees 58 minutes 26.82 seconds N.

Longitude 89 degrees 20 minutes 14.05 seconds W.

and bearing N. 8 degrees 02 minutes 46 seconds W. 39,615 feet from Rock of Ages Light, located on Rock of Ages, on the United States side, in

Latitude 47 degrees 51 minutes 59.72 seconds N.

Longitude 89 degrees 18 minutes 52.56 seconds W.

and also bearing S. 8 degrees 04 minutes 47 seconds E. 39,615 feet from Victoria Island Light, located on Victoria Island, on the Canadian side, in

Latitude 48 degrees 04 minutes 53.89 seconds N.

Longitude 89 degrees 21 minutes 35.88 seconds W.

THENCE N. 68 degrees 17 minutes 43 seconds W. 40,029 feet to Turning Point No. 267, located at the mouth of Pigeon Bay, in

Latitude 48 degrees 00 minutes 52.54 seconds N.

Longitude 89 degrees 29 minutes 21.04 seconds W.

and bearing N. 11 degrees 04 minutes 00 seconds E. 3317 feet from Monument No. 1, located on the east end of Pigeon Point, Minnesota, in

Latitude 48 degrees 00 minutes 20.42 seconds N.

Longitude 89 degrees 29 minutes 30.40 seconds W.

THENCE S. 76 degrees 42 minutes 48 seconds W. 18,943 feet along the middle of Pigeon Bay, passing to the south of Boundary Islands to Turning Point No. 268, in

Latitude 48 degrees 00 minutes 09.49 seconds N.

Longitude 89 degrees 33 minutes 52.12 seconds W.

and bearing N. 13 degrees 34 minutes 00 seconds E. 1378 feet from Monument No. 2, located on the United States side about 1800 feet northeast of the mouth of Pigeon River, in

Latitude 47 degrees 59 minutes 56.27 seconds N.

Longitude 89 degrees 33 minutes 56.88 seconds W.

THENCE S. 44 degrees 53 minutes 20 seconds W. 1719 feet feet along the middle of Pigeon Bay in a direction to enter the mouth of Pigeon River to Turning Point No. 269, located at the mouth of Pigeon River at the western shore of Lake Superior, in

Latitude 47 degrees 59 minutes 57.48 seconds N.

Longitude 89 degrees 34 minutes 09.96 seconds W.

and bearing S. 68 degrees 09 minutes 00 seconds E. 283 feet from Monument No. 3, located on the Canadian side near the mouth of Pigeon River, in

Latitude 47 degrees 59 minutes 58.52 seconds N.

Longitude 89 degrees 34 minutes 13.82 seconds W.

and also bearing N. 68 degrees 14 minutes 13.8 seconds W.

134.5 feet from triangulation station "South Pigeon," situated on the United States side near the mouth of Pigeon River, located in 1908 by the Boundary Commissioners acting under Article V of the treaty of 1908, in

Latitude 47 degrees 59 minutes 56.98 seconds N.

Longitude 89 degrees 34 minutes 08.12 seconds W.

GEOGRAPHIC POSITIONS OF TURNING POINTS AND MONUMENTS OF INTERNATIONAL BOUNDARY UNDER ARTICLE IV.

The following table gives the geodetic data of turning points and monuments of the international boundary from the St. Lawrence River near St. Regis to the mouth of Pigeon River in Lake Superior, as marked and located by the Commission:

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′	Feet.	° ′ ″	° ′ ″
Origin. ..	B.P. 774	.....	.....	90 05	106·6	44 59 58·23 74 39 41·98	44 59 58·23 74 39 40·49
Andrew Ellicott Monument.	B.P. 774	68 28 30	511	72 09	611	44 59 56·38 74 39 48·59	44 59 58·23 74 39 40·49
1	1	144 15 00	3307	356 16	1097	45 00 22·88 74 40 15·48	45 00 33·68 74 40 16·48
2	2	19 41 30	2108	334 53	780	45 00 03·28 74 40 25·37	45 00 10·25 74 40 29·98
3	3	79 31 40	2703	25 27	453	44 59 58·43 74 41 02·35	45 00 02·47 74 40 59·64
4	4	106 02 00	5041	357 55	314	45 00 12·17 74 42 09·78	45 00 15·27 74 42 09·93
5	5	70 37 30	5351	343 30	483	44 59 54·63 74 43 20·02	44 59 59·20 74 43 21·93
6	6	39 10 00	3751	332 08	484	44 59 25·91 74 43 52·99	44 59 30·13 74 43 56·13
		91 09 40	3506				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′	Feet.	° ′ ″	° ′ ″
7	7	.....	.....	41 05	467	44 59 26·61 74 44 41·77	44 59 30·09 74 44 37·49
8	8	111 06 00	4393	61 55	551	44 59 42·22 74 45 38·80	44 59 44 79 74 45 32·03
9	9	169 34 20	3979	345 12	1175	45 00 20·86 74 45 48·82	45 00 32·08 74 45 53·00
10	10	86 25 00	7708	266 25	1719	45 00 16·14 74 47 35·90	45 00 15·08 74 47 59·77
11	11	142 19 00	2945	00 13	1383	45 00 39·15 74 48 00·95	45 00 52·80 74 48 00·88
12	11	162 41 50	1431	87 47	431	45 00 52·64 74 48 06·88	45 00 52·80 74 48 00·88
13	12	83 06 30	3065	312 17	1910	45 00 49·00 74 48 49·23	45 01 01·69 74 49 08·90
14	12	54 05 00	1224	348 07	2047	45 00 41·91 74 49 03·03	45 01 01·69 74 49 08·90
15	13	122 35 50	2903	214 03	1371	45 00 57·35 74 49 37·08	45 00 46·14 74 49 47·76
16	13	78 06 40	2175	116 48	1525	45 00 52·93 74 50 06·71	45 00 46·14 74 49 47·76
17	14	56 24 10	2210	194 27	1720	45 00 40·85 74 50 32·33	45 00 24·41 74 50 38·30
18	14	72 00 20	1146	153 15	1469	45 00 37·36 74 50 47·50	45 00 24·41 74 50 38·30
19	15	50 48 00	3362	223 45	1221	45 00 16·38 74 51 23·76	45 00 07·67 74 51 35·51
20	15	90 50 40	1663	137 56	1221	45 00 16·62 74 51 46·90	45 00 07·67 74 51 35·51
21	15	33 05 00	1781	71 53	1884	45 00 01·88 74 52 00·43	45 00 07·67 74 51 35·51
22	16	97 13 40	2825	343 17	989	45 00 05·39 74 52 39·43	45 00 14·74 74 52 43·39
23	17	79 35 00	2961	10 23	963	45 00 00·10 74 53 19·96	45 00 09·45 74 53 17·55
		50 19 30	4230				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point		Turning Point.	Monument.
		° ′ ″	Feet.	° ′	Feet.	° ′ ″	° ′ ″
24	18	.....	.....	139 22	424	44 59 33·43 74 54 05·26	44 59 30·26 74 54 01·42
		28 49 10	3764				
25	19	.....	.....	144 47	364	44 59 00·87 74 54 30·50	44 58 57·93 74 54 27·58
		92 47 40	10151				
26	20	.....	.....	193 29	529	44 59 05·73 74 56 51·56	44 59 00·65 74 56 53·28
		85 36 00	6567				
27	21	.....	.....	178 53	835	44 59 00·75 74 58 22·66	44 58 52·50 74 58 22·43
		67 27 00	5678				
28	22	.....	.....	150 11	436	44 58 39·24 74 59 35 61	44 58 35·51 74 59 32·60
		38 48 50	2694				
29	23	.....	.....	124 09	625	44 58 18·51 74 59 59·10	44 58 15·05 74 59 51·91
		00 40 30	2049				
30	24	.....	.....	91 25	377	44 57 58·29 74 59 59·43	44 57 58·19 74 59 54·19
		33 43 50	1617				
31	24	.....	.....	43 41	1816	44 57 45·01 75 00 11·92	44 57 58·19 74 59 54·19
		00 00 00	0000				
31	25	.....	.....	174 18	1463	44 57 45·01 75 00 11·92	44 57 30·64 75 00 09·90
		20 27 40	1573				
32	25	.....	.....	88 27	696	44 57 30·45 75 00 19·57	44 57 30·64 75 00 09·90
		52 35 20	7064				
33	26	.....	.....	349 23	515	44 56 48·07 75 01 37·58	44 56 53 07 75 01 38·90
		62 45 40	9681				
34	27	.....	.....	265 29	2073	44 56 04·31 75 03 37·22	44 56 02·70 75 04 05·95
		34 03 40	2192				
35	27	.....	.....	333 06	1854	44 55 46·37 75 03 54·29	44 56 02·70 75 04 05·95
		83 51 00	8270				
36	28	.....	.....	159 51	644	44 55 37·61 75 05 48·57	44 55 31·64 75 05 45·49
		38 38 30	3460				
37	29	.....	.....	160 31	644	44 55 10·92 75 06 18·60	44 55 04·92 75 06 15·62
		99 00 50	3360				
38	30	.....	.....	173 17	568	44 55 16·12 75 07 04·72	44 55 10·55 75 07 03·80
		63 33 10	4941				
39	31	.....	.....	148 35	453	44 54 54·38 75 08 06·19	44 54 50·57 75 08 02·91
		11 49 10	6745				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′	Feet.	° ′ ″	° ′ ″
40	32	.....	.....	307 19	1241	44 53 49·20 75 08 25·38	44 53 56·63 75 08 39·10
41	33	79 10 30	6593	161 05	337	44 53 36·96 75 09 55·32	44 53 33·82 75 09 53·81
42	34	58 38 10	7257	150 46	644	44 52 59·66 75 11 21·38	44 52 54·10 75 11 17·01
43	35	82 16 40	1382	159 22	376	44 52 57·82 75 11 40·40	44 52 54·35 75 11 38·56
44	36	52 07 50	2868	12 19	1280	44 52 40·44 75 12 11·84	44 52 52·79 75 12 08·05
45	37	89 36 10	4014	160 07	515	44 52 40·16 75 13 07·58	44 52 35·38 75 13 05·15
46	38	36 35 40	4287	170 20	400	44 52 06·17 75 13 43·07	44 52 02·28 75 13 42·14
47	39	82 38 00	3344	143 44	423	44 52 01·93 75 14 29·12	44 51 58 57 75 14 25·65
48	40	47 29 00	5293	349 02	1243	44 51 26·61 75 15 23·28	44 51 38·66 75 15 26·56
49	41	74 21 50	3292	160 26	600	44 51 17·85 75 16 07·29	44 51 12·26 75 16 04·50
50	42	60 46 40	4922	126 47	1533	44 50 54·12 75 17 06·91	44 50 45·05 75 16 49·86
51	43	53 57 00	7237	238 57	993	44 50 12·06 75 18 28·10	44 50 07·00 75 18 39·91
52	44	338 45 50	3970	54 40	1006	44 49 35·52 75 18 08·15	44 49 41·26 75 17 56·76
53	45	48 07 10	11039	14 00	726	44 48 22·73 75 20 02·15	44 48 29·69 75 19 59·71
54	46	109 45 20	2995	316 20	1028	44 48 32·73 75 20 41·24	44 48 40·06 75 20 51·09
55	47	40 07 10	10143	155 23	981	44 47 16·12 75 22 11·87	44 47 07·32 75 22 06·20
56	47	03 05 50	1748	30 31	991	44 46 58·89 75 22 13·18	44 47 07·32 75 22 06·20
		75 07 10	4817				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′	Feet.	° ′ ″	° ′ ″
57	48	.....	.....	299 10	1074	44 46 46·67 75 23 17·72	44 46 51·84 75 23 30·72
58	49	45 24 20	3158	329 03	1377	44 46 24·78 75 23 48·90	44 46 36·44 75 23 58·72
59	50	83 50 10	4493	326 00	297	44 46 20·01 75 24 50·81	44 46 22·44 75 24 53·12
60	51	23 43 10	6403	251 10	3049	44 45 22·12 75 25 26·51	44 45 12·40 75 26 06·50
61	52	46 39 00	18758	319 39	1755	44 43 14·93 75 28 35·41	44 43 28·14 75 28 51·15
62	53	53 07 20	9365	134 12	3008	44 42 19·42 75 30 19·13	44 41 58·71 75 29 49·28
63	54	12 30 50	43531	305 19	2780	44 37 07·48 75 37 13·49	44 37 23·34 75 37 44·84
64	55	48 39 10	14339	318 10	403	44 35 33·91 75 39 42·24	44 35 36·87 75 39 45·96
65	56	45 10 30	13969	343 40	864	44 33 56·64 75 41 59·09	44 34 04·83 75 42 02·45
66	57	40 10 30	8461	257 53	696	44 32 52·80 75 43 14·46	44 32 51·36 75 43 23·86
67	57	50 12 30	1026	11 54	522	44 32 46·32 75 43 25·35	44 32 51·36 75 43 23·86
68	58	38 04 00	1085	02 00	422	44 32 37·88 75 43 34·59	44 32 42·05 75 43 34·38
69	59	45 48 10	14940	100 59	3375	44 30 55·01 75 46 02·40	44 30 48·66 75 45 16·67
70	60	33 45 00	19101	68 57	2292	44 28 18·15 75 48 28·74	44 28 26·28 75 47 59·24
71	61	13 59 30	14904	327 50	3463	44 25 55·34 75 49 18·40	44 26 24·28 75 49 43·80
72	62	44 08 50	18221	314 25	496	44 23 46·19 75 52 13·18	44 23 49·62 75 52 18·06
73	63	47 19 50	15258	351 38	578	44 22 04·04 75 54 47·61	44 22 09·69 75 54 48·77
		98 33 00	2334				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′	Feet.	° ′ ″	° ′ ″
74	64	.....	.....	152 35	651	44 22 07·47 75 55 19·39	44 22 01·76 75 55 15·27
75	65	30 46 20	4017	111 24	437	44 21 33·39 75 55 47·68	44 21 31·81 75 55 42·08
76	66	60 23 00	3409	26 02	707	44 21 16·75 75 56 28·47	44 21 23·02 75 56 24·20
77	67	48 12 50	3113	184 36	217	44 20 56·26 75 57 00·41	44 20 54·13 75 57 00·65
78	68	66 18 00	5845	296 40	577	44 20 33·05 75 58 14·06	44 20 35·61 75 58 21·16
79	68	104 17 10	742	69 24	217	44 20 34·86 75 58 23·95	44 20 35·61 75 58 21·16
80	69	152 54 50	1210	175 55	210	44 20 45·50 75 58 31·53	44 20 43·43 75 58 31·32
81	70	101 26 10	913	257 53	363	44 20 47·28 75 58 43·84	44 20 46·53 75 58 48·72
82	70	69 17 40	492	47 15	144	44 20 45·56 75 58 50·18	44 20 46·53 75 58 48·72
83	71	139 38 30	693	267 39	476	44 20 50·78 75 58 56·36	44 20 50·59 75 59 02·90
84	71	79 10 30	1106	72 53	640	44 20 48·73 75 59 11·31	44 20 50·59 75 59 02·90
85	72	102 22 10	534	263 43	587	44 20 49·86 75 59 18·48	44 20 49·22 75 59 26·52
86	72	87 13 40	584	180 00	36	44 20 49·58 75 59 26·52	44 20 49·22 75 59 26·52
87	72	77 34 00	93	100 06	92	44 20 49·38 75 59 27·76	44 20 49·22 75 59 26·52
88	72	101 31 50	470	101 18	562	44 20 50·31 75 59 34·10	44 20 49·22 75 59 26·52
89	73	94 55 30	2282	330 29	542	44 20 52·24 76 00 05·39	44 20 56·90 76 00 09·06
90	74	53 28 30	2245	168 02	303	44 20 39·05 76 00 30·21	44 20 36·12 76 00 29·34
		65 15 00	10806				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
91	75	....	....	148 32 00	413	44 19 54·35 76 02 45·22	44 19 50·87 76 02 42·25
		49 02 40	17838				
92	76	.....	.....	201 42 00	844	44 17 58·86 76 05 50·44	44 17 51·11 76 05 54·74
		81 18 10	3936				
93	77	.....	. .....	329 05 00	363	44 17 52·98 76 06 43·94	44 17 56·05 76 06 46·50
		55 23 20	2022				
94	78	.....	.....	149 18 00	812	44 17 41·63 76 07 06·81	44 17 34·74 76 07 01·12
		91 26 40	2951				
95	79	....	... .	280 04 00	278	44 17 42·37 76 07 47·37	44 17 42·84 76 07 51·12
		135 10 30	639				
96	79	.....	....	156 20 00	442	44 17 46·84 76 07 53·56	44 17 42·84 76 07 51·12
		54 34 40	9846				
97	80	.....	.....	92 08 00	2157	44 16 50·48 76 09 43·85	44 16 49·69 76 09 14·21
		02 30 20	14924				
98	81	.....	.....	319 38 00	1704	44 14 23·25 76 09 52·80	44 14 36·07 76 10 07·96
		46 59 30	9828				
99	82	....	.....	322 31 00	994	44 13 17·03 76 11 31·49	44 13 24·82 76 11 39·79
		59 21 10	4603				
100	83	.....	.....	320 25 00	528	44 12 53·86 76 12 25·85	44 12 57·88 76 12 30·48
		68 11 30	10914				
101	84	.....	.....	357 09 00	881	44 12 13·79 76 14 44·96	44 12 22·48 76 14 45·56
		89 54 50	10805				
102	85	....	..... .	356 22 00	722	44 12 13·61 76 17 13·28	44 12 20 72 76 17 13·90
		75 45 00	7045				
103	86	....	.....	32 46 00	1454	44 11 56·47 76 18 47·01	44 12 08·54 76 18 36·20
		24 04 10	25833				
104	87	.. ..	.....	320 07 00	846	44 08 03·51 76 21 11·47	44 08 09·93 76 21 18·91
		57 02 20	26957				
105	88	.....	....	337 04 00	897	44 05 38·56 76 26 21·38	44 05 46·72 76 26 26·17
		29 19 59	193346				
106	Oswego Lt.	.....	.....	128 58 48	96450	43 37 51·91 76 47 49·19	43 27 53·95 76 30 49 77
		Due West..	501388				
107	30 Mile Pt. Lt.	....	.....	149 55 48	107985	43 37 51·91 78 41 26·26	43 22 29·60 78 29 10·61
		64 13 24	150480				

GÉOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
108	Fort Niagara Lt.	333 08 30	76813	151 36 11	78240	43 27 01·51 79 12 03·18	43 15 42·05 79 03 38·77
109	"			95 15 00	2633	43 15 44·43 79 04 14 20	43 15 42·05 79 03 38·77
110	1	306 11 50	4770	212 43 00	1353	43 15 16·60 79 03 22·18	43 15 05·36 79 03 32·06
111	1	351 11 30	2182	313 42 00	1474	43 14 55·30 79 03 17·67	43 15 05·36 79 03 32·06
112	2	04 48 10	3535	100 04 00	1091	43 14 20·51 79 03 21·67	43 14 18·63 79 03 07·16
113	3	352 41 00	5745	279 16 00	1184	43 13 24·22 79 03 11·79	43 13 26·11 79 03 27·57
114	4	11 03 20	4881	86 28 00	1230	43 12 36·91 79 03 24·43	43 12 37·66 79 03 07·85
115	5	330 28 20	4255	267 32 00	996	43 12 00·34 79 02 56·11	43 11 59·91 79 03 09·55
116	6	10 21 10	5965	102 11 00	1402	43 11 02·38 79 03 10·58	43 10 59 46 79 02 52·08
117	7	02 26 30	3704	213 11 00	1636	43 10 25·82 79 03 12·71	43 10 12·30 79 03 24·80
118	7	345 24 20	2368	301 43 00	1755	43 10 03·19 79 03 04·66	43 10 12·30 79 03 24·80
119	8	328 12 10	2248	88 00 00	499	43 09 44·32 79 02 48·68	43 09 44·49 79 02 41·95
120	9	349 11 10	2394	137 59 00	1013	43 09 21·09 79 02 42·62	43 09 13 66 79 02 33·47
121	9	352 27 40	1487	33 47 00	869	43 09 06·53 79 02 39·98	43 09 13·66 79 02 33·47
122	10	338 35 50	1019	271 47 00	753	43 08 57·16 79 02 34·97	43 08 57·39 79 02 45·12
123	11	356 04 20	2051	67 06 00	655	43 08 36·95 79 02 33·07	43 08 39·47 79 02 24·94
124	12	10 49 50	1951	289 37 00	780	43 08 18·02 79 02 38·02	43 08 20·60 79 02 47·93
		52 35 30	1955				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
125	13			169 54 00	928	43 08 06·29 79 02 58·96	43 07 57·26 79 02 56·76
		32 32 50	1518				
126	13			69 32 00	1045	43 07 53·65 79 03 09·97	43 07 57·26 79 02 56·76
		26 55 20	928				
127	14			272 51 00	1018	43 07 45·47 79 03 15·64	43 07 45·97 79 03 29·35
		42 57 20	1162				
128	14			345 59 00	928	43 07 37·08 79 03 26·31	43 07 45·97 79 03 29·35
		71 44 30	653				
129	14			19 40 00	1174	43 07 35·06 79 03 34·67	43 07 45·97 79 03 29·35
		50 37 50	3537				
130	15			87 35 00	954	43 07 12·89 79 04 11·54	43 07 13·29 79 03 58·68
		309 10 10	2441				
131	16			178 14 00	699	43 06 57·67 79 03 46·03	43 06 50·77 79 03 45·74
		321 00 30	1044				
132	16			280 03 00	645	43 06 49·66 79 03 37·17	43 06 50·77 79 03 45·74
		340 04 00	1142				
133	17			118 48 00	419	43 06 39·05 79 03 31·92	43 06 37·06 79 03 26·97
		351 33 00	1409				
134	17			07 40 00	1202	43 06 25·28 79 03 29·13	43 06 37·06 79 03 26·97
		21 09 20	6158				
135	18			293 43 00	645	43 05 28·56 79 03 59·08	43 05 31·12 79 04 07·05
		43 03 20	1398				
136	19			165 45 00	1024	43 05 18·47 79 04 11·94	43 05 08·67 79 04 08·55
		30 36 00	2931				
137	20			219 58 00	1242	43 04 53·55 79 04 32·05	43 04 44·15 79 04 42·80
		00 00 00	0000				
137	21			133 45 00	1199	43 04 53·55 79 04 32·05	43 04 45·36 79 04 20·38
		346 01 00	1416				
138	20			290 18 00	1215	43 04 39·98 79 04 27·44	43 04 44·15 79 04 42·80
		000 00 00	0000				
138	21			43 54 00	756	43 04 39·98 79 04 27·44	43 04 45·36 79 04 20·38
		283 41 40	18340				
139	22			176 29 00	2305	43 03 57·03 79 00 27·42	43 03 34·30 79 00 25·51
		330 11 10	4170				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
140	23	....	....	102 33 00	820	43 03 21·29 78 59 59·49	43 03 19·53 78 59 48·71
141	24	25 22 50	3528	295 41 00	1339	43 02 49·81 79 00 19·86	43 02 55·54 79 00 36·10
142	25	14 49 40	6818	130 28 00	504	43 01 44·71 79 00 43·35	43 01 41·48 79 00 38·19
143	26	33 28 30	5624	265 31 00	2169	43 00 58·37 79 01 25·10	43 00 56·70 79 01 54·20
144	27	353 40 10	7871	70 03 00	715	42 59 41·10 79 01 13·42	42 59 43·51 79 01 04·38
145	28	326 44 00	4155	223 38 00	3493	42 59 06·78 79 00 42·76	42 58 41·81 79 01 15·19
146	29	301 30 50	11505	68 13 00	570	42 58 07·36 78 58 30·84	42 58 09·45 78 58 23·72
147	30	313 17 20	5336	195 50 00	3026	42 57 28·02 78 57 43·10	42 56 59·26 78 57 54·20
148	31	274 54 30	7795	188 15 00	2967	42 57 21·41 78 55 58·66	42 56 52·41 78 56 04·39
149	32	311 59 20	4869	227 30 00	2576	42 56 49·24 78 55 10·00	42 56 32·05 78 55 35·53
150	32	331 50 50	5529	364 49 00	5490	42 56 01·09 78 54 34·94	42 56 32·05 78 55 35·53
150	33	00 00 00	0000	192 14 00	3952	42 56 01·09 78 54 34·94	42 55 22·94 78 54 46·19
151	33	345 47 50	3739	262 16 00	1770	42 55 25·29 78 54 22·61	42 55 22·94 78 54 46·19
152	34	359 45 10	8554	58 46 00	1667	42 54 00·80 78 54 22·12	42 54 09·34 78 54 02·97
152	35	00 00 00	0000	280 57 00	3108	42 54 00·80 78 54 22·12	42 54 06·63 78 55 03·11
153	Horse-shoe Reef Light.	20 18 00	7384	90 00 00	100	42 52 52·39 78 54 56·52	42 52 52·39 78 54 55·18
154	"	10 04 20	978	15 43 00	1000	42 52 42·88 78 54 58·82	42 52 52·39 78 54 55·18
		15 43 00	19064				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
155	Horseshoe Reef Lt.	63 10 28	346460	15 43 00	20064	42 49 41·62 78 56 08·13	42 52 52·39 78 54 55·18
156	Long Pt. Light.	00 00 00	0000	06 35 46	57442	42 23 36·53 80 04 48·33	42 33 00·20 80 03 20·40
156	Presque Isle Light.	78 15 49	322577	186 33 21	83580	42 23 36·53 80 04 48·33	42 09 56·30 80 06 55·50
157	Fairport Light.	58 41 21	368279	182 59 14	164452	42 12 26·97 81 14 44·92	41 45 2·57 81 16 38·79
158	Pelee Passage Light.	Due West.	77106	321 36 43	81642	41 40 35·31 82 23 51·10	41 51 08·07 82 34 59·17
159	Middle Island Light.	122 48 42	126206	000 00 00	2500	41 40 35·31 82 40 47·15	41 41 00·01 82 40 47·15
160	Colchester Reef Light.	00 00 00	0000	62 35 35	54351	41 51 48·58 83 04 08·93	41 55 56·24 82 53 31·28
160	Toledo Harbour Light.	161 18 08	68262	242 18 06	79941	41 51 48·58 83 04 08·93	41 45 42·54 83 19 44·33
161	1	00 00 00	0000	240 53 00	10468	42 02 27·25 83 08 58·93	42 01 36·96 83 11 00·14
161	2	193 51 30	31696	60 56 00	10468	42 02 27·25 83 08 58·93	42 03 17·51 83 06 57·68
162	3	169 33 00	18294	75 00 00	2080	42 07 31·25 83 07 18·20	42 07 36·57 83 06 51·54
163	4	183 57 10	23339	261 37 00	2740	42 10 28·98 83 08 02·26	42 10 25·03 83 08 38·26
164	5	209 33 10	8985	137 14 00	940	42 14 18·99 83 07 40·87	42 14 12·17 83 07 32·39
165	6	200 17 00	11591	116 55 00	1885	42 15 36·19 83 06 41·94	42 15 27·76 83 06 19·59
166	7	214 23 50	8277	101 23 00	1482	42 17 23·59 83 05 48·48	42 17 20·70 83 05 29·15
167	8	232 41 40	5467	124 17 00	1395	42 18 31·05 83 04 46·25	42 18 23·29 83 04 30·91

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
168	9	.....	.....	146 28 00	1393	42 19 03·78 83 03 48·38	42 18 52·31 83 03 38·14
169	10	250 36 50	12725	145 49 00	1609	42 19 45·48 83 01 08·58	42 19 32·33 83 00 56·54
170	11	262 13 40	8255	348 10 00	409	42 19 56·49 82 59 19·69	42 20 00·45 82 59 20·81
171	12	252 20 40	8405	309 03 00	361	42 20 21·66 82 57 33·05	42 20 23·90 82 57 36·78
172	13	233 41 20	4619	92 50 00	1809	42 20 48·68 82 56 43·48	42 20 47·79 82 56 19·42
173	14	253 01 30	33111	152 20 00	28839	42 22 23·96 82 49 41·60	42 18 11·69 82 46 43·21
173	15	00 00 00	0000	339 46 00	31309	42 22 23·96 82 49 41·60	42 27 14·16 82 52 05·89
174	16	216 32 09	72617	279 33 00	346	42 31 59·92 82 40 04·22	42 32 00·48 82 40 08·77
175	17	207 19 00	3307	137 57 00	888	42 32 28·94 82 39 43·95	42 32 22·42 82 39 36·00
176	18	226 06 30	2927	129 17 00	896	42 32 48·58 82 39 15·76	42 32 43·38 82 39 06·50
177	19	231 02 10	4580	135 27 00	677	42 33 17·43 82 38 28·18	42 33 12·67 82 38 21·84
178	20	250 06 20	2332	171 58 00	675	42 33 25·27 82 37 58·89	42 33 18·67 82 37 57·63
179	21	270 26 40	2461	196 36 00	702	42 33 25·08 82 37 26·01	42 33 18·43 82 37 28·69
180	22	295 57 30	2151	218 43 00	524	42 33 15·78 82 37 00·17	42 33 11·74 82 37 04·55
181	23	315 34 50	2283	208 00 00	795	42 32 59·68 82 36 38·83	42 32 52·74 82 36 43·81
182	24	290 41 10	1498	184 33 00	794	42 32 54·45 82 36 20·11	42 32 46·63 82 36 20·95
183	25	262 12 40	3978	161 57 00	692	42 32 59·77 82 35 27·46	42 32 53·27 82 35 24·60
		233 09 20	2376				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
184	26	.....	.....	311 51 00	1141	42 33 13·84 82 35 02·06	42 33 21·36 82 35 13·41
185	27	194 39 30	3849	106 40 00	459	42 33 50·63 82 34 49·04	42 33 49·33 82 34 43·17
186	28	220 37 00	4839	129 55 00	1081	42 34 26·91 82 34 06·94	42 34 20·06 82 33 55·85
187	29	230 48 10	2909	128 56 00	903	42 34 45·07 82 33 36·81	42 34 39·46 82 33 27·42
188	30	220 36 00	2806	124 00 00	903	42 35 06·11 82 33 12·40	42 35 01·12 82 33 02·40
189	31	206 54 20	2489	128 48 00	976	42 35 28·04 82 32 57·34	42 35 22·00 82 32 47·17
190	32	229 43 30	9099	297 20 00	886	42 36 26·13 82 31 24·52	42 36 30·15 82 31 35·04
191	33	207 27 50	2626	278 48 00	761	42 36 49·15 82 31 08·32	42 36 50·30 82 31 18·38
192	34	195 39 40	9250	290 39 00	1560	42 38 17·13 82 30 34·92	42 38 22·56 82 30 54·45
193	35	178 39 30	9791	102 47 00	1143	42 39 53·81 82 30 37·99	42 39 51·31 82 30 23·07
194	36	198 16 30	13276	108 05 00	411	42 41 58·33 82 29 42·24	42 41 57·07 82 29 37·00
195	37	204 00 20	7509	98 34 00	1699	42 43 06·09 82 29 01·32	42 43 03·59 82 28 38·81
196	38	179 16 10	5451	285 32 00	1581	42 43 59·93 82 29 02·25	42 44 04·11 82 29 22·66
197	39	202 47 50	11470	96 56 00	1257	42 45 44·37 82 28 02·67	42 45 42·88 82 27 45·95
198	40	177 31 00	2872	275 16 00	997	42 46 12·71 82 28 04·34	42 46 13·62 82 28 17·64
199	41	169 12 00	5889	75 32 00	950	42 47 09·86 82 28 19·14	42 47 12·20 82 28 06·80
200	42	158 18 60	6372	71 30 00	949	42 48 08·33 82 28 56·74	42 48 11·31 82 28 38·66
		170 34 30	2158				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
201	43	.....	.....	276 11 00	1064	42 48 29·36 82 28 55·48	42 48 30·49 82 29 09·66
		187 46 20	6292				
202	44	....	.....	106 41 00	1867	42 49 30·94 82 28 44·06	42 49 25·64 82 28 20·05
		201 33 40	4463				
203	45	.....	.....	294 38 00	1507	42 50 11·94 82 28 22·04	42 50 18·14 82 28 40·43
		189 53 00	7006				
204	46	....	.....	98 55 00	1304	42 51 20·11 82 28 05·90	42 51 18·12 82 27 48·61
		177 13 40	11581				
205	47	....	.....	267 33 00	1318	42 53 14·37 82 28 13·42	42 53 13·81 82 28 31·11
		197 58 30	6977				
206	48	....	.....	101 43 00	1271	42 54 19·92 82 27 44·56	42 54 17·37 82 27 27·77
		193 40 10	7924				
207	49	.....	....	294 11 00	1162	42 55 35·97 82 27 19·33	42 55 40·67 82 27 33·58
		206 52 50	4463				
208	50	.....	.....	118 26 00	1083	42 56 15·28 82 26 52·20	42 56 10·19 82 26 39·40
		224 03 10	7286				
209	51	..... .	.....	303 25 00	1028	42 57 07·00 82 25 44·09	42 57 12·59 82 25 55·62
		211 00 10	6275				
210	52	....	.....	143 19 00	1457	42 58 00·12 82 25 00·62	42 57 48·57 82 24 48·91
		194 17 20	3981				
211	53	. . ..	... .	110 31 00	1574	42 58 38·22 82 24 47·40	42 58 32·77 82 24 27·57
		143 00 40	3699				
212	54	.....	.....	265 10 00	736	42 59 07·40 82 25 17·34	42 59 06·79 82 25 27·21
		161 11 20	2622				
213	55	. .....	.....	123 58 00	1094	42 59 31·91 82 25 28·72	42 59 25·87 82 25 16·50
		183 26 50	2025				
214	56	.....	.....	315 35 00	683	42 59 51·88 82 25 27·08	42 59 56·70 82 25 33·51
		209 26 00	5643				
215	57	... .	.....	158 28 00	3006	43 00 40·42 82 24 49·76	43 00 12·80 82 24 34·91
		00 00 00	0000				
215	58	....	.....	283 09 00	3095	43 00 40·42 82 24 49·76	43 00 47·38 82 25 30·32
		200 01 52	225118				
216	Port Sanilac Light.	... .	.....	241 47 44	125400	43 35 28 03 82 07 22·05	43 23 45·43 82 32 23·61
		170 55 43	645430				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
217	Thunder Bay I. Lt.			237 31 41	205920	45 20 19·35 82 31 06·40	45 02 14·95 83 11 38·39
		122 53 41	327499				
218	1			41 40 53	41515	45 49 17·13 83 35 49·19	45 54 23·41 83 29 19·40
		000 00 00	0000				
218	2			26 38 10	39564	45 49 17·13 83 35 49·19	45 55 06·34 83 31 38·75
		212 45 24	76756				
219	3			247 31 00	10923	45 59 53·96 83 26 00·94	45 59 12·74 83 28 23·90
		138 15 33	52641				
220	4			201 17 00	6512	46 06 21·42 83 34 18·32	46 05 21·52 83 34 51·86
		105 25 18	21848				
221	5			159 15 00	6968	46 07 18·66 83 39 17·31	46 06 14·33 83 38 42·26
		75 28 20	27483				
222	6			341 26 00	2669	46 06 10·43 83 45 34·86	46 06 35·40 83 45 46·92
		109 14 50	17850				
223	7			39 38 00	4915	46 07 08·44 83 49 34 08	46 07 45 81 83 48 49·58
		42 38 40	28932				
224	8			333 13 00	1728	46 03 38·26 83 54 12 02	46 03 53·48 83 54 23·06
		84 10 40	13260				
225	9			35 48 00	2866	46 03 24·94 83 57 19·06	46 03 47·89 83 56 55·29
		162 22 30	17470				
226	10			211 06 00	1112	46 06 09·30 83 58 34·12	46 05 59·89 83 58 42·27
		127 19 59	9561				
227	11			56 36 00	1677	46 07 06·52 84 00 22·04	46 07 15 63 84 00 02·17
		180 25 20	11360				
228	12			110 25 00	3011	46 08 58·66 84 00 20·85	46 08 48·29 83 59 40 77
		127 28 50	22715				
229	13			45 21 00	1974	46 11 15·03 84 04 37·05	46 11 28·72 84 04 17 09
		165 13 20	8599				
230	14			195 04 00	1444	46 12 37·11 84 05 08·24	46 12 23 34 84 05 13·57
		153 32 30	12749				
231	15			100 30 00	1348	46 14 29·77 84 06 29·05	46 14 27·34 84 06 10·19
		206 15 20	6072				
232	16			243 58 00	1256	46 15 23·52 84 05 50·83	46 15 18·08 84 06 06·88
		133 24 30	6192				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
233	17	.....	.....	297 42 00	1239	46 16 05·52 84 06 54·85	46 16 11·21 84 07 10·47
234	18	176 35 40	17113	112 38 00	1814	46 18 54·15 84 07 09·33	46 18 47·26 84 06 45·48
235	19	232 48 40	4284	160 31 00	1917	46 19 19·71 84 06 20·71	46 19 01 87 84 06 11·60
236	20	149 08 50	6962	36 53 00	1020	46 20 18·71 84 07 11·59	46 20 26·76 84 07 02·87
237	21	158 58 30	13315	236 47 00	1010	46 22 21·39 84 08 19·72	46 22 15·92 84 08 31·77
238	22	174 00 00	16992	274 45 00	10955	46 25 08·20 84 08 45·07	46 25 17·19 84 11 20·89
239	23	195 45 40	32380	61 18 00	3659	46 30 15·80 84 06 39·34	46 30 33·15 84 05 53·47
240	24	160 28 00	5308	337 53 00	936	46 31 05·18 84 07 04·72	46 31 13·74 84 07 09·76
241	24	131 31 00	1735	106 37 00	988	46 31 16·53 84 07 23·29	46 31 13·74 84 07 09·76
242	25	157 27 50	3713	55 41 00	757	46 31 50 38 84 07 43·65	46 31 54·60 84 07 34·70
243	26	105 15 40	2732	233 48 00	1128	46 31 57·48 84 08 21·35	46 31 50·91 84 08 34·37
244	26	74 15 50	1928	98 36 00	957	46 31 52·32 84 08 47·90	46 31 50·91 84 08 34·37
245	27	59 49 20	1986	148 53 00	379	46 31 42·46 84 09 12·46	46 31 39 26 84 09 09·66
246	28	77 43 00	3390	228 16 00	1911	46 31 35·34 84 09 59·83	46 31 22·78 84 10 20·22
247	28	95 56 00	2754	139 50 00	2037	46 31 38·15 84 10 39·01	46 31 22·78 84 10 20·22
248	29	140 01 30	6255	203 45 00	2708	46 32 25·46 84 11 36·49	46 32 00 99 84 11 52·09
249	30	74 29 30	8415	127 43 00	1717	46 32 03·23 84 13 32·47	46 31 52·86 84 13 13·04
		30 59 20	14148				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Point.		From Monument to Turning Point.		Turning Point.	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
250	31	.....	.....	319 15 00	1370	46 30 03·50 84 15 16·60	46 30 13·74 84 15 29·38
		49 07 40	3560				
251	32	.....	.....	340 23 00	190	46 29 40·50 84 15 55·06	46 29 42·27 84 15 55·98
		78 42 50	2763				
252	33	.....	.....	105 15 00	967	46 29 35·16 84 16 33·79	46 29 32·65 84 16 20·46
		89 49 20	4410				
253	34	.....	.....	315 08 00	1306	46 29 35·02 84 17 36·82	46 29 44·16 84 17 49·99
		107 44 10	8309				
254	35	.....	.....	05 12 00	1987	46 29 59·99 84 19 29·94	46 30 19·52 84 19 27·37
		123 37 50	5058				
255	36	.....	.....	182 22 00	2457	46 30 27·64 84 20 30·15	46 30 03·42 84 20 31·61
		94 14 30	8143				
256	37	.....	.....	173 16 00	2936	46 30 33·57 84 22 26·25	46 30 04·79 84 22 21·33
		54 28 50	6614				
257	38	.....	.....	346 57 00	3049	46 29 55·63 84 23 43·20	46 30 24·95 84 23 58·01
		96 18 40	6494				
258	39	.....	.....	165 28 00	4634	46 30 02·67 84 25 15·46	46 29 18·39 84 24 58·83
		55 21 30	7374				
259	40	.....	.....	154 26 00	4352	46 29 21·28 84 26 42·16	46 28 42·53 84 26 15·31
		30 08 00	15272				
260	41	.....	.....	00 00 00	4277	46 27 10·89 84 28 31·65	46 27 53·11 84 28 31·65
		98 05 10	20662				
261	42	.....	.....	52 41 00	9490	46 27 39·47 84 33 23·86	46 28 36·28 84 31 36·05
		140 44 45	81796				
262	43	.....	.....	67 37 00	10598	46 38 04·03 84 45 45·51	46 38 43·89 84 43 25·08
		165 19 11	96014				
263	White-fish Pt. Light.	.....	.....	209 30 30	49368	46 53 20·67 84 51 35·83	46 46 16·74 84 57 25·91
		00 00 00	0000				
263	Copper-mine Pt. Light.	.....	.....	27 40 35	39210	46 53 20·67 84 51 35·83	46 59 03·49 84 47 13·63
		122 07 11	1008035				
264	Passage I. Lt.	.....	.....	178 38 12	29906	48 18 20·36 88 22 06·60	48 13 25·32 88 21 56·07
		73 33 13	78915				
265	Passage I. Lt.	.....	.....	95 39 00	76772	48 14 38·37 88 40 44·73	48 13 25·32 88 21 56·07
		58 46 04	188545				

GEOGRAPHIC POSITIONS OF TURNING POINTS AND OF MONUMENTS, INTERNATIONAL BOUNDARY, UNITED STATES AND CANADA, FROM ST. REGIS, QUEBEC, TO MOUTH OF PIGEON RIVER, LAKE SUPERIOR.—*Continued.*

Number of		Azimuth Distance.		Azimuth Distance.		Position of	
Turning Point.	Mon.	Between Turning Points.		From Monument to Turning Point.		Turning Point	Monument.
		° ′ ″	Feet.	° ′ ″	Feet.	° ′ ″	° ′ ″
266	Rock of Ages Lt.	.....	.....	171 57 14	39615	47 58 26·82 89 20 14·05	47 51 59·72 89 18 52·56
		00 00 00	0000				
266	Victoria I. Lt.	....	.....	351 55 13	39615	47 58 26·82 89 20 14·05	48 04 53·89 89 21 35·88
		111 42 17	40029				
267	1	....	.....	191 04 00	3317	48 00 52·54 89 29 21·04	48 00 20·42 89 29 30·40
		76 42 48	18943				
268	2	....	.....	193 34 00	1378	48 00 09·49 89 33 52·12	47 59 56·27 89 33 56·88
		44 53 20	1719				
269	3	....	.....	291 51 00	283	47 59 57·48 89 34 09·96	47 59 58·52 89 34 13·82

There are transmitted to each Government for its archives the following records: Two leather portfolios, each containing a set of the thirty boundary charts, certified and signed by the Commissioners; thirty of the sixty engraved copper plates, 27½ inches by 43 inches, covering alternate charts along the boundary line; and thirty of the sixty aluminum plates, 43 inches by 53 inches, consisting of fifteen black and fifteen tint plates, covering the remaining alternate charts along the boundary line.

Attached hereto is Appendix I, a detailed description of the operations of the Commission under Article IV of the Boundary Treaty; Appendix II, a table of positions, azimuths, and lengths of triangulation on the St. Lawrence River and the Great Lakes, determined by the Commission in its boundary work and Appendix III, a table of positions, azimuths, and lengths of prominent points, lights, boundary turning points and monuments determined by the Commission.

GEO. C. GIBBONS,
Chairman, Canadian Section.

O. H. ERNST, *Brig. Gen'l, U. S. Army, Retired.*
Chairman, American Section.

LOUIS COSTE,
Member, Canadian Section.

GEORGE CLINTON,
Member, American Section.

WM. J. STEWART,
Member, Canadian Section.

E. E. HASKELL,
Member, American Section.

ATTEST:

W. EDWARD WILSON,
Secretary.

APPENDIX I.

DETAILED DESCRIPTION OF THE OPERATIONS OF THE COMMISSION UNDER ARTICLE IV OF THE BOUNDARY TREATY.

OPERATIONS OF COMMISSION UNDER ARTICLE IV OF BOUNDARY TREATY OF 1908.

The Commission held its first meeting, under Article IV of the Boundary Treaty, at Buffalo, N.Y., June 2, 1908. At this meeting, a committee of two commissioners—Mr. E. E. Haskell, of the American section, and Mr. W. J. Stewart, of the Canadian section,—was appointed to prepare a plan for ascertaining and re-establishing accurately the water boundary line between St. Regis, on the St. Lawrence River, and the mouth of Pigeon River, Lake Superior, and report to the Commission at a meeting to be held at Toronto, June 23, 1908.

The report of the Committee was submitted to, and unanimously adopted by, the Commission at its meeting at Toronto on the above date. It provided for (1) the engraving on lithographic stones, and printing therefrom, a set of thirty charts showing the boundary line, (2) the necessary field work for the construction of these charts, and (3) erection and location of the monuments necessary to mark it. Later, the Commission decided to engrave the thirty boundary charts on copper instead of stone, using sixty plates 27½ inches by 43 inches, to print the charts from stone and transfer to a set of aluminum plates the work covering the thirty charts, so that each Government will have a complete record on metal, consisting of one-half of the engraved copper plates and one-half of the aluminum transfer plates.

BOUNDARY CHART WORK.

The Commission decided that the office of the American section at Buffalo, N.Y., was the most suitable place for preparing the boundary charts. Through the courtesy of the Secretary

of the Treasury, several rooms in the Federal Building were added to those already in use. The necessary furniture was also provided by the Treasury Department, some of it from special designs by the officers of the Commission.

A boundary committee composed of Commissioners Haskell and Stewart was formed and authorized to organize a force and proceed with the work. This was placed under the immediate personal direction of the secretary of the American section, Mr. W. Edward Wilson, subject to the close supervision of the Boundary Committee, who submitted reports to, and received instructions from, the full Commission. Expert draughtsmen and surveyors were secured equally from both countries as far as possible. Great difficulty was experienced in securing competent engravers. Mr. A. D. Hollingsworth was appointed principal draughtsman for the United States, Mr. L. R. Voligny for Canada, and Mr. R. F. Bartle, chief engraver. These officers reported at the Buffalo office during the summer and early autumn of 1908. Additional assistants were employed when required.

On September 20, 1909, Mr. G. L. Crichton succeeded Mr. Voligny, who had resigned to accept a position with the Department of Public Works of Canada. On May 15, 1913, Mr. R. F. Bartle, chief engraver, died. The engraving division was then placed in direct charge of Mr. A. D. Hollingsworth.

The following assistants have been employed under the Commission on the boundary work:—

TABLE I.—EMPLOYEES OF COMMISSION ON BOUNDARY WORK.

Name.	Position.
W. Edward Wilson	Secretary, American section, and supervising engineer.
Thomas J. Haney	Clerk.
A. D. Hollingsworth	Principal draughtsman for the United States.
L. R. Voligny	Principal draughtsman for Canada.
R. F. Bartle	Chief engraver.
David G. Morris	Engraver.
Frank P. Deane	Draughtsman.
W. W. Arnold	Engraver.
Wm. C. Perkins	"
Grover C. Brown	Assistant engineer.
K. W. MacPherson	" "
Alfred Illing	Draughtsman.
G. L. Crichton	Principal draughtsman for Canada.
Jos. L. Shed	Assistant engineer.
Hugo E. Franke	Engraver.
A. E. Drake	Assistant engineer.
Douglas Ellis	" "
H. A. Fisher	Recorder.
N. E. D. Sheppard	"
A. M. Sutherland	"
S. E. Dockstader	Junior engineer.
C. R. Harding	Observer.
D. G. Anglin	"
J. Wm. Mackie	Recorder.
G. Wollenweber	"
F. W. Clarke	Assistant engineer.
W. P. Stranahan	Engraver.
Thos. S. Brock	"
R. F. Bartle, jr	Engraver's assistant.
Robert T. Franke	" "
Edward Wegner	" "
James Claxton	" "

In addition, the necessary labourers were employed on the surveying parties during the field seasons of 1909, 1910, 1911, 1912, and 1913.

The charts of the United States Lake Survey and those of the Canadian Hydrographic Survey were not suitable for delineating the boundary line because of their various sizes and scales. Some are too small for clearly showing the boundary line, many are not delineated upon the North American datum (the geodetic reference plane to which all charts in North America are now referred), and many did not contain sufficient information for boundary-line purposes, so that new surveys were required. Of the thirty charts constructed, eighteen are on a scale of 1:20,000, the smallest that the Commission felt could be used to delineate the boundary line through the rivers

and show details clearly. Of these eighteen, seven cover the St. Lawrence River; two, the Niagara River; two, the Detroit River; two, the St. Clair River; four, the St. Marys River; and one, Pigeon Bay. Five of the thirty charts are projected on a scale of 1:60,000, one of which covers the eastern end of Lake Ontario; one, the western end of Lake Erie; one, Lake St. Clair; one, the northern end of Lake Huron; and one, the eastern end of Lake Superior. The four lake charts are on a scale of 1:300,000. In addition to the charts enumerated above, there are two on a scale of 1:10,000,—one, covering Niagara Falls, and the other, St. Marys Falls,—and an index chart on a scale of 1:1,200,000. All are of the same size, forty inches by fifty inches within the border, and are projected on the North American datum.

The following table, No. 2, gives the number, geographical location, and scale of the thirty boundary charts:—

TABLE II.—INTERNATIONAL BOUNDARY CHARTS PREPARED BY THE INTERNATIONAL WATERWAYS COMMISSION, SHOWING LOCATION OF BOUNDARY LINE BETWEEN THE UNITED STATES AND CANADA THROUGH THE ST. LAWRENCE RIVER, GREAT LAKES, AND COMMUNICATING WATERWAYS.

No.	Chart.	Scale.
Index	Great Lakes	1 : 1,200,000
1	St. Lawrence River	1 : 20,000
2	" "	1 : 20,000
3	" "	1 : 20,000
4	" "	1 : 20,000
5	" "	1 : 20,000
6	" "	1 : 20,000
7	" "	1 : 20,000
8	Eastern end of Lake Ontario	1 : 60,000
9	Lake Ontario	1 : 300,000
10	Niagara River	1 : 20,000
11	"	1 : 10,000
12	"	1 : 20,000
13	Lake Erie	1 : 300,000
14	Western end of Lake Erie	1 : 60,000
15	Detroit River	1 : 20,000
16	"	1 : 20,000
17	Lake St. Clair	1 : 60,000
18	St. Clair River	1 : 20,000
19	"	1 : 20,000
20	Lake Huron	1 : 300,000
21	North end of Lake Huron	1 : 60,000
22	St. Marys River	1 : 20,000
23	" "	1 : 20,000
24	" "	1 : 20,000
25	" "	1 : 10,000
26	" "	1 : 20,000
27	Eastern end of Lake Superior	1 : 60,000
28	Lake Superior	1 : 300,000
29	Pigeon Bay	1 : 20,000

These charts show the shore lines of the lakes, rivers, islands and the mouths of the more important streams; the location of the principal cities and towns and of lighthouses and other permanent aids to navigation; all hydrography available from the United States and Canadian surveys; all the geodetic positions upon which the projections are based; and the boundary line with all monuments used to mark it. Unnecessary topography and all other matter not essential for the special purpose are omitted.

The greater part of the data for the charts has been secured from the Engineer Bureau of the United States War Department. Under the authority of the Secretary of War, the Chief of Engineers, United States Army, placed at the disposal of the Commission the original large-scale manuscript charts constructed in the office of the Lake Survey, and other records of that bureau. The Canadian Hydrographic Survey also furnished the Commission with all its available data. Additional chart data were also secured from the Canadian Department of Militia and Defence, United States Geological Survey, United States Hydrographic Office, the State of Michigan, and several municipalities, corporations, and individuals. It was found necessary, however, to send out surveying parties to make a considerable number of detached topographical surveys to supplement the information on record. The Commission has made a considerable number of such surveys; some, as the Niagara River from Lake Erie to the Falls, Prince Edward Bay and Amherst Island in Lake Ontario, False Detour Passage, Drummond and Cockburn Islands in Lake Huron, and Pigeon Bay, Lake Superior, being quite extensive. The following is a list of the topographical surveys made by the Commission for completing the boundary charts:—

TABLE III.—TOPOGRAPHIC SURVEYS MADE BY COMMISSION FOR COMPLETING BOUNDARY CHARTS.

Locality.	Title.
St. Lawrence River	North shore of Barnhart Island.
	Entrance to Massena Power Canal.
	American Island and vicinity.
	The Rift.
	Hickory and Arabella Islands.
Lake Ontario	Prince Edward Bay and Amherst Island.
Niagara River	Niagara Falls to Lake Erie.
Detroit River	West shore of Detroit River, between Trenton and Pointe Mouillée.
Lake Huron	False Detour Passage.
	Drummond and Cockburn Islands.
St. Marys River	West Neebish Channel.
	Islands at head of Sugar Island, St. Marys River, near Little Rapids.
	Sault Ste. Marie, Ontario, and vicinity.
	Parts of Sault Ste. Marie, Michigan.
	Pointe aux Pins, Ontario.
Lake Superior	Taquamenaw Bay.
	Pigeon Bay.

Every effort was made to increase the engraving force, but unfortunately engravers were not obtainable in the United States or Canada. The draughting and engraving were finally completed in November, 1914.

The boundary charts were printed by A. Hoen & Company, Baltimore, Md. The official charts filed with each Government are signed by the Commissioners; all others have facsimile signatures only.

1909 FIELD WORK.

During the winter of 1908-9, the Commission outlined their plans for necessary surveys.

In accordance therewith, a complete triangulation and topographic survey of Niagara River from Lake Erie to Niagara Falls, including all the islands lying in the river, was executed by a party in charge of Mr. Grover C. Brown, assistant engineer. A base line about three-quarters of a mile in length was measured along the river front on the west side of the freight tracks of the New York Central Railroad, between Jersey and Carolina streets, Buffalo, N.Y. From this base, a triangulation system was carried from the head of the Niagara River down both channels, around Grand Island, to the head of the rapids approaching Niagara Falls. This triangulation was also tied

to the old Lake Survey primary triangulation stations " Tonawanda 1875 " and " Buffalo City Hall Tower 1875 ". Seventy-eight triangulation stations were located and observed in this survey. Permanent buried concrete monuments were left to mark the new stations. For the topography of the survey, a line of levels was run from P. B. M. " Tonawanda No. 2 " in Tonawanda, N.Y., across the Tonawanda Channel to Grand Island; thence westward following the Whitehaven Road to the Chippawa Channel, a distance of about seven miles, where a permanent bench mark was established, consisting of a brass plug on triangulation station " Windsor ". The mean elevation of P. B. M. " Windsor " is 584.05, 1903 levels. Permanent bench marks were likewise established on Grand Island on the brass plugs at stations " Tonawanda Ferry ", elevation 589.31 feet; " Oak Grove ", elevation 591.02 feet; and " Electric ", elevation 576.35. The section of the American shore from station " Wheatfield " to Niagara Falls was not mapped at this time, this having been done in 1907, but was connected with the new triangulation system. The survey was continued until February 9, 1910, when owing to the severity of the weather, work was suspended until April 28, 1910. During the interval, the party was engaged on the reduction of its field work. Outdoor work was finally completed on May 19, 1910.

A field party sent out under the direction of the Canadian section of the Commission made a topographic survey of all the shore line on the Canadian side of the boundary, including Navy Island, from near Chippawa to Point Abino, Ontario. They also surveyed the Welland River several miles from Chippawa. All of the topography taken by the Canadian party was connected with the Commission's triangulation.

A topographical survey was also made by Mr. A. D. Hollingsworth of the American shore near the mouth of Detroit River from Slocum Island, near Trenton, to half a mile south of Pointe Mouillée, Mich., between October 15th and 19th, 1909. Twenty-eight miles of shore line were surveyed. He also located the positions of twenty-eight lights on the St. Clair River and head of Detroit River, returning to Buffalo on November 5th.

1910 FIELD WORK.

Upon the completion on May 19th of the Niagara River survey, Mr. Grover C. Brown and party were transferred to Sault Ste. Marie, Ontario, arriving there on May 24th. A triangulation and topographic survey in the vicinity of Sault Ste. Marie,

Ontario, and a portion of Whitefish Bay, Lake Superior, was made in accordance with the Commission's orders. The triangulation system extended from Topsail Island, a few miles below the city of Sault Ste. Marie, Ontario, as far west as station "Iron", located near the plant of the Algoma Iron & Steel Company, and consisted of eleven stations, forming nine triangles. The line "14 Ripley" to "East Base" of the United States Lake Survey triangulation system was used as a base. The stations were marked by permanent buried concrete monuments. The topographic survey extended from a point on the Canadian shore opposite Topsail Island to the old triangulation station on Dick Moore Island, above St. Marys Falls, and included the city of Sault Ste. Marie, Ontario. This work was completed on June 14th.

The survey in Whitefish Bay, Lake Superior, was next undertaken. The line from the tall chimney of the saw mill at Emerson to station "Taquamenon Island" was used as a base, described as "Taquamenon Island" to "Russell 95." The topographic survey extended from Salt Point to a point about half a mile west of Emerson, Mich. This survey was completed on July 13th and the party divided; one part under Mr. Grover C. Brown moved to the St. Lawrence River, while the other under Mr. Jos. L. Shed, junior engineer, located lights in St. Marys River and made topographic surveys in the vicinity of the West Neebish Channel and at two or three other localities where changes had occurred.

Before the monumenting was started, the Commission spent a great deal of time investigating the question of form and character of monument to be used, and adopted one of concrete, the form of the frustum of a cone with a hemispherical top. These monuments are two feet six inches high, two feet in diameter at the base, one foot six inches at the top, and with a radius for the hemispherical crown of nine inches. The foundations extend five feet below the surface, except where rock occurred, when the monument was built on and bonded to the rock by several iron pins. Each monument has its centre marked by a brass plug three-quarters of an inch in diameter and has a number cast in its side. They are numbered consecutively, starting with unity for each of the following groups: (1) St. Lawrence River, (2) Niagara River, (3) Detroit and St. Clair Rivers, (4) False Detour Passage, Potagannissing Bay, and St. Marys River, (5) Pigeon Bay. Through lakes

Ontario, Erie, Huron, and Superior, lighthouses are used as reference monuments. A photograph of a typical monument accompanies this report.

It was found necessary to make a new triangulation of the St. Lawrence River to locate the monuments and turning points in the international boundary line. This began on July 18, 1910, at boundary post 774, erected in 1902 by Dr. W. F. King, chief astronomer for Canada, and Edward A. Bond, state engineer and surveyor for the state of New York, at St. Regis, Quebec, the eastern end of the work assigned to this Commission. Mr. Grover C. Brown, assistant engineer, was placed in charge of this work, which was also under the field supervision of commissioners Haskell and Stewart, the Boundary Committee. For control of the triangulation, three base lines were measured in 1912—one on the north bank of the Cornwall Canal, one on the south bank of the Cardinal Canal, and one on the railway at Cape Vincent. An astronomic observation for the azimuth of the line Boundary Post 774 to Monument No. 1 was made. During the season, sixty-eight triangulation stations and eight old Lake Survey stations were located and thirty-six boundary monuments, the last one being on the foot of Ogden Island, were built and located. This work covered about twenty-three miles of river to the westward of St. Regis. The following old Lake Survey stations were connected with this triangulation: "16," "18," "23," "24," "28," "Croil Island," "McLeod," and "Whalen." A small topographic survey was made of the north and east sides of Barnhart Island. The field work closed on December 1st, the survey officers returning to the Buffalo office.

1911 FIELD WORK.

The field work of the preceding season was largely in the nature of an experiment to develop a method of procedure. The experience gained was satisfactory. Three parties were therefore organized at the beginning of the season, one for the St. Lawrence River, one for the Detroit and St. Clair Rivers, and a third for the north end of Lake Huron and the St. Marys River. Later in the year, an additional party was sent to Pigeon Bay, Lake Superior.

The 1911 field work on the St. Lawrence River began on May 2nd under the immediate supervision of Mr. A. E. Drake, assistant engineer. The triangulation started in 1910 was

continued westward to the foot of Wolfe Island, a distance of approximately eighty miles. During the season, 216 triangulation stations, 45 boundary monuments, and 14 United States Lake Survey stations were located and observed. Eighteen lighthouses and 36 prominent points were also tied in. The old United States Lake Survey stations forming a part of our main system were "Bradford," "Allison," "Red Mill," "Morristown Point," and "Bluff," and correspond to the Commission's stations 72, 76, 90, 132, 150, and 181, respectively. Old Lake Survey stations "Wort," "Sparrowhawk," "Chimney," "Nevins Point," "K," "Oak Point," "Peach," "Hill," and "Waterloo," were also located. The lights tied in were North Channel Dyke light, North Channel Dyke West End light, Windmill Point light, Prescott beacon, Ogdensburg light, Cole Shoal light, Crossover Island light, Bridge Island light, Sister Island light, Grenadier Island light, Sunken Rock light, Lindoe Island light, Gananoque Narrows light, Jackstraw Shoal light, Spectacle Shoal light, Red Horse Rock light, Burnt Island light, and Wolfe Island light. Observations for azimuth were made at Cardinal, Gananoque, and station 162. At several places along the river, new topographical surveys were made as follows: A portion of the east and north shores of Barnhart Island; American Island; the Rift and contiguous shores of Wells and Hill Islands; and Hickory and Arabella Islands. The monumenting work began at Ogden Island. Forty-five monuments were erected during the season, the last, number 81, on Arabella Island. The party disbanded on November 20th, when the survey officers returned to the Buffalo office.

The Detroit and St. Clair Rivers survey party took the field on May 3rd under the immediate supervision of Mr. Douglas Ellis, assistant engineer. This monumenting and survey work began at the mouth of Detroit River and was carried to the head of St. Clair River. Monuments 1 and 2 were built at Pointe Mouillée, on the American side, and Bar Point, on the Canadian side, respectively. The United States Lake Survey triangulation system was used for locating all the monuments on the Detroit and St. Clair Rivers, except on a portion of the latter where an independent triangulation system was run from about one mile below the foot of Stag Island to the head of St. Clair River, a distance of about twelve miles. On October 3rd, Mr. Ellis severed his connection with the Commission and was succeeded by Mr. A. D. Hollingsworth,

who had just completed a survey in the vicinity of Pigeon Bay, Lake Superior. The last monument located at the head of St. Clair River and the foot of Lake Huron was completed on October 26th. During the season, fifty-eight monuments were built on the Detroit and St. Clair Rivers and Lake St. Clair and 131 triangulation stations occupied. On November 25th, the party disbanded and the survey officers returned to the Buffalo office.

The triangulation and monumenting work on the St. Marys River was under the immediate supervision of Mr. Jos. L. Shed, assistant engineer. Actual field work began on May 23rd. The work consisted of a triangulation of False Detour Passage and portions of the western end of the North Channel, Lake Huron, and Potagannissing Bay, with some topography on Drummond and Cockburn Islands. The triangulation began on the old Lake Survey line "Fort St. Joe"—"Drummond" as a base and was carried eastward to the south end of False Detour Passage. The following Lake Survey stations were included in the triangulation system:—"Drummond," "Fort St. Joe," "305," "285," "Burnt Island," "Serpent," and "345." The position of Sulphur Island light as rebuilt was determined. The topographical survey covered the north and east sides of Drummond Island from Poe Point to Shoal Cove, a distance of 31 miles, the west side of Cockburn Island between Tolsmaville and Boom Point, a distance of 32¾ miles, and Harbor, Kitchener, and Bigsby Islands. Whilst this work was in progress, boundary monuments 1 to 8 were constructed and located between the south end of False Detour Passage and Fort St. Joe.

On September 8th, Mr. Shed started the monumenting of the St. Marys River from Fort St. Joe northward. Boundary monuments Nos. 9 to 36, inclusive, were constructed and located from the existing Lake Survey triangulation. Topographic surveys were made of several localities in the river, including the small islands of East Neebish Rapids, Cook Island, and the small islands adjacent thereto. All of the shoreline changes and new islands were due to the stage of water being lower than when the original surveys were made. During the season, 36 monuments were built and located, the last at Sault Ste. Marie, Mich., and 97 triangulation stations occupied, 46 of which were Lake Survey stations. The party disbanded on October 28th and the survey officers returned to the Buffalo office.

At the beginning of the season, it was expected that Mr. Shed would complete the work on this river and make a survey of Pigeon Bay, but owing to adverse weather conditions this was found impossible. Accordingly, Mr. A. D. Hollingsworth, assisted by Messrs. G. L. Crichton and F. P. Deane, was sent from the Buffalo office on August 22nd to make a complete survey of Pigeon Bay and monument the same. The topographic survey was controlled by the triangulation of the International Boundary Commissioners acting under Article V of the 1908 Boundary Treaty, and such other additional triangulation as was found necessary. Four monuments were built, one of which was an azimuth monument, located on detached rock lying to the eastward of Marin Island. Monument No. 1 was located on Pigeon Point, and 2 and 3 near the mouth of Pigeon River. Twelve triangulation stations were occupied and 23 miles of shore line traversed. The party completed its work and disbanded on September 28, 1911, and the survey officers returned to the Buffalo office.

1912 FIELD WORK.

Mr. A. E. Drake, assistant engineer, resumed work on the St. Lawrence River on May 21, 1912. Monuments 82 to 88 were erected and located, thus completing the monumenting on this river. The United States Lake Survey base line at Cape Vincent, N.Y., was found and remeasured with a fifty-meter Invar tape, standardized at Washington, and loaned by the College of Civil Engineering of Cornell University, Ithaca, N.Y. Bases located near Cardinal, Ontario, and Cornwall, Ontario, were also measured with this tape.

The main secondary triangulation system was carried from the foot of Wolfe Island through the channel south of it to its head, a distance of about 18 miles. A small tertiary system was carried through the Rift for the purpose of locating the boundary monuments through this narrow reach. Topography was also taken at the head of the Massena Canal, near Massena, N.Y. All geodetic positions of stations on this river depend upon the adjusted position of "West Base" at Cape Vincent, which is in the first triangle off the United States Lake Survey primary line "Carleton"—"Wolfe." On this portion of the work, 26 triangulation stations were occupied, 6 monuments built and located, and the positions determined of four lights, viz: Rock Island light, Carleton Island light, Cape Vincent Breakwater East light, and Cape Vincent Breakwater West light.

Upon the completion of the base-line work at Cape Vincent on July 12th, the party proceeded to Prince Edward Bay, Lake Ontario. A triangulation and topographic survey was made of the bay, Amherst Island and some small islands in that vicinity, and the Canadian mainland between Sandhurst and Bath. The base line used for the triangulation was "Duck Island"—"False Ducks Lighthouse." From this base, another system was carried through the lower gap to the vicinity of Kingston, Ont., a distance of 28 miles, where Pigeon Island light, Ninemile Point light, Snake Island light, Center Brother Island light, Knapp Point light, Portsmouth Front Range light, Portsmouth Back Range light, Barriefield Common Front Range light, Barriefield Common Back Range light, and Kingston City Hall were located. This work was completed and the party disbanded on November 12th. The engineers returned to the Buffalo office and were immediately transferred to the lower Niagara River with instructions to take up base-line and triangulation work.

The St. Marys River field work was resumed on May 21st under the supervision of Mr. Jos. L. Shed, assistant engineer. Monuments 38 to 43, between St. Marys Falls and the lower end of Ile Parisienne, in Whitefish Bay, were erected and located from existing Lake Survey triangulation. During the season, a topographic survey was made of the canal of the Michigan Northern Power Company, including topography near the works of the Union Carbide Company at Sault Ste. Marie, Mich. A topographic survey of Topsail Island was made and the dock of the Great Lakes Dredge & Dock Company at Little Rapids was located.

In 1911, all monuments between Fort St. Joe and Sault Ste. Marie were located from local United States Lake Survey stations, using those nearest the monument. Upon investigation, some of these stations were found to be merely flag stations for local river surveys and no information was available as to the accuracy of their location. It was decided, therefore, to have these monuments relocated from the main triangulation system. This necessitated the relocating of fourteen monuments and the occupation of thirty-two stations. The party completed the field work on this river and disbanded on July 9th, when the survey officers returned to Buffalo.

The work of monumenting and locating the boundary line in the Niagara River was immediately started under the field supervision of Mr. Jos. L. Shed, assistant engineer. Thirty-five monuments were built and located. The triangulation survey of the upper Niagara River made by the Commission

in 1909 was used for the location of the monuments in the upper river. Between Lake Ontario and Niagara Falls, a new system of triangulation was made for the location of monuments. On this work, 95 triangulation stations were occupied, 4 of which were Lake Survey stations.

Upon the completion of its work, the St. Lawrence River party was also transferred to this river, and measured three base lines,—one at Niagara Falls, N.Y., one at Queenston, Ontario, and a third at Youngstown, N.Y. The Niagara Falls base was located in Niagara Falls, N.Y., along the New York Central Railroad tracks near the Niagara Falls brewery and the plant of The Aluminum Company of America. The Queenston base was located near the site of the United States Lake Survey base "Volt"—"Bolt," on the International Railway tracks just north of where the Ontario Power Company's transmission line crosses the Gorge. This base is not the same as the Lake Survey base, only one point "Volt" being common, the other end of the base line being eccentric to "Bolt" and "Bolt Eccentric." The Youngstown base was laid out on United States Government property, parallel to the macadam road along the river bank between the officers' quarters and the St. Vincent Catholic Institution.

During the Niagara River work, the party under Mr. Shed secured the topography of the small islands on the Canadian side near the head of the Niagara River, the shore line, roads, etc., in the vicinity of Black Creek, Ontario, including a mile up the creek and a mile each way up and down the river from the mouth of the creek, and in the vicinity of Chippawa, Ontario, including the town and Hog Island, and the banks of the Welland River as far as the mouth of Lyons Creek. A hydrographic survey in the vicinity of Diamond Rock, in the Chippawa Channel, was also made. The field work of the two parties was completed on December 16th, when the parties disbanded and the survey officers returned to the Buffalo office.

Mr. A. D. Hollingsworth, principal draftsman for the United States, made a triangulation survey for the location of Presque Isle light, at Erie, Pa., between September 12th and 28th, inclusive. On this work, 12 triangulation stations were occupied and 4 lights located. Thirtymile Point light, on the south shore of Lake Ontario, was also located by Mr. Hollingsworth between October 7th and 21st. Twenty triangulation stations were necessary in this triangulation.

During August, 1912, Commissioners Gibbons and Stewart of the Canadian section, and Ernst, Clinton, and Haskell, of the American section, the secretaries Coté and Wilson, made an inspection trip over the tentative boundary line through the Great Lakes, St. Lawrence River, and communicating waters. Through the courtesy of Mr. J. G. MacPhail, commissioner of lights, Department of Marine and Fisheries, Dominion of Canada, the Canadian Government steamer *Simcoe* was placed at the disposal of the Commission. The party left Port Arthur, Ontario, August 20th, arrived at the mouth of Pigeon River, and then cruised along the tentative boundary line through the Great Lakes, reaching Cape Vincent, N.Y., on August 29th. At this point, the party left the *Simcoe* and completed their inspection of the St. Lawrence River work on the launch *Choice* and steamer *Rapid Prince,* reaching Cornwall, Ontario, near the eastern terminus of the Commission's work on August 30th.

Colonel J. G. Warren, Corps of Engineers, U.S.A., in charge of the Buffalo District, and Lieut.-Col. Mason M. Patrick, Corps of Engineers, U.S.A., in charge of the Detroit District, very courteously furnished the Commission the use of United States Government steamers for the inspection of the tentative boundary through the upper Niagara River and the St. Marys River from Sault Ste. Marie, through the Lake George Channel, to the foot of Sugar Island, respectively.

1913 FIELD WORK.

At the beginning of 1913, the field work had been completed with the exception of a small amount at several scattered localities along the waterways. In August, 1913, Mr. G. L. Crichton, principal draftsman for Canada, took up this work and made additional surveys on the St. Marys River in the vicinity of the International bridge; at the head of Sugar Island and near Pointe aux Chenês. Mr. Crichton made additional surveys on the St. Clair River in the vicinity of Port Huron and Sarnia; on the Detroit River near its head; on the St. Lawrence River in the vicinity of Morrisburg; and on the Niagara River near the Suspension bridge at Lewiston, N.Y.; and in the vicinity of the International bridge at Buffalo and Bridgeburg. This work was completed on November 7, 1913.

APPENDIX II.

TABLE OF POSITIONS, AZIMUTHS, AND LENGTHS OF TRIANGULATION ON THE ST. LAWRENCE RIVER AND THE GREAT LAKES, DETERMINED BY THE COMMISSION IN ITS BOUNDARY WORK.

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.

Locality, Saint Lawrence River. Date. ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
	45–00–33·685	3411·7	22–13–55·1	202–13–45·6	Monument No. 2..	2563·6	3·4088567
Monument No. 1.....	74–40–16·476	1183·7	356–15–32·9	.....	T. P. No. 1.....	1096·9	3·0401490
			324–14–30·0	.....	Boundary Post No. 774.		
			325–22–38·4	145–23–02·8	Origin....	4363·5	3·6398365
			332–03–33·1	....	Andrew Ellicott Monument.....	4276·8	3·6311239
			287–35–50·	.....	St. Regis Church Spire.		
Turning Point No. 1.....	45–00–22·878	2316·9	19–41–25·9	.....	T. P. No. 2.....	2108·3	3·3239406
	74–40–15·480	1112·2					
Boundary Post No.774.....	44–59–58·228	5897·3	90–04–32·4	.....	Origin.....	106·6	2·0277339
	74–39–40·492	2909·8	72–09–02·2	.. ..	Andrew Ellicott Monument.	611·3	2·7862349
			255–04–13·	....	St. Regis Church Spire.		
			181–45–36·	.....	St. Regis Dyke Back Light.		
Origin	44–59–58·229	5897·3	68–28–26·9	.....	Andrew Ellicott Monument..	510·9	2·7083500
	74–39–41·975	3016·1					

Andrew Ellicott Monument	44–59–56·378 74–39–48·589	5710·0 3491·5	144–15–00·	.....	T. P. No. 1	3307·1	3·5194447
St. Regis Church Spire	45–00–10·721 74–38–34·478	1086·0 2477·7	74–45–00·	.....	Andrew Ellicott Monument	5520·0	3·7419393
St. Regis Dyke Back Light	45–01–01·48 74–39–37·75	149·9 2711·9					
Monument No. 2	45–00–10·254 74–40–29·975	1038·4 2153·9	69–42–08·5 334–53–00· 288–54–06·1 215–52–30·	249–41–47·5	Monument No. 3 T. P. No. 2 Boundary Post No. 774. St. Regis Dyke Back Light.	2272·9 780·2	3·3565747 2·8921961
Turning Point No. 2	45–00–03·278 74–40–25·366	332·3 1823·2	79–31–44·4		T. P. No. 3	2702·8	3·4318127
Monument No. 3	45–00–02·468 74–40–59·641	250·0 4285·8	104–24–09·6 25–27–00· 119–57–45· 131–14–35· 265–24–15·	284–23–19·9	Monument No. 4 T. P. No. 3 West end Catholic Church Spire, Cornwall. East end Catholic Church Spire, Cornwall. St. Regis Church Spire.	5214·7 453·4	3·7172271 2·6564922
Turning Point No. 3	44–59–58·426 74–41–02·352	5917·6 169·0	106–02–01·8	.....	T. P. No. 4	5040·7	3·7024934
West end Catholic Church Spire, Cornwall.	45–01–16·020 74–43–57·220	1622·4 4110·9					
East end Catholic Church Spire, Cornwall.	45–01–08·090 74–42–45·169	819·2 3244·7					
Monument No. 4	45–00–15·269 74–42–09·934	1546·6 713·9	72–32–54·4 357–55–00· 154–40–50· 271–40–55·	252–32–03·5	Monument No. 5 T. P. No. 4 East end Catholic Church Spire, Cornwall. St. Regis Church Spire.	5423·3 314·3	3·7342598 2·4973497

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 4.....	45–00–12·167	1232·6	70–37–26·1	....	T. P. No. 5.....	5351·1	3·7284400
	74–42–09·775	702·8					
Monument No. 5.....	44–59–59·204	5996·0	39–51–33·9	219–51–09·7	Monument No. 6.....	3835·2	3·5837859
	74–43–21·931	1576·1	343–30–00·	.....	T. P. No. 5.....	482·9	2·6838920
			358–42–50·	....	Chimney on small house across river.		
Turning Point No. 5.....	44–59–54·632	5532·8	39–09–55·8	.....	T. P. No. 6.	3751·3	3·5741869
	74–43–20·022	1438·6					
Monument No. 6.....	44–59–30·135	3052·2	89–54–50·8	269–54–21·6	Monument No. 7.....	2972·6	3·4731434
	74–43–56·132	4033·4	332–08–00·	. . . . .	T. P. No. 6.....	483·6	2·6844817
			69–48–24·0	249–47–20·5	Azimuth Monument	6884·0	3·8378424
Tallest Stack, Lower Cotton Mills, Cornwall, Ontario.	45–00–58·244	5898·9					
	74–42–39·677	2850·7					
Turning Point No. 6.....	44–59–25·913	2624·0	91–09–42·5	.....	T. P. No. 7.....	3506·5	3·5448707
	74–43–52·987	3808·4					
Monument No. 7.....	44–59–30·089	3047·2	110–48–01·0	290–47–22·5	Monument No. 8.....	4192·3	3·6224563
	74–44–37·494	2694·5	41–05–00·	.....	T. P. No. 7.....	467·2	2·6694942
			55–46–40·3	235–46–06·0	Azimuth Monument.....	4218·2	3·6251313
Azimuth Monument.....	44–59–06·662	674·9					
	74–45–26·020	1870·4					

Turning Point No. 7	44–59–26·612	2695·2	111–06–04·4		T. P. No. 8	4393·0	3·6427629
	74–44–41·766	3002·3					
Monument No. 8	44–59–44·785	4535·8	162–32–24·8	342–32–10·0	Monument No. 9	5020·8	3·7007744
	74–45–32·029	2301·8	61–55–00·		T. P. No. 8	551·2	2·7412935
			353–37–02·0	173–37–06·0	Azimuth Monument	3885·1	3·5894037
Turning Point No. 8	44–59–42·224	4275·9	169–34–17·3		T. P. No. 9	3979·0	3·5997758
	74–45–38·796	2788·4					
Monument No. 9	45–00–32·075	3248·7	79–18–36·8	259–17–07·2	Monument No. 10	9270·2	3·9670906
	74–45–52·996	3807·7	345–12–00·		T. P. No. 9	1174·5	3·0698672
			347–21–58·6	167–22–17·7	Azimuth Monument	8865·1	3·9476855
			255–04–50·		Paper Mill Chimney, Cornwall.		
			261–33–10·		Pumping Station Chimney, Cornwall		
			28–35–55·		Conical Tower on house at Massena Point.		
			239–34–43·3		Standpipe, Cornwall.		
Turning Point No. 9	45–00–20·863	2112·5	86–27–04·8		T. P. No. 10	7708·4	3·8869665
	74–45–48·820	3507·9					
Standpipe, Cornwall	45–00–56·490	5721·1					
	74–44–54·368	3905·5					
Conical Tower on house at Massena Point.	45–00–11·66	1180·8					
	74–46–08·68	623·7					
Monument No. 10	45–00–15·077	1526·9	178–48–27·3	358–48–26·5	Monument No. 11	3821·6	3·5822401
	74–47–59·773	4294·9	266–25–00·		T. P. No. 10	1719·1	3·2353155
			257–48–00·		Paper Mill Chimney, Cornwall, Ont.		
Turning Point No. 10	45–00–16·138	1634·5	142–19–04·9		T. P. No. 11	2945·1	3·4691042
	74–47–35·895	2579·7					
Monument No. 11	45–00–52·802	5347·8	100–26–51·2	280–26–03·1	Monument No. 12	4968·9	3·6962590
	74–48–00·880	63·3	00–13–00·		T. P. No. 11	1382·5	3·1406787
			87–47–00·		T. P. No. 12	431·1	2·6345796
			80–17–10·		East gable of house of L. Barnhart.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 11	45-00-39·151	3965·2	162-41-46·5	.....	T. P. No. 12	1430·6	3·1555148
	74-48-00·953	68·2					
Turning Point No. 12	45-00-52·637	5331·4	83-06-32·8	.....	T. P. No. 13	3065·1	3·4864394
	74-48-06·876	494·4					
Monument No. 12	45-01-01·693	171·6	60-34-08·7	240-33-41·2	Monument No. 13	3205·3	3·5058697
	74-49-08·902	639·4	312-17-00·	.....	T, P. No. 13	1910·1	3·2810564
			348-07-00·	.....	T. P. No. 14	2047·2	3·3111688
Turning Point No. 13	45-00-49·004	4963·6	54-04-55·2	.....	T. P. No. 14	1224·4	3·0879243
	74-48-49·232	3536·8					
Turning Point No. 14	45-00-41·912	4244·7	122-35-47·2	.....	T. P. No. 15	2903·3	3·4628873
	74-49-03·034	217·8					
Monument No. 13	45-00-46·140	4672·9	58-47-06·5	238-46-30·8	Monument No. 14	4246·2	3·6279970
	74-49-47·760	3431·1	214-03-00·	.....	T. P. No. 15	1370·7	3·1369526
			116-48-00·	.....	T. P. No. 16	1524·9	3·1832503
			168-56-55·	.....	Cross on boulder 295 feet distant		
			297-37-45·	.....	N.W. corner cheese factory on Barnhart Island.		
Turning Point No. 15	45-00-57·354	5808·4	78-06-40·8	.....	T. P. No. 16	2174·9	3·3374432
	74-49-37·082	2663·7					
Turning Point No. 16	45-00-52·929	5360·6	56-24-06·6	.....	T. P. No. 17	2210·0	3·3443930
	74-50-06·707	482·0					

Monument No. 14	45–00–24·409	2472·1	67–35–23·7	247–34–43·3	Monument No. 15.	4446·6	3·6480300
	74–50–38·302	2752·0	194–27–00·		T. P. No. 17	1719·8	3·2354812
			153–15–00·		T. P. No. 18	1468·5	3·1668743
			66–57–40·		East Peak of red barn on Barnhart Island.		
Turning Point No. 17	45–00–40·853	4137·1	72–00–23·3		T. P. No. 18	1146·2	3·0592574
	74–50–32·329	2322·8					
Turning Point No. 18	45–00–37·357	3783·8	50–48–05·0		T. P. No. 19	3361·7	3·5265571
	74–50–47·502	3412·7					
Monument No. 15	45–00–07·667	776·6	98–21–43·2	278–20–55·2	Monument No. 16	4929·7	3·6928185
	74–51–35·511	2551·8	223–45–00·		T. P. No. 19	1221·1	3·0867606
			137–56–00·		T. P. No. 20	1221·1	3·0867606
			71–53–00·		T. P. No. 21	1883·9	3·2750474
			178–19–20·		Hole drilled in boulder 254·6 feet north.		
Turning Point No. 19	45–00–16·377	1659·1	90–50–40·6		T. P. No. 20	1662·7	3·2208172
	74–51–25·759	1707·3					
Turning Point No. 20	45–00–16·618	1683·4	33–05–02·0		T. P. No. 21	1781·2	3·2507186
	74–51–46·897	3370·1					
Turning Point No. 21	45–00–01·882	190·3	97–13–36·4		T. P. No. 22	2825·0	3·4510293
	74–52–00·428	30·8					
Monument No. 16	45–00–14·740	1492·8	77–41–13·1	257–40–48·9	Monument No. 17	2512·1	3·4000453
	74–52–43·389	3117·4	343–17–00·		T. P. No. 22	988·8	2·9951274
			61–57–40·		Dickinson Landing Light.		
			65–13–30·		R. C. Church Spire, Dickinson Landing.		
Turning Point No. 22	45–00–05·389	545·9	79–34–55·5		T. P. No. 23	2961·2	3·4714636
	74–52–39·431	2833·3					
Monument No. 17	45–00–09·449	957·0	38–27–53·9	218–27–22·9	Monument No. 18	5069·1	3·7049329
	74–53–17·546	1260·8	10–23·00·		T. P. No. 23	962·6	2·9834443
			53–03–10·		Chimney on Lock House, Lock No. 21, Cornwall Canal.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

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	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 23	45-00-00·100	10·2	50-19-27·6	.....	T. P. No. 24.....	4230·0	3·6263373
	74-53-19·960	1434·1					
Monument No. 18.....	44-59-30·257	3064·3	29-52-24·8	209-52-06·3	Monument No. 19.....	3775·5	3·5769745
	74-54-01·420	102·0	139-22-00·	.....	T. P. No. 24.....	423·9	2·6272467
			106-20-40·	.....	R. C. Church Spire, Dickinson Landing.		
			93-59-10·	.....	Dickinson Landing Light.		
Turning Point No. 24.....	44-59-33·433	3385·8	28-49-07·1	.....	T. P. No. 25	3764·1	3·5756619
	74-54-05·261	378·0					
Monument No. 19.....	44-58-57·931	5867·1	91-31-20·0	271-29-37·0	Monument No. 20.....	10476·1	4·0201981
	74-54-27·582	1982·6	144-47-00·	.....	T. P. No. 25.....	364·2	2·5613072
			170-41-40·	.....	R. C. Church Spire, Dickinson Landing.		
			185-47-45·	.....	U. S. L. S. No. 28.		
Turning Point No. 25..	44-59-00·869	88·3	92-47-39·2	.....	T. P. No. 26.....	10150·8	4·0065008
	74-54-30·504	2192·6					
Dickinson Landing Light.....	44-59-31·99	3239·8					
	74-54-36·48	2621·7					
R. C. Church Spire, Dickinson Landing....	44-59-37·606	3808·7					
	74-54-36·743	2640·7					

Monument No. 20	44-59-00·653	66·3	82-40-04·1	262-39-01·1	Monument No. 21	6461·5	3·8103367
	74-56-53·276	3829·4	193-29-00·		T. P. No. 26	528·9	2·7233492
			252-05-50·		Dickinson Landing Light.		
			249-06-10·		R. C. Church Spire, Dickinson Landing.		
Turning Point No. 26	44-59-05·731	580·4	85-36-02·8		T. P. No. 27	6567·4	3·8173933
	74-56-51·560	3706·0					
Monument No. 21	44-58-52·501	5317·2	71-09-53·7	251-09-04·1	Monument No. 22	5329·2	3·7266653
	74-58-22·432	1612·5	178-53-00·		T. P. No. 27	835·3	2·9218426
			84-16-10·		Spire on Presbyterian Church, Farran Point.		
Turning Point No. 27	44-59-00·747	76·1	67-27-00·1		T. P. No. 28	5678·3	3·7542211
	74-58-22·658	1628·9					
Spire on Presbyterian Church, Farran Point	44-58-45·082	4565·9					
	75-00-06·406	460·6					
Monument No. 22	44-58-35·507	3596·1	33-49-37·7	213-49-24·0	Monument No. 23	2494·0	3·3968908
	74-59-32·595	2343·2	150-11-00·		T. P. No. 28	435·7	2·6391823
			111-45-10·		Spire on Presbyterian Church, Farran Point.		
			152-16-50·		Spire on Catholic Church, Farran Point.		
Turning Point No. 28	44-58-39·240	3974·1	38-48-50·9		T. P. No. 29	2694·1	3·4304114
	74-59-35·609	2560·0					
Monument No. 23	44-58-15·050	1524·3	05-29-06·8	185-29-05·2	Monument No. 24	1715·0	3·2342619
	74-59-51·906	3731·9	124-09-00·		T. P. No. 29	624·7	2·7956511
			161-05-10·		Spire on Presbyterian Church, Farran Point.		
Turning Point No. 29	44-58-18·512	1874·7	00-40-25·3		T. P. No. 30	2048·6	3·3114541
	74-59-59·097	4248·7					

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Monument No. 24.....	44–57–58·194	5893·7	22–02–33·9	202–02–22·8	Monument No. 25.....	3010·7	3·4786747
	74–59–54·186	3895·7	91–25–00·	.....	T. P. No. 30.....	377·3	2·5766820
			43–40–35·	.....	T. P. No. 31.....	1846·3	3·2663039
			81–40–10·	.....	S. W. corner of large brick house just below head of Farran Point Canal.		
Turning Point No. 30.....	44–57–58·286	5903·5	33–43–49·5	....	T. P. No. 31.....	1616·8	3·2086684
	74–59–59·432	4273·0					
Turning Point No. 31.....	44–57–45·009	4558·7	20–27–40·5	....	T. P. No. 32.....	1573·5	3·1968582
	75–00–11·918	857·3					
Monument No. 25..... ...	44–57–30·639	3103·0	59–16–46·8	239–15–43·9	Monument No. 26.....	7446·1	3·8719285
	75–00–09·899	711·9	174–18–00·	.....	T. P. No. 31.....	1462.6	3·1651243
			88–27–00·	.....	T. P. No. 32.....	695·5	2·8423201
			83–13–20·	.....	Church Spire, Aultsville, Ont.		
			84–11–50·	.....	Flagpole, Fraternity Hall, Aultsville, Ont.		
Turning Point No. 32.....	44–57–30·453	3084·0	52–35–24·6	....	T. P. No. 33.....	7064·1	3·8490578
	75–00–19·567	1407·5					
Turning Point No. 33.....	44–56–48·072	4868·4	62–45–41·6	....	T. P. No. 34.....	9680·7	3·9859048
	75–01–37·580	2703·1					

Monument No. 26	44–56–53·071	5374·7	64–15–52·4	244–14–08·5	Monument No. 27	11744·0	4·0698027
	75–01–38·899	2797·9	349–23–00·	.....	T. P. No. 33	515·1	2·7118839
			41–31–50·	.....	Weather Vane on large barn, United States Shore.		
Monument No. 27	44–56–02·695	273·0	66–17–51·4	246–16–41·1	Monument No. 28	7822·0	3·8933200
	75–04–05·947	427·8	265–29–00·	.....	T. P. No. 34	2072·8	3·3165638
			333–06–00·	.....	T. P. No. 35	1853·6	3·2680326
			292–45–30·	.....	Weather Vane on large barn, United States Shore.		
Turning Point No. 34	44–56–04·306	436·4	34–03–38·4	.....	T. P. No. 35	2192·4	3·3409249
	75–03–37·223	2677·5					
Turning Point No. 35	44–55–46·372	4696·2	83–51–03·5	.....	T. P. No. 36	8270·3	3·9175198
	75–03–54·290	3905·8					
Monument No. 28	44–55–31·636	3204·1	38–42–28·5	218–42–07·2	Monument No. 29	3466·8	3·5399293
	75–05–45·489	3273·0	159–51–00·	.....	T. P. No. 36	644·4	2·8091257
			149–21–30·	.....	Crysler Monument (middle groove, near top.)		
Turning Point No. 36	44–55–37·609	3809·0	38–38–31·5	.....	T. P. No. 37	3460·4	3·5391253
	75–05–48·574	3494·7					
Crysler Monument	44–55–47·235	4783·8					
	75–05–58·497	4208·7					
Monument No. 29	44–55–04·923	498·7	99–20–14·8	279–19–40·8	Monument No. 30	3513·5	3·5457446
	75–06–15·616	1123·7	160–31–00·	.....	T. P. No. 37	644·4	2·8091257
			89–31–40·	.....	Lutheran Church Spire, Canada.		
			116–14–20·	.....	Windmill, opposite foot of Goose Neck I., Canada.		
Turning Point No. 37	44–55–10·921	1106·0	99–00–45·9	.....	T. P. No. 38	3359·9	3·5263207
	75–06–18·603	1338·2					

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Monument No. 30.....	44–55–10·549	1068·2	64–33–57·2	244–33–15·5	Monument No. 31.....	4710·8	3·6730986
	75–07–03·796	273·3	173–17–00·	.....	T. P. No. 38....	567·6	2.7540303
			95–01–40·	.....	Church of England Church Spire, "The Churches."		
			169–43–00·	....	Windmill, Canadian Shore.		
			141–33–40·	.....	Windmill, Canadian Shore.		
Turning Point No. 38.....	44–55–16·115	1632·5	63–33–12·4	.....	T. P. No. 39.....	4940·8	3·6937964
	75–07–04·719	339·6					
Monument No. 31.....	44–54–50·568	5121·4	25–29–29·8	205–29–04·3	Monument No. 32.....	6052·1	3·7819054
	75–08–02·911	209·6	148–35–00·	.....	T. P. No. 39....	452·8	2·6558633
			155–16–40·	.....	Lutheran Church Spire, "The Churches."		
			194–05–40·	.....	Church of England Church Spire, "The Churches.		
Turning Point No. 39.....	44–54–54·383	5507·5	11–49–05·8	.....	T. P. No. 40.....	6745·0	3·8289829
	75–08–06·190	445·5					
Church of England Church Spire, "The Churches."	44–55–13·727	1390·1					
	75–07–54·726	3938·0					
Lutheran Church Spire, "The Churches."	44–55–04·226	428·1					
	75–08–11·765	846·5					

Monument No. 32	44–53–56·626	5734·9	66–45–44·6	246–44–51·8	Monument No. 33	5853·6	3·7674268
	75–08–39·095	2814·0	307–19–00·		T. P. No. 40	1241·5	3·0939353
			78–53–30·		Methodist Church Spire, Morrisburg, Ont.		
Turning Point No. 40	44–53–49·195	4982·6	79–10–28·0		T. P. No. 41	6592·5	3·8190518
	75–08–25·380	1827·1					
Monument No. 33	44–53–33·815	3424·9	56–07–56·3	236–06–57·6	Monument No. 34	7215·1	3·8582450
	75–09–53·808	3873·7	161–05–00·		T. P. No. 41	336·6	2·5271316
			316–44–30·		Weather Vane on Cupola of barn to S.-E. of Monument No. 33.		
Turning Point No. 41	44–53–36·959	3743·1	58–38–09·0		T. P. No. 42	7256·6	3·8607351
	75–09–55·324	3982·6					
Methodist Church Spire, Morrisburg, Ont.	44–53–37·37	3784·4					
	75–10–56·91	4096·8					
Roman Catholic Church Spire, Morrisburg, Ont.	44–53–44·072	4463·2					
	75–11–03·671	264·1					
Church of England Church Spire, Morrisburg, Ont.	44–53–40·975	4149·9					
	75–11–06·935	499·3					
Monument No. 34	44–52–54·105	5479·6	90–54–52·1	270–54–36·9	Monument No. 35	1552·1	3·1909331
	75–11–17·008	1224·7	150–46–00·		T. P. No. 42	644·4	2·8091257
			147–39–20·		Flagpole at Shipyard, Morrisburg, Ont.		
Turning Point No. 42	44–52–59·657	6042·0	82–16–39·7		T. P. No. 43	1382·3	3·1405985
	75–11–21·378	1539·4					
Monument No. 35	44–52–54·349	5504·3	85–44–59·7	265–44–38·9	Monument No. 36	2129·0	3·3281704
	75–11–38·561	2776·6	159–22–00·		T. P. No. 43	376·0	2·5751688
			56–06–54·9	236–06–44·0	Azimuth Monument	1339·3	3·1268705
			206–09–40·		Roman Catholic Church Spire, Morrisburg.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date..... ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 43.....	44–52–57·823	5855·6	52–07–50·5	.....	T. P. No. 44.....	2867·7	3·4575360
	75–11–40·401	2909·1					
Monument No. 36....	44–52–52·790	5346·4	66–47–32·9	246–46–52·7	Monument No. 37.....	4474·0	3·6506912
	75–12–08·046	579·1	12–19–00·	.....	T. P. No. 44.....	1280·2	3·1072715
			221–44–10·	.....	Roman Catholic Church Spire, Morrisburg.		
			300–12–26·2	120–12–36·1	Azimuth Monument	1170·3	3·0682874
Turning Point No. 44.....	44–52–40·440	4095·5	89–36–08·9	.....	T. P. No. 45.....	4014·3	3·6036060
	75–12–11·838	852·4					
Azimuth Monument.....	44–52–46·976	4757·5					
	75–11–54·001	3888·4					
Monument No. 37.....	44–52–35·378	3583·0	38–28–44·0	218–28–17·9	Monument No 38....	4281·7	3·6316149
	75–13–05·146	370·7	160–07–00·	.....	T. P. No. 45	515·1	2·7118839
			257–04–47·4	77–05–37·6	Azimuth Monument	5256·1	3·7206656
Turning Point No. 45.....	44–52–40·161	4067·2	36–35–43·1	....	T. P. No. 46.....	4287·5	3·6322022
	75–13–07·579	545·9					
Monument No. 38.....	44–52–02·280	231·0	83–09–57·4	263–09–26·7	Monument No. 39.....	3156·5	3·4992023
	75–13–42·136	3034·8	170–20–00·	.....	T. P. No. 46.....	399·6	2·6016315
			277–08–50·	....	R. C. Church Spire, Waddington.		

Turning Point No. 46	44–52–06·170	625·0	82–38–00·7		T. P. No. 47	3344·5	3·5243281
	75–13–43·068	3102·0					
Monument No. 39	44–51–58·569	5931·7	65–19–15·3	245–18–32·3	Monument No. 40	4828·5	3·6838083
	75–14–25·649	1847·4	143–44–00·		T. P. No. 47	422·6	2·6259001
			208–12–30·		Flagpole head of Lock No. 24, Morrisburg Canal.		
			133–53–00·		Stack on planing mill, Canada.		
Turning Point No. 47	44–52–01·933	195·5	47–29–02·8		T. P. No. 48	5292·8	3·7236875
	75–14–29·119	2097·4					
Monument No. 40	44–51–38·658	3915·0	45–38–05·8	225–37–39·0	Monument No. 41	3823·1	3·5824126
	75–15–26·558	1913·1	349–02–00·		T. P. No. 48	1242·8	3·0943942
			06–39–50·		Middle Ventilator on red barn, U.S. Shore opposite Monument No. 40.		
Turning Point No. 48	44–51–26·611	2694·9	74–21–49·2		T. P. No. 49	3292·3	3·5175004
	75–15–23·276	1677·2					
Monument No. 41	44–51–12·261	1241·8	49–52–00·0	229–51–28·0	Monument No. 42	4275·2	3·6309571
	75–16–04·496	323·8	160–26–00·		T. P. No. 49	600·4	2·7784353
			319–11–00·		North Peak of barn on hill near Monument No. 41.		
Turning Point No. 49	44–51–17·847	1807·7	60–46–41·1		T. P. No. 50	4922·0	3·6921381
	75–16–07·286	525·3					
Monument No. 42	44–50–45·049	4562·3	64–05–34·8	244–04–17·2	Monument No. 43	8816·3	3·9452865
	75–16–49·861	3592·5	126–47–00·		T. P. No. 50	1533·5	3·1856729
			90–21–03·		Lutheran Church Spire, Iroquois, Ont.		
Turning Point No. 50	44–50–54·117	5481·0	53–57–00·0		T. P. No. 51	7237·1	3·8595619
	75–17–06·907	497·7					
Lutheran Church Spire, Iroquois, Ont.	44–50–45·42	4600·1					
	75–18–17·44	1256·9					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued*

Locality, Saint Lawrence River. Date.....

Locality.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back. Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 43.....	44-50-07·000	709·0	309-58-27·2	129-58-57·7	Monument No. 44.....	4057·5	3·6082558
	75-18-39·906	2876·0	238-57-00·	.....	T. P. No. 51.....	992·8	2·9968531
			237-23-05·	.....	Methodist Church Spire, Morrisburg, Ont.		
Turning Point No. 51.....	44-50-12·056	1221·5	338-45-47·0	.. . .	T. P. No. 52.....	3970·2	3·5988143
	75-18-28·103	2024·9					
Monument No. 44..... ..	44-49-41·259	4178·5	50-44-04·9	230-42-38·3	Monument No. 45.....	11449·0	4·0587669
	75-17-56·764	4091·2	54-40-00·	.....	T. P. No. 52	1005·9	3·0025564
			124-31-03·	... .	Small Flagpole on Square White Cupola, Luley's House, Canada.		
Turning Point No. 52.....	44-49-35·516	3597·4	48-07-10·0	.....	T. P. No. 53....	11039·3	4·0429402
	75-18-08·150	587·3					
Monument No. 45.....	44-48-29·691	3006·9	105-50-25·7	285-49-49·5	Monument No. 46.....	3850·2	3·5854830
	75-19-59·709	4304·8	14-00-00·	.....	T. P. No. 53	726·4	2·8611618
			310-03-10·	.....	West Ventilator on barn U. S. Shore, S.E. of Monument No. 45.		
Turning Point No. 53. ...	44-48-22·732	2302·2	109-45-16·2	....	T. P. No. 54..... ...	2995·2	3·4764231
	75-20-02·146	154·9					
Monument No. 46...	44-48-40·065	4057·7	29-58-43·8	209-57-50·9	Monument No. 47.....	10843·1	4·0351461
	75-20-51·086	3683·1	316-20-00·	.....	T. P. No. 54...	1027·6	3·0118060
			46-23-20·	....	Presbyterian Church Spire, N. end Cardinal.....		
			39-59-10·	....	Water Tank, Cardinal.....		

Turning Point No. 54	44-48-32·726 75-20-41·245	3314·6 2973·1	40-07-07·0		T. P. No. 55	10143·5	4·0061871
Monument No. 47	44-47-07·318 75-22-06·204	741·1 447·5	75-35-12·0 155-23-00· 30-31-00· 104-32-40· 112-21-40· 119-07-30· 121-24-00·	255-34-12·5	Monument No. 48 T. P. No. 55 T. P. No. 56 Water Tank, Cardinal. Church Spire, " R. C. Church Spire, Cardinal. Presbyterian Church Spire, Cardinal.	6294·7 981·0 990·8	3·7989749 2·9916554 2·9959911
Turning Point No. 55	44-47-16·124 75-22-11·870	1632·5 856·3	03-05-47·2		T. P. No. 56	1747·9	3·2425207
Turning Point No. 56	44-46-58·890 75-22-13·179	5964·2 950·8	75-07-11·3		T. P. No. 57	4817·3	3·6828601
Water Tank of Starch Co., Cardinal, Ont	44-47-12·49 75-22-34·19	1265·1 2466·2					
R. C. Church Spire, Cardinal, Ont	44-47-18·80 75-22-35·15	1903·9 2535·4					
Presbyterian Church Spire, Cardinal, Ont	44-47-23·62 75-22-43·73	2392·1 3153·5					
Monument No. 48	44-46-51·838 75-23-30·724	5249·7 2216·2	52-19-12·7 299-10-00· 242-50-20· 228-41-00·	232-18-53·0	Monument No. 49 T. P. No. 57 Water Tank, Cardinal. Presbyterian Church Spire, Cardinal	2551·4 1074·1	3·4067746 3·0310629
Turning Point No. 57	44-46-46·670 75-23-17·722	4726·7 1278·2	45-24-23·9		T. P. No. 58	3158·2	3·4994438
Monument No. 49	44-46-36·438 75-23-58·716	3690·3 4235·9	70-08-38·4 329-03-00· 239-04-40· 243-18-40·	250-08-00·1	Monument No. 50 T. P. No. 58 Water Tank, Cardinal. Large Chimney at Starch Works, Cardinal, Ont.	4172·7 1377·3	3·6204127 3·1390266

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Turning Point No. 58.....	44-46-24·775	2509·5	83-50-11·4	.....	T. P. No. 59.....	4492·8	3·6525130
	75-23-48·897	3527·6					
Monument No. 50.....	44-46-22·440	2272·6	36-44-50·5	216-43-58·8	Monument No. 51.....	8851·4	3·9470128
	75-24-53·117	3832·0	326-00-00·	.....	T. P. No. 59.....	297·2	2·4731124
			36-04-30·	.....	Presbyterian Church Spire, Ogdensburg, N.Y.		
			236-59-30·	.....	Presbyterian Church Spire, Cardinal		
			243-09-30·	.....	Water Tank, Cardinal.		
Turning Point No. 59.....	44-46-20·007	2026·6	23-43-10·2	.....	T. P. No. 60.....	6403·3	3·8064019
	75-24-50·813	3665·7					
North Channel Dyke Light..	44-46-07·65	774·6					
	75-25-41·30	2979·7					
Monument No. 51.....	44-45-12·401	1255·9	48-23-47·5	228-21-51·6	Monument No. 52.....	15898·4	4·2013533
	75-26-06·499	468·8	251-10-00·	.....	T. P. No. 60.....	3049·2	3·4841869
			173-49-20·	.....	Windmill, Canada.		
			227-43-30·	.....	Presbyterian Church Spire, Cardinal		
Turning Point No. 60.....	44-45-22·119	2240·2	46-38-55·4	.....	T. P. No. 61.....	18758·1	4·2731895
	75-25-26·507	1913·1					
Large Stack, N.Y. State Hospital.	44-43-41·13	4165·0					
	75-26-37·65	2718·5					

North Channel Dyke, West End Light.	44–44–23·87 75–27–04·93	2417·3 355·6					
Monument No. 52	44–43–28·135 75–28–51·150	2849·4 3693·2	24–52–26·4 319–39–00· 15–09–40· 31–40–00· 54–34–30· 233–37–40·	204–51–45·5	Monument No. 53 T. P. No. 61 Presbyterian Church Spire, Ogdensburg. Ogdensburg Light. Windmill Point Light. N. Channel Dyke, West End Light.	9981·7 1755·2	3·9992047 3·2443380
Turning Point No. 61	44–43–14·926 75–28–35·411	1512·1 2556·8	53–07–16·4	.....	T. P. No. 62	9365·2	3·9715158
Windmill Point Light	44–43–15·98 75–29–15·12	1618·4 1091·9					
Monument No. 53	44–41–58·712 75–29–49·275	5945·9 3559·4	50–59–41·3 134–12–00· 196–39–40·	230–54–07·0	Monument No. 54 T. P. No. 62 Windmill Point Light.	44263·9 3007·9	4·6460497 3·4782588
Turning Point No. 62	44–42–19·417 75–30–19·131	1966·9 1381·9	43–30–45·8	.....	T. P. No. 63	43531·3	4·6388016
Methodist Church Spire, Ogdensburg, N.Y.	44–41–38·28 75–29–18·67	3877·3 1348·4					
Presbyterian Church Spire, Ogdensburg.	44–41–54·47 75–29–26·73	5516·4 1930·8					
Ogdensburg Light	44–41–52·51 75–30–13·84	5317·9 999·7					
Church of England Spire, Prescott, Ont.	44–42–41·36 75–31–01·11	4188·3 79·7					
Methodist Church Spire, Prescott, Ont.	44–42–36·19 75–31–05·36	3665·3 386·8					

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	° ′ ″		° ′ ″	° ′ ″			
Old Church Spire, Prescott, Ont.	44-42-33·54 75-31-07·54	3396·3 544·3					
Water Tank, Prescott.....	44-42-45·68 75-31-09·17	4626·3 662·1					
Monument No. 54....	44-37-23·343 75-37-44·844	2363·8 3243·4	39-06-34·9 305-19-00· 56-02-30·	219-05-09·8	Monument No. 55..... .... T. P. No. 63..... . .. Conical Tower on Asylum, Brockville, Ont.	13893·8 2779·5	4·1428216 3·4439701
Turning Point No. 63.....	44-37-07·475 75-37-13·489	757·5 975·7	48-39-07·7	.....	T. P. No. 64.....	14339·4	4·1565314
Old Distillery, Maitland, Ont.	44-38-04·87 75-36-49·02	493·1 3544·9					
Monument No. 55.	44-35-36·871 75-39-45·957	3733·9 3325·8	46-40-47·5 318-10-00· 77-35-10· 79-43-30· 303-03-40·	226-39-11·7	Monument No. 56..... T. P. No. 64..... . ... Town Hall, Brockville, Ont. Presbyterian Church Spire, Brockville, Ont. Catholic Church Spire, Morristown, N.Y.	13582·2 402·9	4·1329695 2·6051826
Turning Point No. 64.....	44-35-33·907 75-39-42·244	3434·0 3056·8	45-10-27·9	.....	T. P. No. 65.....	13969·0	4·1451666

Brockville Asylum Tower....	44-36-18·57	1880·6					
	75-39-59·45	4301·2					
Catholic Church Spire, Morristown, N.Y.	44-35-09·83	995·1					
	75-38-47·83	3461·9					
Presbyterian Church Spire, Brockville, Ont.	44-35-25·67	2599·7					
	75-41-12·36	894·3					
Town Hall, Brockville, Ont..	44-35-18·80	1903·9					
	75-41-40·73	2947·2					
Monument No. 56.....	44-34-04·834	489·5	38-23-47·2	218-22-50·1	Monument No. 57.	9493·2	3·9774130
	75-42-02·448	177·2	343-40-00·	.....	T. P. No. 65.....	864·2	2·9366000
			14-03-20·	.....	Flagpole on House, Point Comfort.		
Turning Point No. 65.....	44-33-56·645	5735·9	40-10-34·9	.....	T. P. No. 66.....	8461·1	3·9274267
	75-41-59·091	4278·2					
Flagpole, Point Comfort.....	44-33-05·09	515·4					
	75-42-23·36	1691·9					
Monument No. 57.....	44-32-51·358	5201·1	38-56-11·3	218-56 03·9	Monument No. 58.....	1212·3	3·0836277
	75-43-23·863	1728·3	257-53-00·	.....	T. P. No. 66	696·2	2·8427296
			11-54-00·	.....	T. P. No. 67..... ..	521·7	2·7173813
			252-23-00·	.....	Flagpole, Point Comfort.		
Turning Point No. 66.....	44-32-52·801	5347·1	50-12-33·5	.....	T. P. No. 67...	1025·9	3·0110879
	75-43-14·464	1047·2					
Turning Point No. 67..... ..	44-32-46·318	4690·9	38-04-01·4	.....	T. P. No. 68.....	1085·1	3·0354835
	75-43-25·348	1836·0					
Monument No. 58.....	44-32-42·046	4257·9	32-50-46·3	212-49-34·6	Monument No. 59.....	13666·6	4·1356306
	75-43-34·383	2490·2	02-00-00·	.....	T. P. No. 68.....	421·9	2·6252252
			61-08-00·	.....	Cole Shoal Light.		
Turning Point No 68.....	44-32-37·882	3835·9	45-48-06·3	.....	T. P. No 69...	14939·4	4·1743383
	75-43-34·586	2505·2					

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	° ′ ″		° ′ ″	° ′ ″			
Cole Shoal Light	44-31-58·26	5899·9					
	75-45-25·39	1839·2					
Monument No. 59.....	44-30-48·664	4928·1	39-16-26·4	219-14-32·5	Monument No. 60	18622·0	4·2700246
	75-45-16·669	1207·7	100-59-00·	.....	T. P. No. 69	3375·3	3·5283152
			46-07-30·	.....	Crossover Island Light.		
Turning Point No. 69.....	44-30-55·011	5570·9	33-44-55·8	....	T. P. No. 70	19101·2	4·2810642
	75-46-02·397	173·9					
Crossover Island Light.....	44-29-49·10	4972·4					
	75-46-43·20	3131·2					
Monument No. 60.....	44-28-26·281	2661·4	31-33-19·7	211-32-06·5	Monument No. 61.....	14497·0	4·1612791
	75-47-59·236	4295·3	68-57-00·	.....	T. P. No. 70.....	2292·0	3·3602128
			74-07-50·	....	Bridge Island Light.		
Turning Point No. 70.....	44-28-18·151	1837·9	13-59-30·0	.....	T. P. No. 71.....	14904·6	4·1733205
	75-48-28·735	2084·0					
Bridge Island Light.	44-28-01·89	191·3					
	75-49-58·97	4276·6					
Monument No. 61.	44-26-24·281	2459·0	35-34-28·1	215-32-40·1	Monument No. 62.....	19252·3	4·2844826
	75-49-43·800	3177·8	327-50-00·	....	T. P. No. 71.....	3462·6	3·5394013
			223-55-20·	....	Weather Vane on Residence, Dark Island.		

Turning Point No. 71	44-25-55·336	5604·3	44-08-49·6		T. P. No. 72	18220·5	4·2605610
	75-49-18·396	1335·3					
Sister Island Light	44-24-50·92	5156·5					
	75-50-41·38	3003·6					
Monument No. 62	44-23-49·622	5024·9	47-15-36·8	227-13-51·4	Monument No. 63	14907·0	4·1733913
	75-52-18·056	1311·0	314-25-00·		T. P. No. 72	496·1	2·6955360
			228-30-00·		Sister Island Light.		
			48-13-10·		Water Tank, Bolt's Farm.		
Turning Point No. 72	44-23-46·194	4677·5	47-19-48·4		T. P. No. 73	15258·4	4·1835090
	75-52-13·176	957·0					
Grenadier Island Light	44-22-58·40	5914·0					
	75-54-19·42	1410·4					
Monument No. 63	44-22-09·691	981·3	67-21-22·4	247-21-03·9	Monument No. 64	2085·3	3·3191755
	75-54-48·772	3543·0	351-38-00·		T. P. No. 73	578·1	2·7619901
			203-22-10·		Grenadier Island Light.		
			227-42-40·		Sister Island Light.		
Turning Point No. 73	44-22-04·042	409·1	98-32-58·3		T. P. No. 74	2334·4	3·3681746
	75-54-47·614	3458·7					
Sunken Rock Light	44-20-44·75	4531·8					
	75-54-56·77	4125·6					
Monument No. 64	44-22-01·762	178·5	32-42-50·7	212-42-32·0	Monument No. 65	3604·6	3·5568602
	75-55-15·265	1108·9	152-35-00·		T. P. No. 74	650·9	2·8135259
			95-44-50·		Stone Water Tank, Club Island.		
			137-44-20·		R. C. Church Spire, Rockport, Ont.		
Turning Point No. 74	44-22-07·468	756·6	30-46-23·0		T. P. No. 75	4016·7	3·6038728
	75-55-19·392	1408·5					
Monument No. 65	44-21-31·812	3221·4	73-46-55·6	253-46-26·2	Monument No. 66	3187·1	3·5033892
	75-55-42·078	3057·1	111-24-00·		T. P. No. 75	437·0	2·6404884
			144-54-40·		Water Tank, Club Island.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 75.....	44-21-33·387	3381·2	60-22-55·3	.....	T. P. No. 76.....	3409·2	3·5326526
	75-55-47·678	3464·2					
R. C. Church Spire, Rockport	44-22-12·67	4320·9					
	75-56-07·09	515·1					
Water Tank, Club Island....	44-22-06·12	619·7					
	75-56-15·68	1139·1					
Monument No. 66..	44-21-23 020	2331·0	42-09-41·1	222-09-15·6	Monument No 67.....	3946·7	3·5962366
	75-56-24·196	1755·6	26-02-00·	....	T. P. No. 76	707·0	2·8494315
			24-01-50·	.....	S. Cupola, Bolt's Farm, Wells Island		
Turning Point No. 76.....	44-21-16·747	1696·2	48-12-45·8	....	T. P. No. 77.....	3113·2	3·4932105
	75-56-28·467	2068·6					
Water Tank, Bolt's Farm, Wells Island.	44-20-56·92	5764·1					
	75-56-47·28	3435·4					
Monument No. 67	44-20-54·129	5481·6	72-14-03·5	252-13-07·2	Monument No. 68.	6143·9	3·7884431
	75-57-00·651	47·2	184-36-00·	.....	T. P. No. 77.....	216·5	2·3355281
			28-38-24·2	....	U. S. L. S. △ Waterloo.		
Turning Point No. 77.....	44-20-56·260	5697·2	66-17-55·4	.....	T. P. No. 78.....	5845·5	3·7668185
	75-57-00·411	29·9					

Monument No. 68	44–20–35·609	3606·0	136–59–16·5	316–59–09·4	Monument No. 69	1083·0	3·0346359
	75–58–21·159	1537·7	296–40–00·		T. P. No. 78	577·4	2·7614969
			69–24–00·		T. P. No. 79	216·5	2·3355281
Turning Point No. 78	44–20–33·050	3346·8	104–17–05·7		T. P. No. 79	741·6	2·8701775
	75–58–14·059	1022·0					
Turning Point No. 79	44–20–34·857	3530·2	152–54–46·2		T. P. No. 80	1210·2	3·0828637
	75–58–23·948	1740·5					
Monument No. 69	44–20–43·429	4398·0	103–57–58·8	283–57–46·6	Monument No. 70	1302·5	3·1147930
	75–58–31·325	2276·9	175–55–00·		T. P. No. 80	210·0	2·3221642
Turning Point No. 80	44–20–45·497	4607·6	101–26–09·6		T. P. No. 81	912·7	2·9603266
	75–58–31·531	2291·3					
Monument No. 70	44–20–46·533	4712·3	111–44–09·1	291–43–59·2	Monument No. 71	1109·2	3·0449984
	75–58–48·719	3540·3	257–53–00·		T. P. No. 81	362·5	2·5593465
			47–15–00·		T. P. No. 82	144·4	2·1594369
Turning Point No. 81	44–20–47·284	4787·7	69–17–35·7		T. P. No. 82	492·3	2·6922482
	75–58–43·841	3185·7					
Turning Point No. 82	44–20–45·565	4613·8	139–38–32·4		T. P. No. 83	693·3	2·8409222
	75–58–50·178	3646·6					
Monument No. 71	44–20–50·589	5123·0	85–23–42·1	265–23–25·6	Monument No. 72	1722·1	3·2360580
	75–59–02·897	210·6	267–39–00·		T. P. No. 83	475·7	2·6773522
			72–53–00·		T. P. No. 84	639·8	2·8060188
Turning Point No. 83	44–20–50·782	5142·4	79–10–31·4		T. P. No. 84	1106·5	3·0439404
	75–58–56·356	4095·8					
Turning Point No. 84	44–20–48·730	4934·7	102–22–09·5		T. P. No. 85	533·7	2·7273157
	75–59–11·311	821·8					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Stations.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 72.....	44-20-49·223	4984·6	104-07-21·7	284-06-52·0	Monument No. 73.....	3187·9	3·5035069
	75-59-26·518	1927·2	263-43-00·	.....	T. P. No. 85.....	587·3	2·7688372
			180-00-00·	.....	T. P. No. 86.....	36·1	1·5573769
			100-06-00·	.....	T. P. No. 87.....	91·9	1·9631422
			101-18-00·	.....	T. P. No. 88.....	562·0	2·7497416
Turning Point No. 85.....	44-20-49·859	5049·2	87-13-44·7	.....	T. P. No. 86.....	584·4	2·7667405
	75-59-18·485	1343·2					
Turning Point No. 86.....	44-20-49·580	5020·7	77-33-55·0	.....	T. P. No. 87.....	92·7	1·9668336
	75-59-26·518	1927·2					
Turning Point No. 87.....	44-20-49·383	5000·6	101-31-49·4	.....	T. P. No. 88.....	470·1	2·6722284
	75-59-27·763	2017·4					
Turning Point No. 88.....	44-20-50·311	5094·8	94-55-25·2	.....	T. P. No. 89.....	2281·9	3·3582912
	75-59-34·102	2478·3					
Monument No. 73.....	44-20-56·902	5762·1	35-00-27·4	215-00-13·2	Monument No. 74.....	2569·2	3·4097980
	76-00-09·062	658·5	330-29-00·	.....	T. P. No. 89.....	542·0	2·7539942
Turning Point No. 89.....	44-20-52·244	5290·0	53-28-28·0	.....	T. P. No. 90.....	2244·7	3·3511604
	76-00-05·387	391·7					
Monument No. 74.....	44-20-36·121	3657·8	64-38-04·1	244-36-31·2	Monument No. 75.....	10691·4	4·0290371
	76-00-29·343	2132·2	168-02-00.	.....	T. P. No. 90.....	303·2	2·4816562

Turning Point No. 90	44-20-39·050	3954·4	65-15-00·2		T. P. No. 91	10806·1	4·0336699
	76-00-30·208	2195·5					
Lindoe Island Light	44-20-59·66	6041·7					
	76-00-15·68	1139·4					
Rock Island Light	44-16-50·19	5082·7					
	76-01-02·94	213·9					
Monument No. 75	44-19-50·871	5151·6	49-06-37·1	229-04-22·6	Monument No. 76	18519·2	4·2676213
	76-02-42·246	3071·2	148-32-00·		T. P. No. 91	413·4	2·6163547
			75-59-10·		Gananoque Narrows Light.		
Turning Point No. 91	44-19-54·353	5503·9	49-02-45·0		T. P. No. 92	17837·5	4·2513345
	76-02-45·215	3287·1					
Gananoque Narrows Light	44-19-27·53	2787·7					
	76-04-52·37	3807·4					
R. C. Church Spire, Clayton, N.Y.	44-14-19·12	1936·0					
	76-05-11·76	856·3					
Monument No. 76	44-17-51·114	5176·2	97-33-58·0	277-33-21·8	Monument No. 77	3798·0	3·5795529
	76-05-54·735	3981·0	201-42-00·		T. P. No. 92	843·8	2·9262552
Turning Point No. 92	44-17-58·856	5960·6	81-18-05·3		T. P. No. 93	3935·8	3·5950382
	76-05-50·445	3668·6					
Monument No. 77	44-17-56·049	5675·8	26-13-50·2	206-13-40·0	Monument No. 78	2405·3	3·3811751
	76-06-46·501	3381·9	329-05-00·		T. P. No. 93	362·9	2·5597393
Turning Point No. 93	44-17-52·975	5365·1	55-23-16·0		T. P. No. 94	2021·7	3·3057123
	76-06-43·938	3195·9					
Monument No. 78	44-17-34·742	3518·0	102-43-03·6	282-42-28·7	Monument No. 79	3728·7	3·5715559
	76-07-01·117	81·4	149-18-00·		T. P. No. 94	811·7	2·9093839
			131-40-50·		Church of England Spire, Gananoque, Ont.		
			176-30-40·		Jackstraw Shoal Light.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 94.....	44-17-41·634	4215·9	91-26-36·7	....	T. P. No. 95.....	2950·5	3·4698992
	76-07-06·814	495·4					
Jackstraw Shoal Light.....	44-19-31·36	3175·8					
	76-07-11·02	801·2					
Monument No. 79.....	44-17-42·845	4338·9	48-19-07·1	228-18-09·1	Monument No. 80.....	8093·7	3·9081486
	76-07-51·124	3718·5	280-04-00·	.....	T. P. No. 95.....	277·6	2·4433546
			156-20-00·	....	T. P. No. 96.....	442·3	2·6456741
			138-51-00·	.....	Church of England Spire, Gananoque, Ont.		
			194-51-30·	.....	Jackstraw Shoal Light.		
Turning Point No. 95.....	44-17-42·366	4290·7	135-10-32·2	.....	T. P. No. 96.....	639·5	2·8058312
	76-07-47·367	3445·2					
Turning Point No. 96.....	44-17-46·845	4743·4	54-34-43·1	....	T. P. No. 97.....	9845·5	3·9932389
	76-07-53·565	3895·3					
Presbyterian Church Spire, Gananoque, Ont.	44-19-42·93	4347·4					
	76-09-40·75	2962·2					
Monument No. 80.....	44-16-49·687	5031·5	16-07-48·1	196-07-10·6	Monument No. 81.....	14085·2	4·1487619
	76-09-14·212	1033·8	92-08-00·	.....	T. P. No. 97.....	2157·5	3·3339460
			79-13-10·	....	Church Spire, Howe Island.		
			120-23-30·	... .	Burnt Island Light.		
			167-59-00·	... .	Church of England Spire, Gananoque, Ont.		

Turning Point No. 97	44-16-50·480	5111·9	02-30-16·5		T. P. No. 98	14923·8	4·1738810
	76-09-43·847	3190·3					
Monument No. 81	44-14-36·067	3652·2	42-49-55·3	222-48-51·2	Monument No. 82	9836·2	3·9928262
	76-10-07·965	579·7	319-38-00·		T. P. No. 98	1704·1	3·2314861
			67-58-00·		Wolfe Island Light.		
			274-31-20·		R. C. Church Spire, Clayton, N.Y.		
Turning Point No. 98	44-14-23·246	2354·3	46-59-25·5		T. P. No. 99	9827·8	3·9924546
	76-09-52·805	3844·2					
Burnt Island Light	44-17-46·88	4747·4					
	76-11-30·05	2185·7					
Methodist Church Spire, Gananoque, Ont.	44-19-41·00	4151·9					
	76-10-07·00	508·9					
Wolfe Island Light	44-14-19·85	2010·2					
	76-11-03·69	268·7					
Spectacle Shoal Light	44-18-40·56	4107·3					
	76-11-01·21	87·9					
Red Horse Rock Light	44-18-09·17	928·5					
	76-11-27·32	1986·9					
Monument No. 82	44-13-24·824	2513·8	53-32-00·4	233-31-25·1	Monument No. 83	4589·9	3·6618075
	76-11-39·793	2898·0	322-31-00·		T. P. No. 99	994·1	2·9974268
			23-25-10·		Church Spire, Riverview, N.Y.		
			258-56-40·		R. C. Church Spire, Clayton, N.Y.		
Turning Point No. 99	44-13-17·034	1724·4	59-21-07·1		T. P. No. 100	4602·7	3·6630142
	76-11-31·486	2293·3					
Monument No. 83	44-12-57·881	5861·2	69-59-34·8	249-58-00·6	Monument No. 84	10471·9	4·0200265
	76-12-30·475	2219·5	320-25-00·		T. P. No. 100	528·2	2·7228101
Turning Point No. 100	44-12-53·860	5454.1	68-11-26·2		T. P. No. 101	10914·4	4·0380002
	76-12-25·854	1882.9					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Roman Catholic Church Spire, Wolfe Island.	44-12-32·92 76-14-27·66	3333·7 2014·8					
Church Spire, Riverview, N.Y.	44-10-18·91 76-14-30·17	1915·0 2198·8					
Monument No. 84.....	44-12-22·478 76-14-45·558	2276·2 3318·6	89-04-12·2 357-09-00. 354-52-50·	269-02-28·8	Monument No. 85..... T. P. No. 101..... Church Spire, Riverview, N.Y.	10808·0 880·6	4·0337316 2·9447667
Turning Point No. 101.	44-12-13·793 76-14-44·957	1396·3 3275·3	89-54-50·7	.....	T. P. No. 102.....	10804·6	4·0336106
Monument No. 85	44-12-20·719 76-17-13·905	2098·1 1013·1	78-23-08·0 356-22-00· 34-17-50· 315-56-20·	258-22-10·6	Monument No. 86..... T. P. No. 102..... Carleton Island Light. Church Spire, Riverview, N.Y.	6120·8 721·8	3·7868051 2·8584069
Turning Point No. 102.....	44-12-13·606 76-17-13·277	1378·3 967·5	75-44-56·2	.....	T. P. No. 103.....	7045·3	3·8478988
Monument No. 86.....	44-12-08·542 76-18-36·205	864·8 2637·5	26-09-30·0 32-46-00· 01-34-40· 270-03-10·	206-07-36·6	Monument No. 87..... T. P. No. 103..... Carleton Island Light. Red Water Tank at Cape Vincent, N.Y.	26916·5 1454·1	4·4300190 3·1625840

Turning Point No. 103.....	44–11–56·468	5718·2	24–04–10·1	. . ..	T. P. No. 104.....	25833·5	4·4121828
	76–18–47·007	3424·9					
Cape Vincent Breakwater, East End Light.	44–07–55·91	5661·7					
	76–19–55·89	4076·4					
Cape Vincent Breakwater, West End Light.	44–07–53·36	5403·5					
	76–20–07·23	527·2					
Church of England Spire, Cape Vincent, N.Y.	44–07–29·19	2955·7					
	76–20–08·39	611·9					
Presbyterian Church Spire, Cape Vincent, N.Y.	44–07–40·49	4100·0					
	76–20–07·90	576·1					
R. C. Church Spire, Cape Vincent, N.Y.	44–07–27·97	2832·3					
	76–20–22·80	1663·1					
Carleton Island Light.....	44–10–50·74	5138·1					
	76–18–39·18	2855·3					
Monument No. 87.....	44–08–09·927	1005·2	57–07–44·5	237–04–10·6	Monument No. 88.....	26697·5	4·4264710
	76–21–18·912	1379·3	320–07–00·	.....	T. P. No. 104.....	846·5	2·9276039
			17–22–30·	.....	Tibbetts Point Light.		
			287–47–00·	....	Cape Vincent Breakwater, West End Light.		
			316–04–10·	.....	R. C. Church Spire, Cape Vincent, N.Y.		
Turning Point No. 104.....	44–08–03·513	355·3	57–02–19·0	.....	T. P. No. 105.....	26956·6	4·4306652
	76–21–11·470	836·6					
Tibbetts Point Light.....	44–06–02·361	238·8					
	76–22–14·301	1043·6					
Monument No. 88..	44–05–46·718	4731·0	265–03–00·	....	Tibbetts Point Light.		
	76–26–26·166	1909·4	337–04–00·	... .	T. P. No. 105.....	897·0	2·9527827
Turning Point No. 105.	44–05–38·560	3904·8	29–19–59·2	.....	T. P. No. 106....	193346·1	5·2863354
	76–26–21·377	1560·4					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Lake Ontario. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Oswego Light.....	43-27-53·954 76-30-49·770	5462·9 3670·6	128-58-47·9	.....	T. P. No. 106.....	96450	4·9843020
Turning Point No. 106.....	43-37-51·908 76-47-49·187	5255·9 3617·4	Due West..	Due East..	T. P. No. 107.....	501388	5·7001740
Thirtymile Point Light.....	43-22-29·598 78-29-10·606	2996·7 783·5	149-55-48·1	.....	T. P. No. 107.....	107985	5·0333624
Turning Point No. 107.....	43-37-51·908 78-41-26·259	5255·9 1931·1	64-13-23·8	.....	T. P. No. 108.....	150480	5·1774788
Fort Niagara Light.....	43-15-42·048 79-03-38·774	4257·2 2869·1	151-36-10·6	.....	T. P. No. 108.....	78240	4·8934289
Turning Point No. 108.....	43-27-01·507 79-12-03·178	152·6 234·6	333-08-29·9	.....	T. P. No. 109.....	76813	4·8854324

Locality, Niagara River. Date.....

Fort Niagara Light.....	43-15-42·048 79-03-38·774	4257·2 2869·1	95-15-00·	.....	T. P. No. 109.....	2632·5	3·4203751
Turning Point No. 109.....	43-15-44·426 79-04-14·201	4498·4 1050·9	306-11-45·3	.....	T. P. No. 110.....	4770·0	3·6785308

Monument No. 1	43-15-05·360	542·6	338-42-59·2	158-43-16·3	Monument No. 2	5077·8	
	79-03-32·064	2373·4	212-43-05·0	.....	T. P. No. 110	1352·6	
			313-42-02·	.....	T. P. No. 111	1473·5	3·7056773
			172 24-08·1	.....	Fort Niagara Light	3753·2	3·1311804
			237-57-55	.....	Water Tank, Villa St. Vincent.		3·1683470
			276-19-35·	.....	Standpipe, Youngstown.		3·5744912
			304-04-35·	.....	Methodist Church Spire, Youngstown.		
			150-05-55·	.....	Niagara-on-the-Lake Front Range Light.		
			159-54-15·	.....	Storm Signal Station, Fort Niagara.		
Turning Point No. 110	43-15-16·600	1680·8	351-11-29·9	.....	T. P. No. 111	2181·7	3·3388118
	79-03-22·185	1641·4					
Turning Point No. 111	43-14-55·305	5529·1	04-48-11·2	.....	T. P. No. 112	3535·4	3·5484385
	79-03-17·671	1307·7					
Catholic Church Spire, Niagara-on-the-Lake.	43-15-13·56	1373·0					
	79-04-04·57	338·3					
Niagara-on-the-Lake, Back Range Light.	43-15-13·58	1375·0					
	79-03-38·35	2838·2					
Court House Flagpole, Niagara-on-the-Lake	43-15-17·26	1747·4					
	79-04-20·01	1481·0					
Presbyterian Church Spire, Niagara-on-the-Lake.	43-15-18·57	1880·2					
	79-04-48·62	3598·4					
Niagara-on-the-Lake, Front Range Light.	43-15-19·43	1967·2					
	79-03-43·13	3191·9					
Cupola, Queen's Royal Hotel, Niagara-on-the-Lake.	43-15-30·12	3049·5					
	79-04-14·74	1090·9					
Storm Signal Station, Fort Niagara.	43-15-43·82	4436·7					
	79-03-51·32	3797·6					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locali y, Niagara River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 2.....	43-14-18·627	1885·8	15-51-34·8	195-51-20·8	Monument No. 3.....	5527·7	3·7425477
	79-03-07·165	530 5	100-04-06·	.....	T. P. No. 112.....	1090·5	3·0376452
			157-16-15·	.....	Center line of Chimney at Waterworks, Niagara-on-the-Lake.		
			165-36-00·	.. ..	Water Tank, Fort Niagara.		
Turning Point No. 112.....	43-14-20·509	2076·4	352-41-02·1	.....	T. P. No. 113.....	5745·4	3·7593157
	79-03-21·670	1604·3					
Monument No. 3.....	43-13-26·108	2643·4	343-25-12·8	163-25-26·3	Monument No. 4..	5118·2	3·7091112
	79-03-27·567	2041·0	279-16-00·	....	T. P. No. 113.....	1183·7	3·0732507
Turning Point No. 113.....	43-13-24·225	2452·1	11-03-21·2	.....	T. P. No. 114.....	4881·2	3·6885234
	79-03-11·789	873·0					
Monument No. 4.....	43-12-37·658	3812·7	01-53-18·3	181-53-17·1	Monument No. 5.....	3823·5	3·5824621
	79-03-07·847	581·0	86-28-00·	....	T. P. No. 114.....	1230·3	3·0900155
			135-26-10·	....	Water Tank at Jackson's Farm.		
			176-26-55·	....	Flagpole, Fort Niagara.		
			163-05-25·	....	Windmill, Pt. Elinor.		
Turning Point No. 114.....	43-12-36·909	3736·9	330-28-15·2	.....	T.P. No. 115.....	4255·6	3·6289434
	79-03-24·428	1809·1					
Cross on Stella Niagara. . ..	43-12-01·40	141·7					
	79-02-28·28	2094·5					

Stack at Stella Niagara	43–12–04·53 79–02–27·59	458·7 2043·6					
Monument No. 5	43–11–59·914 79–03–09·548	6065·9 707·3	348–03–38·0 267–32–00· 261–25–50· 267–09–20·	168–03–50·0	Monument No. 6 T.P. No. 115 Stack at Stella Niagara Cross on Stella Niagara	6256·1 996·1	3·7963052 2·9982860
Turning Point No. 115	43–12–00·337 79–02–56·113	34·4 4156·2	10–21–05·4		T.P. No. 116	5964·9	3·7756027
Monument No. 6	43–10–59·459 79–02–52·080	6020·0 3858·9	26–55–12·5 102–11–00·	206–54–50·1	Monument No. 7 T.P. No. 116	5355·0 1402·2	3·7287585 3·1468187
Turning Point No. 116	43–11–02·381 79–03–10·579	240·8 783·8	02–26–27·1		T.P. No. 117	3704·4	3·5687293
Monument No. 7	43–10–12·298 79–03–24·795	1245·1 1837·6	311–33–37·0 213–11–00· 301–43–00· 245–38–50· 345–10–20· 332–09–50·	131–34–06·3	Monument No. 8 T.P. No. 117 T.P. No. 118 Lewiston School Flagpole. Brock's Monument Church of England Church Spire, Queenston.	4243·9 1636·5 1754·6	3·6277615 3·2139106 3·2441756
Turning Point No. 117	43–10–25·825 79–03–12·708	2614·2 941·9	345–24–23·0		T. P. No. 118	2368·4	3·3744562
Turning Point No. 118	43–10–03·187 79–03–04·656	322·8 345·5	328–12–11·3		T. P. No. 119	2248·0	3·3517915
Lewiston School Flagpole	43–10–26·23 79–02–42·74	2655·8 3167·3					
Water Tank on Fibre Bottle Works, Lewiston	43–10–01·60 79–02–49·70	162·1 3683·4					
Church of England Church Spire, Queenston, Ont.	43–09–57·21 79–03–13·91	5792·3 1030·8					

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Locality, Niagara River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Methodist Church Spire, Queenston, Ont.....	43-09-52·61 79-03-16·73	5326·4 1239·8					
Monument No. 8.....	43-09-44·488 79-02-41·951	4504·3 3109·2	348-36-35·1 88-00-00· 69-14-40· 107-40-55·	168-36-40·9	Monument No. 9 ..... T. P. No. 119..... Brock's Monument..... Methodist Church Spire, Queenston.	3184·1 498·7	3·5029870 2·6978278
Turning Point No. 119.....	43-09-44·316 79-02-48·675	4486·9 3607·6	349-11-10·	.....	T.P. No. 120.....	2393·8	3·3790932
Brock's Monument....	43-09-36·235 79-03-11·736	3668·6 870·7					
Monument No. 9.....	43-09-13·658 79-02-33·468	1382·9 2481·0	27-40-42·4 137-59-00· 33-46-48·6 128-52-05·	207-40-34·4	Monument No. 10..... T. P. No. 120..... T. P. No. 121..... Brock's Monument.....	1860·1 1013·1 868·8	3·2695341 3·0056615 2·9388310
Turning Point No. 120.....	43-09-21·092 79-02-42·616	2135·2 3159·1	352-27-36·1	.....	T. P. No. 121.....	1487·5	3·1724561
Turning Point No. 121.	43-09-06·527 79-02-39·983	661·1 2963·9	338-35-53·0	.....	T. P. No. 122.....	1019·0	3·0081897

Monument No. 10	43–08–57·388	5810·4	320–29–02·0	140–29–15·8	Monument No. 11	2352·0	3·3714427
	79–02–45·123	3345·1	202–23–00·		T. P. No. 121	1000·6	3·0002840
			271–47–00·		T. P. No. 122	753·3	2·8769561
			298–52–30·		Water Tank, U. S. Shore.		
			337–17–45·		Cross on Niagara University.		
Turning Point No. 122	43–08–57·156	5787·4	356–04–24·7		T. P. No. 123	2050·5	3·3118960
	79–02–34·967	2592·5					
Monument No. 11	43–08–39·466	3995·7	41–45–27·4	221–45–11·7	Monument No. 12	2559·8	3·4082034
	79–02–24·937	1848·7	67–06–00·		T. P. No. 123	654·9	2·8161447
			148–52–40·		Brock's Monument.		
			167–32–40·		Water Tank, Bottle Works.		
			355–54–10·		Cross, Niagara University.		
Turning Point No. 123	43–08–36·949	3740·8	10–49–47·2		T. P. No. 124	1951·4	3·2903515
	79–02–33·073	2452·1					
Monument No. 12	43–08–20·605	2086·0	15–29–39·0	195–29–33·0	Monument No. 13	2453·0	3·3896999
	79–02–47·929	3553·8	289–37–00·		T. P. No. 124	780·2	2·8921961
			276–36–55·		Cross, Niagara University.		
			327–45–40·		Water Tank, U. S. Shore.		
			349–55–55·		Stack, U. S. Light and Heat Co.		
Turning Point No. 124	43–08–18·018	1824·5	52–35–27·3		T. P. No. 125	1955·0	3·2911604
	79–02–38·018	2819·2					
Cross on Niagara University.	43–08–18·48	1871·1					
	79–02–22·90	1697·8					
Monument No. 13	43–07–57·257	5796·9	64–41–42·6	244–41–20·3	Monument No. 14	2672·5	3·4269165
	79–02–56·766	4209·0	169–54–00·		T. P. No. 125	928·5	2·9677706
			69–32–00·		T.P. No. 126	1045·3	3·0192300
			160–43–00·		Water Tank, Larkin's Farm.		
Turning Point No. 125	43–08–06·286	636·8	32–32–28·5		T. P. No. 126	1517·7	3·1812212
	79–02–58·961	4372·0					
Turning Point No. 126	43–07–53·648	5431·7	26–55–23·8		T. P. No. 127	928·1	2·9676834
	79–03–09·971	739·2					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
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Monument No. 14	43-07-45·973	4654·5	33-19-42·0	213-19-22·0	Monument No. 15.....	3959·9	3·5976890
	79-03-29·346	2176·2	272-51-00·	.....	T. P. No. 127.....	1017·7	3·0076260
			345-59-00·	.....	T. P. No. 128	928·5	2·9677706
			19-40-00·	.....	T. P. No. 129	1173·9	3·0696245
			35-11-50·	.....	Observatory Tower, Lundy's Lane.		
			236-15-40·	.....	Cross, Niagara University.		
Turning Point No. 127.....	43-07-45·473	4603·7	42-57-23·1	.....	T. P. No. 128.....	1161·7	3·0651127
	79-03-15·639	1159·8					
Turning Point No. 128.....	43-07-37·075	3754·3	71-44-30·9	.....	T. P. No. 129.	652·9	2·8147661
	79-03-26·314	1951·1					
Turning Point No. 129.....	43-07-35·055	3549·5	50-37-47·4	.....	T. P. No. 130.....	3536·7	3·5486082
	79-03-34·673	2571·2					
Monument No. 15.....	43-07-13·292	1345·8	337-09-55·9	157-10-04·7	Monument No. 16..... ..	2474·3	3·3934567
	79-03-58·681	4352·4	87-35-00·	.....	T.P. No. 130.....	954·4	2·9797279
			03-09-15·	.....	St. Andrew's Church Spire, Niagara Falls, Ont.		
			341-08-30·	.....	Water Tank, Wm. Rogers Silver Co., Niagara Falls, Ont.		
			351-38-50·	....	Water Tank of Grand Trunk Ry., Niagara Falls, Ont.		
Turning Point No. 130.....	43-07-12·894	1305·1	309-10-13·2	.....	T. P. No. 131.....	2440·6	3·3875245
	79-04-11·537	856·0					

Monument No. 16	43-06-50·768	5139·8	314-55-53·1	134-56-05·9	Monument No. 17	1966·0	3·2935896
	79-03-45·736	3392·4	178-14-00·		T. P. No. 131	698·8	2·8443638
			280-03-00·		T. P. No. 132	645·0	2·8095677
			310-59-35·		Flagpole, Post Office, Suspension Bridge, N.Y.		
			320-20-20·		Congregational Church Spire, Suspension Bridge, N.Y.		
			350-34-50·		Water Tank of Wm. Rogers Silver Co., Niagara Falls, Ont.		
Turning Point No. 131	43-06-57·666	5838·6	321-00-27·6		T. P. No. 132	1043·6	3·0185082
	79-03-46·026	3414·0					
Turning Point No. 132	43-06-49·655	5027·9	340-04-01·3		T. P. No. 133	1142·0	3·0577113
	79-03-37·174	2757·2					
Monument No. 17	43-06-37·053	3751·3	24-00-42·8	204-00-15·4	Monument No. 18	7307·3	3·8637572
	79-03-26·973	2001·0	118-48-00·		T. P. No. 133	419·3	2·6225150
			07-40-00·		T. P. No. 134	1202·4	3·0800582
			51-19-15·		P. O. Flagpole, Niagara Falls, Ont.		
			106-16-45·		Water Tank, Wm. Rogers Silver Co., Niagara Falls, Ont.		
			295-27-15·		Old P. O. Flagpole at Suspension Bridge, N.Y.		
Turning Point No. 133	43-06-39·050	3953·4	351-32-58·0		T. P. No. 134	1408·8	3·1488878
	79-03-31·925	2367·8					
Stack, Acme Process, Niagara Falls, N.Y.	43-05-37·03	3749·0					
	79-03-38·79	2878·3					
Water Tank of Wm. Rogers Silver Co., Niagara Falls, Ont.	43-06-40·57	4107·3					
	79-03-43·43	3221·4					
Flagpole of Malting Co., Suspension Bridge, N.Y.	43-06-38·65	3913·0					
	79-03-19·54	1449·5					
Flagpole on Old P.O. Suspension Bridge, N.Y.	43-06-34·92	3535·4					
	79-03-20·87	1548·2					

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	° ′ ″		° ′ ″	° ′ ″			
Flagpole on P. O. Niagara Falls, Ont.	43-06-27·74 79-03-42·84	2808·4 3178·1					
Turning Point No. 134.....	43-06-25·285 79-03-29·134	2559·4 2161·1	21-09-16·6	....	T. P. No. 135.....	6158·1	3·7894527
Stack, Dominion Suspender Co., Niagara Falls, Ont.	43-06-24·69 79-03-41·64	2499·7 3089·2					
Christ Church Spire, Niagara Falls, Ont.	43-06-17·00 79-03-42·64	1721·1 3163·4					
Congregational Church Spire, Suspension Bridge, N.Y.	43-06-24·64 79-03-16·18	2494·7 1200·1					
Monument No. 18.....	43-05-31·122 79-04-07·046	3150·9 523·0	02-48-24·9 293-43-00· 59-30-30·	182-48-23·9	Monument No. 19..... ..... T. P. No. 135..... Water Tank, Clifton Hotel, Niagara Falls, Ont.	2276·2 645·3	3·3572036 2·8097886
			214-52-00·	.....	Congregational Church Spire, Suspension Bridge, N.Y.		
			316-49-00·	.....	Methodist Church Spire, Niagara Falls, N.Y.		
			340-25-00·	.....	Museum Flagpole, Niagara Falls, N.Y.		

Turning Point No. 135	43-05-28·558	2891·4	43-03-23·0		T. P. No. 136	1397·8	3·1454457
	79-03-59·084	4383·8					
Methodist Church Spire, Niagara Falls, N.Y.	43-05-12·84	1299·9					
	79-03-43·64	3238·5					
Water Tank, Clifton Hotel, Niagara Falls, Ont.	43-05-26·29	2661·7					
	79-04-18·25	1354·3					
Monument No. 19	43-05-08·667	877·6	45-40-45·5	225-40-22·1	Monument No. 20	3553·2	3·5506256
	79-04-08·548	634·5	165-45-00·		T. P. No. 136	1024·0	3·0102780
			44-46-50·		Spire, Loretto Abbey.		
			157-59-50·		Water Tank, Clifton Hotel, Niagara Falls, Ont.		
Turning Point No. 136	43-05-18·470	1870·1	30-36-01·2		T. P. No. 137	2931·3	3·4670630
	79-04-11·945	885·8					
West Stack, Union Carbide Co.	43-05-02·76	279·5					
	79-00-27·00	2003·6					
Monument No. 20	43-04-44·145	4469·5	94-13-35·0	274-13-50·3	Monument No. 21	1668·6	3·2223484
	79-04-42·800	3176·5	219-57-43·1		T. P. No. 137	1242·1	3·0941490
			290-18-20·7		T. P. No. 138	1215·2	3·0847208
			42-43-45·		Cross, Loretto Abbey.		
			174-37-15·		Table Rock Observation Tower.		
			203-08-00·		Water Tank, Clifton Hotel, Niagara Falls, Ont.		
Turning Point No. 137	43-04-53·549	5421·6	346-01-00·3		T. P. No. 138	1415·7	3·1509650
	79-04-32·051	2378·6					
West Stack of International Paper Co.	43-01-54·03	5470·1					
	79-02-51·72	3838·2					
West Stack of Hooker Co.	43-04-48·55	4915·3					
	79-00-30·85	2289·7					
West Stack of Rampo Iron Works.	43-04-48·29	4889·1					
	79-00-48·62	3608·3					

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Table Rock Observation Tower	43-04-50·63	5126·0					
	79-04-43·63	3238·2					
Turning Point No. 138.	43-04-39·980	4048·9	283-41-37·3	.....	T. P. No. 139.....	18339·5	4·2633876
	79-04-27·442	2036·6					
Cross on Loretto Abbey.....	43-04-32·79	3319·9					
	79-04-57·11	4238·8					
Monument No. 21.....	43-04-45·359	4592·2	292-24-04·5	112-26-44·5	Monument No. 22.....	18860·0	4·2755493
	79-04-20·379	1512·5	133-45-00·	....	T. P. No. 137..	1199·1	3·0788716
			43-54-28·6	.....	T. P. No. 138.....	755·9	2·8784630
			64-58-30·	.....	Cross on Loretto Abbey.		
Monument No. 22.....	43-03-34·300	3472·8	298-41-02·7	118-41-27·8	Monument No. 23.....	3114·5	3·4933889
	79-00-25·511	1894·0	176-29-00·	... .	T. P. No. 139.....	2305·4	3·3627541
			167-09-00·	....	E. Stack, Rampo Iron Works.		
			176-56-00.	. .. .	Stack, Hooker Electro Chemical Co.		
			179-22-15·	....	Stack, Carbide Co.		
			194-15-15·	.....	Intake, Filtration Plant.		
Turning Point No. 139.....	43-03-57·028	5773·9	330-11-10·4	.....	T. P. No. 140.....	4169·6	3·6201063
	79-00-27·416	2035·4					

Monument No. 23	43–03–19·533	1977·7	55–28–00·5	235–22–28·1	Monument No. 24	4276·3	3·6310642
	78–59–48·711	3616·5	102–33–00·		T. P. No. 140	820·2	2·9139242
			153–45–15·		W. Stack, Rampo Iron Works.		
			153–48–10·		E. Stack, " " Works.		
			160–55–00·		Stack, Hooker Electro Chemical Co.		
Turning Point No. 140	43–03–21·293	2155·5	25–22–49·4		T. P. No. 141	3528·2	3·5475644
	78–59–59·494	4416·7					
Monument No. 24	43–02–55·536	5622·7	01–10–51·8	181–10–50·4	Monument No. 25	7499·5	3·8750301
	79–00–36·105	2681·1	295–41–00·		T. P. No. 141	1338·6	3·1266444
Turning Point No. 141	43–02–49·806	5043·0	14–49–35·6		T. P. No. 142	6817·6	3·8336330
	79–00–19·860	1474·7					
Monument No. 25	43–01–41·478	4199·5	51–14–55·5	231–14–03·6	Monument No. 26	7241·3	3·8598184
	79–00–38·186	2836·6	130–28–00·		T. P. No. 142	503·9	2·7023754
			163–18–15·		Stack, Alkali Works, Niagara Falls, N.Y.		
Turning Point No. 142	43–01–44·708	4526·6	33–28–29·0		T. P. No. 143	5623·7	3·7500215
	79–00–43·347	3219·8					
Monument No. 26	43–00–56·701	5740·5	333–27–05·4	153–27–39·4	Monument No. 27	8283·0	3·9181896
	79–01–54·198	4026·6	265–31–00·		T.P. No. 143	2168·6	3·3361857
			267–14–50·		Flagpole, Cook Point		
Turning Point No. 143	43–00–58·373	5909·4	353–40–13·4		T. P. No. 144	7871·0	3·8960298
	79–01–25·098	1864·8					
Monument No. 27	42–59–43·511	4405·2	07–19–38·9	187–19–31·5	Monument No. 28	6298·0	3·7992012
	79–01–04·384	325·8	70–03–00·		T. P. No. 144	714·6	2·8540421
Turning Point No. 144	42–59–41·103	4161·1	326–44–03·5		T. P. No. 145	4155·2	3·6185941
	79–01–13·422	997·4					
Monument No. 28	42–58–41·812	4233·2	284–23–52·4	104–25–49·3	Monument No. 29	13162·0	4·1193203
	79–01–15·189	1129·3	223–38–00·		T. P. No. 145	3493·4	3·5432522

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Turning Point No. 145.....	42–59–06·785	686·4	301–30–49·8	.....	T. P. No. 146.....	11505·2	4·0609060
	79–00–42·759	3178·5					
Monument No. 29.....	42–58–09·450	956·7	342–49–45·2	162–50–05·3	Monument No. 30.....	7437·7	3·8714366
	78–58–23·724	1763·8	68–13–00·	.....	T. P. No. 146.....	569·6	2·7555339
			125–00–30·	.....	Flagpole, Club Island Hotel.		
			359–16–40·	.....	Water Tank, Ship Yard, Ont.		
Turning Point No. 146.....	42–58–07·362	745·1	318–17–24.3	.....	T. P. No. 147.....	5335·5	3·7271840
	78–58–30·837	2293·0					
Monument No. 30.....	42–56–59·259	5999·3	274–50–34·6	94–51–49·4	Monument No. 31.....	8196·9	3·9136515
	78–57–54·201	4031·2	195–50–00·	.....	T. P. No. 147.....	3026·2	3·4809035
			111–02–20·	.....	Water Tank, Ship Yard, Ont.		
			208–56–35·	.....	N. Stack Wickwire Steel Plant.		
			209–10–50·	.....	S. " "		
			261–50–05·	.....	Strawberry Island Upper Cut Rear Range Light.		
Turning Point No. 147.....	42–57–28·016	2836·6	274–54–32·8	.....	T. P. No. 148.....	7795·0	3·8918303
	78–57–43·098	3205·0					

Monument No. 31	42–56–52·409	5305·8	313–50–07·6	133–50–27·3	Monument No. 32 (Mainland)	2975·3	3·4735321
	78–56–04·386	326·1	188–15–00·		T. P. No. 148	2967·2	3·4723448
			271–49–49·1	91–50–33·2	Monument No. 32 (Strawberry)	4820·9	3·6831289
			173–28–30·		W. Stack, Wickwire Steel Plant.		
			183–56–30·		Strawberry Island Lower Cut Rear Range Light.		
			246–33–30·		Strawberry Island Upper Cut Rear Range Light.		
			295–52–00·		St. Francis Church Spire, Black Rock.		
			305–38–50·		Red Gas Tank, Black Rock.		
Turning Point No. 148	42–57–21·414	2167·7	311–59–15·4		T. P. No. 149	4868·9	3·6874301
	78–55–58·661	4362·2					
Monument No. 32, (Mainland)	42–56–32·054	3245·1	332–18–47·6	152–19–21·2	Monument No. 33	7901·7	3·8977223
	78–55–35·533	2643·0	227–30–00·		T. P. No. 149	2575·5	3·4108539
			304–48–50·		T. P. No. 150	5490·5	3·7396033
			221–23–30·		Strawberry Island Upper Cut Rear Range Light.		
			234–29–50·		Monument No. 32, (Strawberry)	3282·8	3·5162475
			302–53–30·		Red Gas Tank Black Rock.		
Turning Point No. 149	42–56–49·239	4985·2	331–50–54·5		T. P. No. 150	5528·7	3·7426230
	78–55–10·004	743·8					
Turning Point No. 150	42–56–01·089	110·2	345–47–50·7		T. P. No. 151	3738·5	3·5726985
	78–54–34·941	2599·4					
Center of Swing Span, International Bridge	42–55–45·948	4651·9	175–40–43·6	355–40–41·2	Hertel	3491·8	3·5430458
	78–54–29·726	2211·6	132–52–54·1	312–52–33·2	Hoyt	3118·8	3·4939829
Monument No. 32, (Strawberry)	42–56–50·883	5151·2	353–36–17·1	173–36–26·2	Monument No. 33	8959·3	3·9522734
	78–51–59·602	4433·1	96–18–15·		Water Tank, Ship Yard, Ont.		
			07–11–45·		Standpipe, Bridgeburg.		
			315–06–15·		St. Francis Church Spire, Black Rock.		
			339–33–00·		Water Tank, Thomas Motor Car Co., Buffalo, N.Y.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 33.....	42-55-22·939	2322·5	336-38-57·5	156-39-26·9	Monument No. 34.....	8115·8	3·9093318
	78-54-46·190	3437·6	192-13-31·2	.....	T. P. No. 150.....	3952·0	3·5968128
			262-16-00·	.....	T. P. No. 151.....	1770·3	3·2480561
			214-25-50·	.....	St. Francis Church Spire, Black Rock.		
			239-20-20·	.....	Red Gas Tank, Black Rock.		
			325-57-20·	.....	Niagara River Rear Range Light.		
Turning Point No. 151	42-55-25·291	2560·4	359-45-11·6	.....	T. P. No. 152	8553·8	3·9321606
	78-54-22·613	1682·4					
Monument No. 34	42-54-09·339	945·5	86-30-17·0	266-29-36·1	Monument No. 35.....	4484·6	3·6517247
	78-54-02·972	221·1	58-46-00·	.....	T. P. No. 152.....	1666·7	3·2218479
			26-31-30·	.....	Horseshoe Reef Light.		
			59-58-10·	.....	Monument Fort Erie Ruins.		
			121-10-30·	.....	Standpipe, Fort Erie.		
			341-47-50·	.....	Buffalo Light.		
Turning Point No. 152.....	42-54-00·802	81·0	20-17-57·9	.....	T. P. No. 153.....	7384·4	3·8683146
	78-54-22·118	1646·3					
Monument No. 35.	42-54-06·634	671·6	280-56-52·7	.....	T. P. No. 152.....	3107·9	3·4924580
	78-55-03·111	231·6	265-14-40·	.....	Flagpole, 74th Armoury.		
			287-08-42·	.....	St. Michael's Church Spire, Buffalo, N.Y.		
			291-50-05·	.....	Tower, General Electric Building, Buffalo, N.Y.		

			301–22–40·	.....	Tower, City Hall, Buffalo, N.Y.		
			550–23–40·	... .	New Intake Light, Buffalo, N.Y.		
			355–31–40·	.....	Horseshoe Reef Light.		
Horseshoe Reef Light.....	42–52–52·392	5304·8	90–00–00·	.....	T. P. No. 153..... ...	100	2·0000000
	78–54–55·182	4107·9	15–43–13·7	.....	T. P. No. 154.....	1000	3·0000000
Turning Point No. 153..... ...	42–52–52·392	5304·4	10–04–15·4	.....	T. P. No. 154.....	977·7	2·9901862
	78–54–56·525	4208·3					
Stack, Tonawanda Iron and Steel Co.....	43–02–12·29	1244·0					
	78–53–13·35	991·4					
Stack, Upper Water Works, Tonawanda.....	43–01–14·28	1445·5					
	78–53–06·81	506·2					
Stack on Brewery, Tonawanda.....	43–00–47·03	4760·8					
	78–53–53·01	3938·3					
Cupola, Electric Beach Hotel, Grand Island.	43–00–46·98	4756·4					
	78–55–01·31	96·7					
Flagpole, District School No. 1, Grand Island, N.Y.	42–59–57·56	5827·0					
	78–56–27·11	2014·3					
Stack, Wickwire Steel Plant, Rattlesnake Island, N.Y.	42–58–59·09	5982·5					
	78–56–23·92	1777·1					
Flagpole, Island Park Club..	42–58–34·66	3509·2					
	78–59–12·74	947·2					
Cupola, Bedell House, Grand Island.	42–58–23·24	2352·4					
	78–56–43·46	3230·9					
Flagpole on House, Beaver Island.	42–57–33·20	3361·2					
	78–57–36·98	2750·0					
Water Tank, Ship Yard, Ont. (Larger of two.)	42–57–07·30	739·2					
	78–58–22·67	1686·0					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Cross on St. Francis Church, Black Rock.	42–56–09·17 78–54–03·06	928·5 227·7					
Red Gas Tank, Black Rock..	42–55–44·78 78–53–56·06	4533·5 4170·9					
Presbyterian Church Spire, Bridgeburg.	42–55–44·29 78–54–53·40	4484·2 3972·8					
School Tower, Fort Erie... .	42–54–39·45 78–54–52·86	3993·4 3933·7					
Niagara River Rear Range Light.	42–54–33·53 78–54–00·77	3394·7 57·4					
North Chimney of Old Pumping Station, Buffalo, N.Y.	42–54–30·06 78–54–05·47	3043·3 407·2					
Northwest Stack of New Pumping Station, Buffalo, N.Y.	42–53–46·45 78–54–01·03	4702·7 76·8					
Buffalo North Breakwater, Southend Light.	42–52–49·46 78–53–45·50	5007·2 3387·8					
Buffalo Light	42–52–39·97 78–53–23·00	4046·9 1712·9					

Buffalo Old Breakwater, Northend Light.	42-52-39·24 78-53-56·16	3972·8 4181·7					
New Intake Light, Buffalo, N.Y.	42-52-46·33 78-54-44·59	4690·4 3320·0					

Locality, Lake Erie. Date.....

Horseshoe Reef Light.....	42-52-52·392 78-54-55·182	5304·8 4107·9	15-43-13·7 15-43-13·7	.....	T. P. No. 154..... T. P. No. 155.....	1000· 20064·	3·0000000 4·3024175
Turning Point No. 154.....	42-52-42·884 78-54-58·821	4341·5 4379·9	15-43-13·7	.....	T. P. No. 155.....	19064·	4·2802128
Turning Point No. 155.....	42-49-41·616 78-56-08·131	4213·2 606·0	63-10-28·4	.....	T. P. No. 156.....	346460·	5·5396538
Long Point Light.....	42-33-00·205 80-03-20·402	20·7 1526·9	06-35-46·4	.....	T. P. No. 156.....	57442·	4·7592296
Presqu' Isle Light.....	42-09-56·299 80-06-55·499	5699·1 4179·4	186-33-21·4	.....	T. P. No. 156.....	83580·	4·9221024
Turning Point No. 156.....	42-23-36·530 80-04-48·334	3697·8 3627·0	78-15-48·9	.....	T. P. No. 157.....	322577·	5·5086332
Fairport Light.....	41-45-24·566 81-16-38·788	2486·5 2940·0	182-59-13·9	.....	T. P. No. 157.....	164452·	5·2160385
Turning Point No. 157.....	42-12-26·973 81-14-44·919	2730·3 3380·9	58-41-21·2	.....	T. P. No. 158.....	368279·	5·5661774
Pelee Passage Light.....	41-51-08·070 82-34-59·168	816·9 4478·3	321-36-42·8	.....	T. P. No. 158.....	81642·	4·9119153
Turning Point No. 158.....	41-40-35·313 82-23-51·101	3574·1 3877·9	Due West..	Due East...	T. P. No. 159.....	77106·	4·8870882

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Lake Erie. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Middle Island Light.....	41-41-00·012	1·3	00-00-00·	.....	T. P. No. 159.....	2500·	3·3979400
	82-40-47·147	3577·4					
Turning Point No. 159. .. .	41-40-35·313	3574·1	122-48-41·7	.....	T. P. No. 160.....	126206·	5·1010811
	82-40-47·147	3577·7					
Colchester Reef Light.	41-55-56·236	5692·2	62-35-35·2	.....	T. P. No. 160....	54351·	4·7352075
	82-53-31·277	2364·2					
Toledo Harbor Light	41-45-42·543	4306·1	242-18-05·7	....	T. P. No. 160....	79941·	4·9027684
	83-19-44·327	3359·4					
Turning Point No. 160.	41-51-48·582	4917·3	161-18-07·3	.....	T. P. No. 161.....	68262·	4·8341765
	83-04-08·931	675·9					
Presque Isle, Pierhead Light.	42-09-18·884	1911·4					
	80-04-21·183	1595·5					
Erie Light No. 1	42-09-06·312	639·1					
	80-04-52·657	3966·5					
Erie Light No. 2	42-09-11·394	1153·5					
	80-04-43·206	3254·6					

Locality, Detroit River. Date

Monument No. 1	42-01-36·961 83-11-00·136	3741·5 10·2	240-53-24·6 240-53-24·6 309-33-19·6	60-56-07·0	Monument No. 2 T. P. No. 161 Detroit River Light Station.	20936·3 10468·1	4·3209004 4·0198702
Turning Point No. 161	42-02-27·254 83-08-58·932	2758·2 4446·5	193-51-25·1		T. P. No. 162	31696·3	4·5010084
Detroit River Light Station (U.S.L.S.)	42-00-03·295 83-08-23·154	333·7 2126·0					
Monument No. 2	42-03-17·510 83-06-57·675	1772·6 4351·0	181-00-37·8 60-56-07·0 108-04-21·2	01-00-41·9	Monument No. 3 T. P. No. 161 Bar Point (U.S.L.S.)	26227·8 10468·1 69·8	4·4187603 4·0198702 1·8437434
Monument No. 3	42-07-36·570 83-06-51·537	3701·8 3883·5	154-46-04·0 75-00-00·0 152-15-00· 155-12-25· 352-01-35·	334-44-52·4	Monument No. 4 T. P. No. 162 Grosse Isle, N. Channel Rear Range Light. Grosse Isle, N. Channel Front Range Light. Fort Malden Back Range Light.	18853·0 2080·0	4·2753812 3·3180735
Turning Point No. 162	42-07-31·251 83-07-18·198	3163·4 1371·4	169-32-59·7		T. P. No. 163	18294·2	4·2623167
Monument No. 4	42-10-25·031 83-08-38·265	2533·8 2881·6	192-09-47·1 261-37-00·0 197-32-55· 331-33-35· 257-25-44·	12-10-31·4	Monument No. 5 T. P. No. 163 Mamajuda Rear Range Light. Grosse Isle, N. Channel Front Range Light. Catholic Church Spire at Canard, Ont.	23521·2 2740·1	4·3714589 3·4377747
Turning Point No. 163	42-10-28·976 83-08-02·264	2933·4 170·3	183-57-11·7		T. P. No. 164	23339·3	4·3680885

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Detroit River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 5.....	42-14-12·168	1231·3	215-34-37·7	35-35-26·6	Monument No. 6	9409·6	3·9735707
	83-07-32·387	2436·3	137-14-00·		T. P. No. 164.....	940·3	2·9732604
			104-36-55·		Catholic Church Spire, Ecorse.		
			173-26-56·		△ Salt Works.		
			183-39-35·		Wireless Station, River Rouge, Mich.		
			192-32-20·		Stack, Solvay Works.		
Turning Point No. 164.....	42-14-18·987	1922·2	209-33-10·0		T. P. No. 165.....	8984·9	3·9535157
	83-07-40·875	3074·5					
Catholic Church Spire, Ecorse.	42-14-27·32	2765·7					
	83-08-50·63	3808·4					
Hotel Tower, head of Fighting Island.	42-14-36·62	3696·8					
	83-06-56·15	4223·4					
Monument No. 6.....	42-15-27·764	2810·7	198-20-48·1	18-21-22·0	Monument No. 7.....	12045·1	4·0808107
	83-06-19·590	1473·1	116-55-00·		T. P. No. 165.....	1885·2	3·2753498
			110-41-10·		Wireless Station, River Rouge, Mich.		
			151-48-30·		Tank at Stone Crusher, River Rouge, Mich.		
			161-40-30·		△ 62 located on Smith's Dock.		
			174-59-25·		Stack, Solvay Works.		
Turning Point No. 165.....	42-15-36·193	3663·4	200-17-03·6		T. P. No. 166.....	11591·0	4·0641202
	83-06-41·943	3153·9					

Wireless Station, River Rouge, Mich.	42–15–45·92 83–07–24·32	4648·6 1828·7					
Tank at Stone Crusher, River Rouge, Mich.	42–16–41·06 83–07–11·23	4156·5 844·2					
Monument No. 7	42–17–20·701 83–05–29·149	2095·5 2190·6	214–37–45·3 101–23–00· 18–38–00· 41–59–20· 221–03–50· 226–01–10·	34–38–24·5	Monument No. 8 T. P. No. 166 Stack, Salt Works, Windsor, Ont. Wireless Station, River Rouge, Mich. Spire, Church of Assumption, Sandwich, Ont. Spire, St. John's Church, Sandwich.	7700·7 1482·3	3·8865289 3·1709304
Turning Point No. 166	42–17–23·591 83–05–48·482	2388·1 3643·7	214–23–49·2		T. P. No. 167	8277·1	3·9178771
Stack, Solvay Works	42–17–26·72 83–06–32·02	2704·7 2406·8					
Catholic Church Spire, Belle River, Ont.	42–17–30·30 82–42–19·90	3066·6 1495·4					
Stack, Edison Co., Detroit	42–17–40·95 83–06–03·02	4145·3 227·0					
Spire, Catholic Church, Stony Point, Ont.	42–18–15·56 82–32–50·31	1575·5 3780·2					
Monument No. 8	42–18–23·292 83–04–30·914	2357·9 2323·2	233–28–05·9 124–17–00· 95–47–30· 109–07–25· 175–47–50·	53–28–41·4	Monument No. 9 T. P. No. 167 △ 64 (U.S.L.S.) Tank, Flanders' Motor Co. E. of twin spires on R. C. Church, Detroit.	4935·1 1395·0	3·6933001 3·1445775
Turning Point No. 167	42–18–31·054 83–04–46·254	3143·0 3475·1	232–41–37·1		T. P. No. 168	5466·7	3·7377275

Table of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality. Detroit River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Spire, Catholic Church, Tecumseh.	42-18-40·47 82-53-11·31	4096·8 849·7					
Wireless Station, Detroit, Mich.	42-18-42·97 83-04-54·06	4350·1 4062·0					
Tank, Flanders' Motor Co. ..	42-18-33·92 83-05-12·24	3433·7 919·9					
Monument No. 9..... ..	42-18-52·309 83-03-38·135	5295·3 2865·2	251-31-49·3 146-28-00· 133-35-25· 200-25-15· 217-01-25·	71-33-38·1	Monument No. 10..... .. T. P. No. 168..... .... Tank, Twist Drill Co., Detroit. Spire, 3rd Presbyterian Church, Detroit. Court House Tower, Detroit.	12798·3 1393·0	4·1071522 3·1439642
Turning Point No. 168.	42-19-03·780 83-03-48·378	382·5 3634·8	250-36-45·6		T. P. No. 169..	12725·4	4·1046723
Tower, Church of the Immaculate Conception.	42-19-04·47 83-01-30·15	452·4 2265·1					
E. of twin spires on R. C. Church, Detroit, Mich.	42-19-14·93 83-04-36·03	1511·5 2706·7					

Tower, Fire Hall at Windsor, Ont.	42–19–15·40 83–01–50·63	1559·1 3803·8					
Tank, Twist Drill Co., Detroit, Mich.	42–19–16·54 83–04–12·44	1674·2 934·7					
Stack, Parke Davis Co., Walkerville, Ont.	42–19–33·66 83–00–32·17	3407·5 2416·7					
Spire, 3rd Presbyterian Church, Detroit, Mich.	42–19–39·14 83–03–14·64	3962·3 1099·7					
Tower on Distillery, Walkerville, Ont.	42–19–34·92 83–00–48·04	3534·8 3608·3					
Tank on Ford Motor Co. Plant, Ford, Ont.	42–19–36·19 83–00–14·08	3663·4 1057·4					
Monument No. 10.....	42–19–32·330 83–06–56·542	3272·6 4247·4	248–23–44·3 145–49–00· 93–48–35· 107–23–35· 122–44–30· 232–00–15· 233–18–35·	68–24–48·8	Monument No. 11..... ..... T. P. No. 169..... Spire, 3rd Presbyterian Church, Detroit. Court House Tower, Detroit. Tank, Screw Works, Detroit. △ 88, (U.S.L.S.) Flagpole, East end Belle Isle.	7734·4 1608·9	3·8884192 3·2065347
Turning Point No. 169.....	42–19–45·478 83–01–08·576	4604·0 644·4	262–13–41·7		T. P. No. 170.....	8254·8	3·9167047
Stack, Water Works, Windsor, Ont.	42–19–24·22 83–01–31·17	2451·8 2341·5					
Wayne County Court House Tower.	42–19–55·03 83–02–34·32	5570·5 2577·4					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Detroit River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 11.....	42–20–00·450	45·6	253–05–15·3	73–06–25·4	Monument No. 12.....	8166·1	3·9120121
	82–59–20·806	1563·0	348–10–00·		T. P. No. 170.....	409·5	2·6121988
			53–57–50·		East Tower on R. C. Church near Ford Motor Co. Works, Ford, Ont.		
			68–27–40·		Tank, Walker's Distillery, Walkerville, Ont.		
Turning Point No. 170.....	42–19–56·491	5718·5	252–20–43·7		T. P. No. 171.....	8405·1	3·9245447
	82–59–19·688	1478·7					
Flagpole, East end of Belle Isle.	42–20–07·28	736·9					
	82–59–53·33	4005·6					
Stack, Parke Davis Co., Detroit, Mich.	42–20–14·44	1461·6					
	83–00–59·47	4466·5					
Monument No. 12.....	42–20–23·904	2419·6	247–23–34·3	67–24–26·4	Monument No. 13.....	6293·1	3·7988633
	82–57–36·779	2762·1	309–03–00·		T. P. No. 171.....	360·9	2·5573769
			50–21–50·		Windmill Point Light.		
			67–46–40·		Tank at Ford Motor Co. Works, Ford, Ont.		
			335–41–30·		△ 91, (U.S.L.S.)		
Turning Point No. 171.....	42–20–21·658	2192·6	233–41–22·3		T. P. No. 172.....	4619·4	3·6645894
	82–57–33·047	2482·0					

Tank, Queen Ann's Soap Co..	42–20–24·28 83–00–36·98	2458·0 2777·2					
Monument No. 13.....	42–20–47·794 82–56–19·418	4838·2 1458·3	290–00–08·3 92–50–00· 67–52–16· 208–15–45· 239–38–25· 245–55–25·	110–06–36·3	Monument No. 14..... ..... T. P. No. 172.... ..... Belle Isle Light. Windmill Point Light. Peach Island, Front Range Light. Peach Island, Rear Range Light.	46080·0 1809·0	4·6635141 3·2574510
Turning Point No. 172.. ..	42–20–48·677 82–56–43·478	4927·5 3265·1	253–01–29·3		T. P. No. 173.....	33110·7	4·5199680
Intake, New Water Works, Detroit, (U.S.L.S.)	42–21–07·99 82–58–00·05	808·4 3·3					
Peach Island Rear Range Light.	42–21–14·40 82–54–58·81	1458·0 4415·7					
Windmill Point Light (U.S. L.S.)	42–21–31·705 82–55–47·327	3209·6 3553·5					
Windmill Point Front Range Light.	42–21–32·64 82–55–51·29	3304·8 3851·0					
Tower, Waterworks, Detroit..	42–21–34·25 82–58–50·77	3466·5 3811·7					
Windmill Point Rear Range Light.	42–21–34·82 82–55–48·32	3524·9 3628·6					
Peach Island Front Range Light.	42–21–37·89 82–54–24·00	3835·6 1801·8					
Monument No. 14.....	42–18–11·686 82–46–43·214	1183·1 3247·4	156–13–52·7 152–20–00· 267–22–31·4	336–10–15·2	Monument No. 15.... .. . . T. P. No. 173..... △ Puce, (U.S.L.S.)	60019·0 28839·0	4·7782888 4·4599731
Turning Point No. 173.....	42–22–23·955 82–49–41·600	2424·9 3122·7	216–32–08·8	.....	T. P. No. 174.....	72617·1	4·8610390

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Detroit River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 15.....	42-27-14·162	1433·7	241-35-11·2	61-43-15·6	Monument No. 16.....	61047·0	4·7856644
	82-52-05·888	441·3	339-45-39·2		T. P. No. 173.....	31309·1	4·4956705
			339-54-20·		△ Gaukler, (U.S.L.S.)		

Locality, Saint Clair River. Date.....

Monument No. 16.....	42-32-00·483	48·9	227-50-59·3	47-51-21·5	Monument No. 17.....	3309·5	3·5197572
	82-40-08·772	656·8	279-33-00·		T. P. No. 174.....	345·8	2·5388248
			110-50-30·		Rear Range Light, St. Clair Flats.		
			125-40-20·		Upper Light, St. Clair Flats Canal.		
			194-00-25·		Flagpole on Old Club, South Channel, St. Clair River, Mich.		
Turning Point No. 174.....	42-31-59·916	6065·6	207-19-02·5	.....	T. P. No. 175.....	3306·7	3·5193919
	82-40-04·218	315·9					
Monument No. 17.....	42-32-22·420	2269·7	226-08-50·5	46-09-10·5	Monument No. 18.....	3062·6	3·4860877
	82-39-35·999	2694·9	137-57-00·		T. P No. 175.....	888·4	2·9486329
			232-16-38·		Monument No. 20		
Turning Point No. 175	42-32-28·937	2929·5	226-06-34·3	.....	T. P. No. 176	2927·4	3·4664882
	82-39-43·948	3290·0					

Monument No. 18	42-32-43·378	4391·4	228-25-04·5	48-25-34·7	Monument No. 19	4468·3	3·6501451
	82-39-06·497	486·2	129-17-00·		T. P. No. 176	896·3	2·9524649
			59-28-55·		Flagpole on Old Club, South Channel, St. Clair River, Mich.		
			112-07-35·		Flagpole on Mervue Hotel, South Channel, St. Clair River, Mich.		
			198-06-45·		Flagpole on Star Island House, South Channel, St. Clair River, Mich.		
Turning Point No. 176	42-32-48·984	4958·7	231-02-09·7		T. P. No. 177	4580·3	3·6608905
	82-39-15·765	1180·1					
Monument No. 19	42-33-12·670	1282·5	251-28-59·7	71-29-16·1	Monument No. 20	1911·5	3·2813843
	82-38-21·843	1634·8	135-27-00·		T. P. No. 177	676·5	2·8302729
			58-39-50·		Flagpole, Humphrey's Hotel, South Channel, St. Clair River, Mich.		
			64-50-30·		Flagpole, Mervue Hotel, South Channel, St. Clair, Mich.		
			77-09-20·		Flagpole, Star Island House, South Channel, St. Clair River, Mich.		
Turning Point No. 177	42-33-17·432	1764·7	250-06-15·6		T. P. No. 178	2332·0	3·3677159
	82-38-28·184	2109·6					
Monument No. 20	42-33-18·666	1889·8	270-37-06·9	90-37-26·5	Monument No. 21	2166·1	3·3356873
	82-37-57·626	4313·3	171-58-00·		T. P. No. 178	675·2	2·8294296
			57-06-00·		Flagpole at Old Club, South Channel, St. Clair River, Mich.		
			66-34-25·		Flagpole, Mervue Hotel, South Channel, St. Clair River, Mich.		
			202-23-17·		Flagpole, Riverside Hotel, South Channel, St. Clair River, Mich.		
Turning Point No. 178	42-33-25·270	2558·1	270-26-43·6		T. P. No. 179	2461·0	3·3911107
	82-37-58·887	4407·5					
Riverside Hotel, Flagpole, South Channel, St. Clair River, Mich.	42-33-31·80	3219·2					
	82-37-50·31	3765·4					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
St. Clair River Light No. 1..	42-33-30·20	3057·1					
	82-37-42·82	3205·0					
St. Clair River Light No. 2..	42-33-33·77	3418·6					
	82-37-30·92	2314·3					
St. Clair River Light No. 3..	42-33-27·82	2816·3					
	82-37-21·78	1630·2					
Monument No. 21.....	42-33-18·434	1866·1	290-32-40·8	110-32-57·1	Monument No. 22.	1929·4	3·2854139
	82-37-28·687	2147·0	196-36-00·	.....	T. P. No. 179.....	702·1	2·8463980
			79-52-50·	.....	Flagpole, Star Island House, South Channel, St. Clair River, Mich.		
			110-54-00·	.....	Flagpole, Marshland Hotel, South Channel, St. Clair River, Mich.		
			265-00-55·	....	Flagpole, Joe Bedore's Hotel, South Channel, St. Clair River, Mich.		
Turning Point No. 179.....	42-33-25·080	2539·0	295-57-26·2	.....	T. P. No. 180.....	2150·5	3·3325405
	82-37-26·007	1946·5					
Joe Bedore's Hotel, Flagpole.	42-33-20·51	2076·4					
	82-36-56·22	4208·0					

Monument No. 22..	42–33–11·745	1189·0	321–05–50·4	141–06–04·4	Monument No. 23..... ..	2471·7	3·3929939
	82–37–04·550	340·6	218–43–00·	.....	T. P. No. 180.....	523·6	2·7190171
			141–38–20·	.....	St. Clair River Light No. 3.		
			215–06–50·	....	Flagpole, Joe Bedore's Hotel, South Channel, St. Clair River, Mich.		
Turning Point No. 180.....	42–33–15·781	1597·4	315–34–49·2	.....	T. P. No. 181.....	2282·7	3·358449
	82–37–00·174	12·8					
Monument No. 23.....	42–32–52·744	5339·6	289–52–49·3	109–53–04·7	Monument No. 24.....	1819·9	3·2600582
	82–36–43·814	3280·0	208–00–00·	.....	T. P. No. 181.....	794·6	2·9001583
			131–09–05·	.....	Flagpole, Foster's Hotel, South Channel, St. Clair River, Mich.		
			144–49–00·	....	Flagpole, Joe Bedore's Hotel, South Channel, St. Clair River, Mich.		
			214–24–25·	.....	St. Clair River Light No. 4.		
			242–39–55·	.....	" " " " 5.		
Turning Point No. 181.....	42–32–59·675	6041·0	290–41–14·3	.....	T. P. No. 182.....	1497·9	3·1754764
	82–36–38·830	2906·8					
St. Clair River Light No. 4 ..	42–33–01·61	163·1					
	82–36–28·82	2157·1					
St. Clair River Light No. 5 ..	42–32–59·39	6012·1					
	82–35–54·66	4091·5					
Monument No. 24.....	42–32–46·630	4720·5	260–56–42·5	80–57–20·6	Monument No. 25.....	4271·7	3·6305980
	82–36–20·951	1568·2	184–33–00·	.....	T. P. No. 182..... ...	794·0	2·8997996
Turning Point No. 182.....	42–32–54·448	5512·1	262–12–44·5	.....	T. P. No. 183.....	3977·6	3·5996204
	82–36–20·110	1505·2					
Monument No. 25.....	42–32–53·267	5392·4	196–24–05·6	16–24–13·2	Monument No. 26.....	2965·1	3·4720329
	82–35–24·597	1841·2	161–57–00·	... .	T. P. No. 183.....	692·3	2·8402667
			105–25–45·	....	St. Clair River Light No. 5.		
			169–16–25·	.....	" " " " 6.		
			200–38–20·	.....	Catholic Church Spire, U.S. Shore.		

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date..... .....

Stations.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 183.....	42–32–59·769	6050·5	233–09–18·5	.....	T. P. No. 184.....	2376·3	3·3759087
	82–35–27·462	2055·8					
St. Clair River Light No. 6..	42–33–05·44	550·9					
	82–35–27·72	2074·8					
Spire R. C. Church on United States Shore.	42–34–17·43	1764·4					
	82–34–41·70	3120·4					
Monument No. 26.....	42–33–21·364	2162·7	218–38–20·5	38–38–41·0	Monument No. 27	3624·8	3·5592870
	82–35–13·411	1003·9	311–51–00·		T. P. No. 184.....	1141·0	3·0573138
Turning Point No. 184.....	42–33–13·844	1401·6	194–39–33·8	.....	T. P. No. 185.....	3849·3	3·5853831
	82–35–02·055	153·9					
Monument No. 27..... .	42–33–49·331	4994·1	228–41–40·0	48–42–12·0	Monument No. 28..	4713·0	3·6732939
	82–34–43·167	3230·6	106–40–00·		T. P. No. 185.....	458·7	2·6614914
			182–13–00·		Spire R. C. Church, U. S. Shore.		
			193–41–35·		St. Clair River Light No. 8.		
			280–39–25·		Tower U.S.L.S., Walpole Island, Ont.		
Turning Point No. 185.....	42–33–50·630	5125·3	220–37–01·7	... .	T. P. No. 186.....	4839·0	3·6847572
	82–34–49·038	3670·0					
St. Clair River Light No. 7..	42–34–14·74	1492·1					
	82–34–45·20	3382·2					

St. Clair River Light No. 8	42-34-20·36	2061·0					
	82-34-32·94	2464·9					
St. Clair River Light No. 9	42-34-25·13	2544·0					
	82-34-30·13	2253·9					
Monument No. 28	42-34-20·058	2030·5	227-16-32·2	47-16-51·4	Monument No. 29	2895·6	3·4617330
	82-33-55·853	4179·5	129-55-00·		T. P. No. 186	1081·4	3·0339714
			81-44-10·		St. Clair River Light No. 7.		
			85-34-35·		Spire, Catholic Church, Maple Leaf, Harsens Island, Mich.		
			101-22-30·		St. Clair River Light No. 9.		
Turning Point No. 186	42-34-26·912	2724·4	230-48-14·1		T. P. No. 187	2908·5	3·4636727
	82-34-06·937	519·0					
Monument No. 29	42-34-39·463	3995·1	220-29-20·5	40-29-37·4	Monument No. 30	2883·4	3·4599079
	82-33-27·423	2051·8	128-56-00·		T. P. No. 187	902·9	2·9556326
			68-08-30·		Spire, Catholic Church, Maple Leaf, Harsens Island, Mich.		
			95-06-30·		Flagpole, Tashmoo Dock.		
			136-01-10·		" , San Souci Dock.		
Turning Point No. 187	42-34-45·068	4562·3	220-35-58·6		T. P. No. 188	2805·8	3·4480586
	82-33-36·810	2754·3					
Flagpole San Souci Dock	42-34-51·00	5163·0					
	82-33-42·49	3178·8					
Monument No. 30	42-35-01·124	113·8	208-19-32·1	28-19-42·4	Monument No. 31	2400·5	3·3803074
	82-33-02·398	179·5	124-00-00·		T. P. No. 188	902·9	2·9556326
			59-14-10·		Spire, Catholic Church, Maple Leaf, Harsens Island, Mich.		
			204-17-15·		Water Tank, Algonac.		
			227-21-00·		Spire, Church, Walpole Island, Ont.		
Turning Point No. 188	42-35-06·111	618·8	206-54-16·6		T. P. No. 189	2489·4	3·3961003
	82-33-12·403	927·8					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date.....

Station.	Latitude. and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 31.....	42-35-21·997	2226·7	218-01-01·3	38-01-50·1	Monument No. 32.....	8758·3	3·9424179
	82-32-47·172	3528·5	128-48-00·		T. P. No. 189.....	976·4	2·9896171
			52-40-15·		Spire, Catholic Church, Maple Leaf, Harsens Island, Mich.		
			203-32-10·		Water Tank, Algonac.		
			232-00-05·		Spire, Church, Walpole Island, Ont.		
Turning Point No. 189.....	42-35-28·040	2838·6	229-43-31·4	....	T. P. No. 190....	9098·7	3·9589782
	82-32-57·344	4289·7					
Spire, Church on Walpole Island.	42-36-20·59	2084·3					
	82-31-05·57	416·7					
St. Clair River, Light No. 10.	42-36-23·58	2387·1					
	82-31-41·38	3094·8					
Monument No. 32.....	42-36-30·149	3052·2	211-24-50·0	31-25-01·3	Monument No. 33.....	2390·2	3·3784269
	82-31-35·042	2620·4	297-20-00·		T. P. No. 190..	885·8	2·9473480
			35-28-40·		St. Clair River, Light No. 10.		
			229-03-30·		St. Clair River, Light No. 11.		
			293-41-45·		Spire, Church, Walpole Island.		
Turning Point No. 190.....	42-36-26·131	2645·3	207-27-53·5	.....	T. P. No. 191.....	2626·1	3·4193132
	82-31-24·520	1835·3					
St. Clair River, Light No. 11.	42-36-35·54	3597·8					
	82-31-26·62	1990·8					

St. Clair River, Light No. 12.	42–36–48·47 82–31–17·57	4906·8 1313·6					
Monument No. 33.....	42–36–50·298 82–31–18·382	5091·9 1374·7	190–50–30·2 278–48–00· 22–24–20· 342–19–45·	10–50–46·4	Monument No. 34. . ..... T. P. No. 191 ..... St. Clair River, Light No. 11. Spire, Church, Walpole Island.	9510·2 761·2	3·9781901 2·8814722
Turning Point No. 191.....	42–36–49·148 82–31–08·323	4975·7 622·4	195–39–42·2	....	T. P. No. 192.....	9250·1	3·9661447
Water Tank, Algonac.....	42–37–16·90 82–31–39·10	1711·0 2945·9					
Chenal Ecarté Back Range Light.	42–38–08·81 82–30–06·78	891·7 506·9					
Chenal Ecarté Front Range Light.	42–38–10·28 82–30–08·58	1040·7 641·4					
Monument No. 34.....	42–38–22·562 82–30–54·450	2284·1 4070·2	194–37–34·7 290–39–00·	11–37–56·0	Monument No. 35..... . . .... T. P. No. 192.....	9285·7 1560·4	3·9678167 3·1932260
Turning Point No. 192.....	42–38–17·126 82–30–34·916	1733·9 2609·9	178–39–25·5	....	T. P. No. 193..... .	9790·6	3·9908082
Monument No. 35.....	42–39–51·312 82–30–23·068	5194·5 1723·7	195–07–10·0 102–47–00· 112–38–05· 179–39–05· 341–09–20·	15–07–41·2	Monument No. 36..... T. P. No. 193..... . .. . Flagpole, Riverside Hotel, Mich. Flagpole, Michigan Salt Works. Spire, R. C. Church, Port Lambton.	13188·3 1143·0	4·1201886 3·0580623
Turning Point No. 193.....	42–39–53·810 82–30–37·987	5447·5 2838·2	198–16–26·3	....	T. P. No. 194.....	13276·2	4·1230739

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date .. ..

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 36	42-41-57·072	5777·9	212-49-40·0	32-50-19·5	Monument No. 37	8013·9	3·9038425
	82-29-37·003	2763·1	108-05-00·		T. P. No. 194	411·4	2·6142817
			38-45-00·		Flagpole, Michigan Salt Works.		
			136-20-30·		Stack, Marine City Sugar Works.		
			177-17-45·		Spire, Holy Cross Church, Marine City, Mich.		
			219-32-10·		Water Tank, Sombra.		
Turning Point No. 194.....	42-41-58·333	5905·5	204-00-22·3	.....	T. P. No. 195.....	7508·8	3·8755711
	82-29-42·240	3154·2					
Water Tank, Sombra.....	42-42-39·80	4029·2					
	82-28-49·18	3671·9					
Spire, Holy Cross Church, Marine City, Mich.	42-42-46·56	4713·6					
	82-29-40·18	2999·7					
Spire, R.C. Church, Sombra..	42-43-04·58	463·6					
	82-28-37·40	2792·0					
Monument No. 37.....	42-43-03·586	363·2	151-53-43·1	331-53-13·3	Monument No. 38.....	6946·6	3·8417725
	82-28-38·808	2897·0	98-34-00·		T. P. No. 195...	1699·5	3·2303140
			69-23-40·		Spire, Holy Cross Church, Marine City, Mich.		
			119-33-10·		Stack at Waterworks, Marine City, Mich.		
			226-01-10·		Spire, R.C. Church, Sombra.		

Turning Point No. 195.	42-43-06·086 82-29-01·319	616·1 98·4	179-16-13·6	.....	T. P. No. 196	5450·5	3·7364374
Monument No. 38.....	42-44-04·110 82-29 22·655	416·0 1690·9	215-48-28·1 285-32-00· 330-43-05·	35-49-33·7	Monument No. 39 .... T. P. No. 196 ..... Spire, R.C. Church, Sombra.	12330·5 1580·7	4·0909820 3·1988510
Turning Point No. 196.. ..	42-43-59·928 82-29-02·249	6066·9 168·0	202-47-52·2	.....	T. P. No. 197.....	11470·0	4·0595725
Red Tower, Crystal Salt Works.	42-44-36·86 82-29-08·96	3731·6 668·6					
Monument No. 39.....	42-45-42·875 82-27-45·950	4340·5 3428·1	142-46-45·6 96-56-00·0	322-46-24·1	Monument No. 40..... T. P. No. 197..... ...	3908·4 1257·0	3·5919970 3·0991830
Turning Point No. 197.....	42-45-44·373 82-28-02·671	4492·1 199·1	177-31-00·7	.....	T. P. No. 198.....	2871·7	3·4581370
Monument No. 40..	42-46-13·616 82-28-17·645	1378·3 1316·3	187-45-47·8 275-16-00·	07-45-55·2	Monument No. 41..... T. P. No. 198.....	5985·8 996·7	3·7771229 2·9985720
Turning Point No. 198.....	42-46-12·712 82-28-04·339	1287·1 323·8	169-11-56·8	.....	T. P. No. 199.....	5889·4	3·7700715
Monument No. 41...	42-47-12·200 82-28-06·802	1235·2 507·2	158-20-55·2 75-32-00· 144-22-30· 151-47-55·	338-20-33·6	Monument No. 42..... T. P. No. 199..... Stack, Great Lakes Engineering Works, St. Clair, Mich. Stack, Oakland Hotel, St. Clair, Mich.	6438·2 950·1	3·8087622 2·9777828
Turning Point No. 199.	42-47-09·855 82-28-19·139	997·7 1427·2	158-18-04·6	.....	T. P. No. 200.....	6371·6	3·8042505

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date..... .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Monument No. 42.	42-48-11·306	1144·7	130-02-42·0	310-02-20·9	Monument No. 43.....	3018·5	3·4797944
	82-28-38·665	2882·5	71-30-00·		T. P. No. 200.....	949·2	2·9773326
			96-23-10·		Stack, Great Lakes Engineering Works, St. Clair, Mich.		
			141-33-10·		Stack, Oakland Hotel, St. Clair, Mich.		
			156-23-00·		Stack, Diamond Salt Works, St. Clair, Mich.		
Turning Point No. 200.....	42-48-08·331	843·5	170-34-29·2	.....	T. P. No. 201.....	2157·7	3·3339863
	82-28-50·738	3782·5					
Monument No. 43.....	42-48-30·488	3086·6	213-30-31·8	33-31-05·5	Monument No. 44.....	6697·1	3·8258857
	82-29-09·664	720·5	276-11-00·		T. P. No. 201..... ..	1063·7	3·0267972
			168-37-40·		Stack, Oakland Hotel, St. Clair, Mich.		
			220-48-05·		Flagpole, Hotel Bedard, Courtright, Ont.		
			352-16-40·		Stack, Great Lakes Engineering Works, St. Clair, Mich.		
Turning Point No. 201.....	42-48-29·356	2972·1	187-46-24·4	.....	T. P. No. 202	6292·2	3·7988047
	82-28-55·478	4135·5					
Stack, Oakland Hotel, St. Clair, Mich.	42-48-43·32	4285·8					
	82-29-13·17	981·6					

Stack, Diamond Salt Works, St. Clair, Mich.	42-49-03·10 82-29-09·42	314·0 702·1					
Flagpole, Hotel Bedard, Courtright, Ont.	42-49-06·77 82-28-27·12	685·4 2021·3					
Monument No. 44	42-49-25·642 82-28-20·054	2596·1 1494·4	164-03-28·4 106-41-00· 42-44-30· 58-11-50·	344-03-14·5	Monument No. 45 T. P. No. 202 Stack, Oakland Hotel, St. Clair, Mich. Stack, Diamond Salt Works, St. Clair, Mich.	5527·9 1867·4	3·74256149 3·27124914
Turning Point No. 202	42-49-30·937 82-28-44·058	3132·2 3283·5	201-33-37·9		T. P. No. 203	4463·3	3·6496578
Monument No. 45	42-50-18·144 82-28-40·432	1836·9 3012·5	212-26-46·9 294-38-00· 22-48-00· 278-31-30· 352-10-30·	32-27-22·1	Monument No. 46 T. P. No. 203 Stack, Pumping Station, St. Clair, Mich. Spire on Church, Moore, Ont. Flagpole, Hotel Bedard, Courtright, Ont.	7195·2 1507·2	3·8570415 3·1781752
Turning Point No. 203	42-50-11·938 82-28-22·045	1208·6 1642·4	189-53-02·2		T. P. No. 204	7006·0	3·8454704
Stack, Salt Works, Moore, Ont.	42-50-31·81 82-27-55·40	3220·5 4127·6					
Monument No. 46	42-51-18·117 82-27-48·608	1834·3 3620·7	164-53-02·2 98-55-00· 67-45-50· 283-46-40· 288-29-15·	344-52-33·3	Monument No. 47 T. P. No. 204 Stag Island Middle Light. Stack, Diamond Salt Works. " at Waterworks.	12132·7 1303·8	4·0839654 3·1152121
Turning Point No. 204	42-51-20·113 82-28-05·900	2036·1 439·6	177-13-39·1		T. P. No. 205	11581·0	4·0637337
Stag Island Lower Light	42-51-49·58 82-28-27·42	5019·3 2042·0					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

ocality , Saint Clair River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
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Stag Island Shoal Light.....	42-51-53·18	5383·8					
	82-27-58·96	4391·4					
Corunna Back Range Light..	42-53-06·02	609·6					
	82-27-18·61	1385·5					
Corunna Front Range Light..	42-53-11·45	1159·1					
	82-27-20·48	1524·9					
Stag Island Middle Light....	42-53-09·22	933·4					
	82-28-30·38	2261·8					
Monument No. 47.	42-53-13·811	1398·3	216-13-22·9	36-14-06·0	Monument No. 48.....	7976·8	3·9018262
	82-28-31·106	2315·9	267-33-00·		T. P. No. 205.....	1317·6	3·1197779
			343-39-00·		Stag Island Shoal Light.		
			353-04-45·		" Middle Light.		
Turning Point No. 205.....	42-53-14·367	1454·4	197-58-30·3	.....	T. P. No. 206.....	6977·0	3·8436665
	82-28-13·424	999·0					
Monument No. 48.....	42-54-17·368	1758·2	177-04-13·1	357-04-09·2	Monument No. 49.....	8444·4	3·9265688
	82-27-27·774	2067·3	101-43-00·		T. P. No. 206.....	1271·0	3·1041438
			34-02-45·		Stag Island Middle Light.		
			103-11-05·		" Upper Light.		
			167-48-45·		W. Stack of Salt Works above Marysville.		

Turning Point No. 206	42-54-19·917 82-27-44·495	2016·4 3312·0	193-40-10·0		T. P. No. 207	7923·8	3·8989336
Stag Island Upper Light	42-54-22·64 82-27-58·76	2292·0 4373·4					
S. Stack, Marysville	42-54-24·45 82-27-59·98	2475·4 4463·9					
Stack at Fromfield	42-54-29·34 82-27-18·86	2970·5 1403·5					
N. Stack, Marysville	42-54-31·48 82-27-57·44	3187·6 4274·9					
W. Stack of Salt Co. above Marysville.	42-55-18·12 82-27-45·87	1834·3 3413·0					
Monument No. 49	42-55-40·668 82-27-33·575	4117·1 2498·0	233-25-59·2 294-11-00·	53-26-36·1	Monument No. 50 T. P. No. 207	5017·6 1162·1	3·7004984 3·0652328
Turning Point No. 207	42-55-35·966 82-27-19·327	3641·1 1437·7	206-52-54·1		T. P. No. 208	4462·8	3·6496122
Monument No. 50	42-56-10·191 82-26-39·402	1031·8 2931·1	207-16-06·2 118-26-00· 209-15-40·	27-16-36·0	Monument No. 51 T. P. No. 208 Stack, Tunnel Co., Power House.	7107·0 1082·7	3·8516851 3·0344981
Turning Point No. 208	42-56-15·283 82-26-52·201	1547·2 3883·2	224-03-09·6		T. P. No. 209	7286·0	3·8624602
Flagpole, Council House, Sarnia, Ont.	42-56-30·03 82-26-08·96	3040·3 666·7					
Stack, Reid's Dry Dock	42-56-57·37 82-26-17·92	5808·1 1332·7					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
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Monument No. 51.....	42-57-12·586	1274·3	233-41-55·0	53-42-40·5	Monument No. 52.....	6155·1	3·7892356
	82-25-55·619	4136·5	303-25-00·		T. P. No. 209.....	1027·6	3·0118060
			47-07-50·		Stack, Reid's Dry Dock.		
			214-38-00·		" , Tunnel Power House.		
			232-42-20·		" , Lumber Yard, Sarnia, Ont.		
Turning Point No. 209.....	42-57-06·996	708·3	211-00-14·6	.....	T. P. No. 210.....	6274·9	3·7976033
	82-25-44·087	3279·1					
Stack, Tunnel Power House..	42-57-34·19	3461.6					
	82-25-35·28	2623·7					
Monument No. 52.....	42-57-48·574	4917·6	199-31-09·8	19-31-24·3	Monument No. 53.....	4747·5	3·6764636
	82-24-48·908	3636·5	143-19-00·		T. P. No. 210.....	1457·4	3·1635628
			141-55-50·		Federal Building, Port Huron.		
			151-28-10·		Tower, City Hall, "		
			153-40-35·		Dome, K.O.T.M., "		
			171-18-10·		Fort Gratiot Light, "		
Turning Point No. 210.....	42-58-00·118	11·8	194-17-17·4	.....	T. P. No. 211.....	3980·6	3·5999537
	82-25-00·617	45·9					
High Stack, Port Huron.....	42-58-04·00	404·9					
	82-25-22·02	1637·5					
Tower, Post Office, Sarnia, Ont.	42-58-14·08	1425·5					
	82-24-32·48	2415·0					

Stack, Electric Light Co., Port Huron, Mich.	42-58-23·76 82-25-14·18	2405·5 1054·1					
Tower, City Hall, Sarnia, Ont.	42-58-24·72 82-24-23·60	2502·6 1754·8					
Spire, Methodist Church, Port Huron, Mich.	42-58-32·50 82-25-50·02	3290·3 3718·5					
Monument No. 53	42-58-32·771 82-24-27·571	3317·9 2049·9	127-50-49·2 110-31-00· 103-54-10· 108-50-40· 223-42-10·	307-50-08·5	Monument No. 54 T. P. No. 211 Tower, City Hall, Port Huron. Dome, K. O. T. M. Bldg., Port Huron. Spire, R. C. Church, Sarnia.	5614·1 1574·1	3·7492830 3·1970444
Turning Point No. 211	42-58-38·220 82-24-47·402	3869·4 3523·9	143-00-41·2		T. P. No. 212	3699·1	3·5680911
Spire, R. C. Church, Port Huron, Mich.	42-58-44·10 82-24-12·85	4464·9 955·4					
Tower, City Hall, Port Huron, Mich.	42-58-44·11 82-25-30·01	4465·9 2231·0					
Tower, Court House, Port Huron, Mich.	42-58-44·12 82-25-30·03	4466·5 2232·3					
Stack, Kern's Brewery, Port Huron, Mich.	42-58-46·00 82-25-50·67	4657·1 3766·7					
Dome, K. O. T. M. Bldg., Port Huron, Mich.	42-58-48·18 82-25-29·08	4877·9 2161·7					
Stack, Sawmill, Sarnia, Ont.	42-58-51·98 82-24-21·30	5262·8 1583·7					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
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Monument No. 54.....	42-59-06·790	687·3	202-23-15·8	22-23-23·1	Monument No. 55.....	2089·6	3·3200657
	82-25-27·212	2022·6	265-10-00·		T. P. No. 212.....	736·2	2·8670071
			136-21-30·		Soldiers' Monument.		
			183-28-30·		Fort Gratiot Light.		
			287-00-30·		Tall Stack, Lumber Yard, Sarnia, Ont.		
Turning Point No. 212.....	42-59-07·403	749·3	161-11-17·9	.....	T. P. No. 213.....	2621·6	3·4185637
	82-25-17·343	1289·4					
Monument No. 55.....	42-59-25·874	2619·4	157-57-17·9	337-57-06·3	Monument No. 56.....	3367·3	3·5272847
	82-25-16·504	1226·7	123-58-00·		T. P. No. 213.....	1094·5	3·0392102
			19-15-40·		Soldiers' Monument.		
			102-29-45·		Fort Gratiot Rear Range Light.		
			176-40-55·		Fort Gratiot Light.		
Turning Point No. 213.....	42-59-31·914	3231·0	183-26-55·2	.....	T. P. No. 214.....	2025·4	3·3065057
	82-25-28·717	2134·2					
Fort Gratiot Rear Range Light.	42-59-30·16	3053·5					
	82-25-42·65	3169·9					
Fort Gratiot Front Range Light.	42-59-35·93	3637·8					
	82-25-38·58	2867·4					

Monument No. 56	42-59-56·702	5740·8	249-28-20·0	69-29-00·0	Monument No. 57	4649·9	3·6674403
	82-25-33·511	2490·2	315-35-00·		T. P. No. 214	683·1	2·8344649
			244-46-45·		Water Tank, Wees Beach, Ont.		
			274-54-10·		Spire on School, Pt. Edward, Ont.		
			277-26-45·		" Church, "		
Turning Point No. 214	42-59-51·883	5252·9	209-25-59·1		T. P. No. 215	5642·6	3·7514794
	82-25-27·078	2012·1					
Point Edward Back Range Light.	43-00-04·46	451·4					
	82-24-59·42	4415·7					
Point Edward Front Range Light.	43-00-10·17	1029·5					
	82-24-59·34	4409·1					
Fort Gratiot Light	43-00-22·41	2268·4					
	82-55-20·96	1557·7					
Water Tank, Wees Beach, Ontario.	43-00-51·07	5170·9					
	82-22-56·11	4168·6					
Monument No. 57	43-00-12·803	1296·3	130-22-28·8	310-21-51·0	Monument No. 58	5404·3	3·7327412
	82-24-34·910	2594·2	158-28-00·		T. P. No. 215	3005·9	3·4779745
			28-37-50·		Spire on School, Pt. Edward, Ont.		
			105-52-20·		Fort Gratiot Light.		
			242-10-05·		Water Tank, Wees Beach, Ont.		
Monument No. 58	43-00-47·378	4796·6	283-09-26·		T. P. No. 215	3095·3	3·4906947
	82-25-30·324	2252·9	268-06-45·		Water Tank, Wees Beach, Ont.		
			328-34-45·		Pt. Edward Front Range Light.		
			344-36-45·		Fort Gratiot Light.		

Locality, Lake Huron. Date.

Turning Point No. 215	43-00-40·421	4092·5	200-01-52·5		T. P. No. 216	225118·	5·3524103
	82-24-49·759	3697·2					
Port Sanilac Light	43-25-45·428	4599·7	241-47-44·5		T. P. No. 216	125400·	5·0982975
	82-32-23·609	1741·4					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 216.....	43-35-28·030 82-07-22·046	2838·9 1622·4	170-55-42·6	.....	T. P. No. 217.....	64431·	5·8098494
Thunder Bay Island Light...	45-02-14·948 83-11-38·393	1513·8 2757·4	237-31 41·1	.....	T. P. No. 217	205920·	5·3136985
Turning Point No. 217.....	45-20-19·346 82-31-06·405	1959·3 457·7	122 53-40·8	.....	T. P. No. 218.....	327499·	5·5152105
Monument No. 1.....	45-54-23·412 83-29-19·397	2371·7 1371·7	41-40-52·7	.....	T. P. No. 218	41515·	4·6182089
Monument No. 2.....	45-55-06·336 83-31-38·754	641·7 2739·8	26 38-09·7	.....	T. P. No. 218.....	39564·	4·5972977
Turning Point No. 218.	45-49-17·128 83-35-49·194	1734·9 3484·2	212-45-23·7	....	T. P. No. 219.....	76756·	4·8851118

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Monument No. 1.....	45-54-23·412 83-29-19·397	2371·7 1371·7	113-49-23·9 41-40-52·7	293-47-43·8	Monument No. 2..... T. P. No.218.....	10770·4 41515.4	4·0322328 4·6182089
Turning Point No. 218.....	45-49-17·128 83-35-49·194	1734·9 3484·2	212-45-23·7	.....	T. P. No. 219.....	76756·0	4·8851118

Monument No. 2	45-55-06·336	641·7	208-51-40·5	28-54-00·6	Monument No. 3	28505·3	4·4549254
	83-31-38·754	2739·8	26-38-09·7		T. P. No. 218	39563·8	4·5972977
Monument No. 3	45-59-12·744	1291·0	143-48-31·2	323-43-51·9	Monument No. 4	46309·5	4·6656700
	83-28-23·904	1688·0	247-31-00·		T. P. No. 219	10923·0	4·0383502
			313-54-30·		Cross on Indian Mission, Cockburn Island, Ont.		
Turning Point No. 219	45-59-53·957	5465·5	138-15-32·9		T. P. No. 220	52641·0	4·7213248
	83-26-00·944	66·6					
Cross on Indian Mission, Cockburn Island, Ont.	45-57-30·90	3129·9					
	83-25-52·26	3692·2					
Monument No. 4	46-05-21·517	2179·8	108-15-36·2	288-12-50·2	Monument No. 5	17095·9	4·2328935
	83-34-51·864	3655·8	201-17-00·		T. P. No. 220	6511·8	3·8137010
			161-29-44·4	341-28-35·0	Sulphur Island Light	21360·6	4·3296143
Turning Point No. 220	46-06-21·415	2169·3	105-25-18·4		T. P. No. 221	21848·4	4·3394191
	83-34-18·319	1290·7					
Sulphur Island Light	46-08-41·472	4201·1					
	83-36-28·145	1981·6					
Monument No. 5	46-06-14·333	1452·1	94-07-21·2	274-02-15·2	Monument No. 6	29997·8	4·4770899
	83-38-42·262	2978·0	159-15-00·		T. P. No. 221	6968·5	3·8431387
			212-21-14·7	32-22-51·4	Sulphur Island Light	17646·6	4·2466629
Turning Point No. 221	46-07-18·661	1890·4	75-28-20·2		T. P. No. 222	27483.3	4·4390694
	83-39-17·310	1219·5					
Monument No. 6	46-06-35.403	3586·3	119-00-58·3	298-58-46·6	Monument No. 7	14712·5	4·1676874
	83-45-46·916	3305·8	341-26-00·		T. P. No. 222	2668·6	3·4262884
			251-58-01·3	72-04-44·1	Sulphur Island Light	41377·4	4·6167632
Turning Point No. 222	46-06-10·430	1056·4	109-14-45·8		T. P. No. 223	17850·2	4·2516442
	83-45-34·858	2456·4					

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Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
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Monument No. 7	46-07-45·812	4640·7	44-59-34·9	224-55-34.7	Monument No. 8.....	33259·0	4·5219100
	83-48-49·584	3492·4	39-38-00·		T. P. No. 223.....	4915·0	3·6914960
			23-46-40·		Stack, Detour, Mich.		
			263-45-45·5	83-54-40·1	Sulphur Island Light.....	52518·0	4·7203086
Turning Point No. 223.....	46-07-08·445	855·3	42-38-38·2	....	T. P. No. 224.....	28932·0	4·4613819
	83-49-34·085	2401·2					
Monument No. 8.....	46-03-53·485	5418·0	86-59-27·2	266-57-37·6	Monument No. 9.....	10750·0	4·0314000
	83-54-23·056	1626·0	333-13-00·0		T. P. No. 224.....	1727·7	2·2374651
Turning Point No. 224.....	46-03-38·259	3875·6	84-10-39·6	....	T. P. No. 225.....	13259·8	4·1225374
	83-54-12·016	847·4					
Monument No. 9	46-03-47·886	4851·0	150-35-15·9	330-33-58·8	Monument No. 10.....	15352·0	4·1861734
	83-56-55·288	3899·6	35-48-00·		T. P. No. 225.....	2866·1	3·4572968
Turning Point No. 225.	46-03-24·937	2525·9	162-22-34·2	.....	T. P. No. 226.....	17470·0	4·2422875
	83-57-19·061	1344·2					
Monument No. 10	46-05-59·894	6067·9	143-44-30·2	323-43-32·6	Monument No. 11.....	9515·8	3·9784436
	83-58-42·274	2979·0	211-06-00·0		T. P. No. 226.....	1112·2	3·0461839

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Turning Point No. 226.....	46-06-09·295 83-58-34·121	941·6 2404·5	127-19-50·0	.....	T. P. No. 227.....	9561·3	3·9805179
Monument No. 11.....	46-07-15·634 84-00-02·166	1584·3 152·6	189-07-01·9 56-36-00· 48-15-24·0	09-07-17·3	Monument No. 12..... T. P. No 227..... Round Island Light.	9506·2 1677·2	3·9786068 3·2245750
Turning Point No. 227.....	46-07-66·519 84-00-22·042	660·4 1552·8	180-25-18·8	.....	T. P. No. 228.....	11360·0	4·0553752
Monument No. 12.....	46-08 48·291 83-59-40·773	4891·7 2870·7	129-54-42·4 110-25-00· 24-50-47·8	309-51-23·1	Monument No. 13..... T. P. No. 228..... Round Island Light.	25344·0 3011·1	4·4038817 3·4787323
Turning Point No. 228.....	46-08-58·659 84-00-20·854	5942·2 1468·2	127-28-49·1	.....	T. P. No. 229.....	22715 0	4·3563169
Monument No. 13.....	46-11-28·724 84-04-17·089	2910·4 1202·4	144-19-22·7 45-21-00·	324-18-41·9	Monument No. 14..... T. P No. 229.....	6812·0 1974·4	3·8332737 3·2954364
Turning Point No. 229.....	46-11-15·026 84-04-37·053	1522·0 2606·9	165-13-24·1	.....	T. P. No. 230.....	8599·2	3·9344568
Monument No. 14.....	46-12-23·345 84-05-13·574	2364·9 955·1	162-25-20·8 195-04-00· 46-41-06·1 102-04-45·4	342-24-39·9	Monument No. 15..... T. P. No. 230..... Pilot Island Front Range Light. △Winter Point (U.S.L S.)	13177·0 1443·6	4·1198125 3·1594369
Turning Point No. 230.....	46-12-37·106 84-05-08·238	3758·8 579·4	153-32-30·5	.....	T. P. No. 231.....	12749·0	4·1054769
Pilot Island Front Range Light.....	46-10-34·58 84-07-59·60	3502·9 4194·5					
Monument No. 15.....	46-14-27·345 84 06-10·187	2769·7 716·2	182-35-16·6 100-30-00· 54-47-56·5	02-35-19·0	Monument No. 16..... T. P. No. 231..... Winter Point Front Range Light.	5145·2 1348·4	3·7114059 3·1298260

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Turning Point No. 231.....	46-14-29·770 84-06-29·050	3015·7 2042·0	206-15-19·7	.....	T. P. No. 232.....	6071·8	3·7833208
Winter Point Front Range Light	46-13-03·26 84-09-01·82	330·4 128·0					
Monument No. 16.....	46-15-18 085 84-06-06·881	1831·7 483·3	140-18-18·8 243-58-29·0 201-01-56·2	320-17-32·9	Monument No. 17..... . T. P. No. 232 .... Sailor's Encampment Front Range Light.	6994·3 1255·5	3·8447431 3·0988182
Turning Point No. 232.....	46-15-23·523 84-05-50·826	2383·9 3572·5	133-24-31·5	.....	T. P. No. 233..... ...	6191·6	3·7918013
Sailor's Encampment Front Range Light.....	46-15-41·17 84-05-54·08	4170·6 3800·0					
Monument No. 17.....	46-16-11·207 84-07-10·468	1135·2 735 2	186-19-57·3 297-41-58·6 299-32-36·1	06-20-15·4	Monument No. 18..... T. P. No. 233..... Sailor's Encampment Front Range Light.	15906·0 1239·4	4·2015560 3·0931979
Turning Point No. 233.....	46-16-05·520 84-06-54·849	559·1 3853·3	176-35-41·1	.....	T. P. No. 234.....	17113·4	4·2333370
Monument No. 18.....	46-18-47·262 84-06-45·476	4787·4 3192·6	238-06-34·5 112-38-02·1	58-06-59·0	Monument No. 19..... T. P. No. 234.....	2801·0 1814 2	3·4473132 3·2586801

Turning Point No. 234	46-18-54·153	5485·9	232-48-40·4		T. P. No. 235	4283·9	3·6318404
	84-07-09·330	654·9					
Monument No. 19	46-19-01·868	189·3	157-17-56·0	337-17-18·9	Monument No. 20	9322·3	3·9695214
	84-06-11·595	814·0	160-31-00·		T. P. No. 235	1917·3	3·2826944
Turning Point No. 235	46-19-19·711	1996·7	149-08-47·3		T. P. No. 236	6962·2	3·8427471
	84-06-20·706	1453·4					
Monument No. 20	46-20-26·760	2711·0	150-35-26·3	330 34-22·0	Monument No. 21	12696·0	4·1036579
	84-07-02·871	201·4	36-53-00·		T. P. No. 236	1019·7	3·0084652
Turning Point No. 236	46-20-18·709	1895·3	158-58-30·3		T. P. No. 237	13314·8	4·1243357
	84-07-11·593	813·3					
Monument No. 21	46-22-15·925	1612·9	147-10-21·2	327-08-18·7	Monument No. 22	21856·0	4·3395787
	84-08-31·773	2227·7	236-47-00·		T. P. No. 237	1010·5	3·0045349
			173-52-13·6		Lake George Light.		
Turning Point No. 237	46-22-21·389	2166·6	174-00-00.7		T. P. No. 238	16992·0	4·2302455
	84-08-19·717	1382·9					
Monument No. 22	46-25-17·188	1741·1	215-34-23·9	35-38-21·3	Monument No. 23	39368·8	4·5951525
	84-11-20·894	1463·9	274-45-00·		T. P. No. 238	10955·4	4·0396266
			290-26-25·9		Lake George Light.		
Turning Point No. 238	46-25-08·204	831·0	195-45-35·5		T. P. No. 239	32380·3	4·5102812
	84-08-45·067	3157·5					
Monument No. 23	46-30-33·150	3359·2	127-37-43·3	307-36-47·9	Monument No. 24	6736·8	3·8284554
	84-05-53·468	3740·7	61-18-00·		T. P. No. 239	3658·8	3·5633370
			19-26-21·8		Lake George Light.		
Turning Point No. 239	46-30-15·803	1601·0	160-28-00·4		T. P. No. 240	5307·8	3·7249177
	84-06-39·345	2752·3					
Monument No. 24	46-31-13·744	1392·1	157-09-08·2	337-08-50·1	Monument No. 25	4491·3	3·6523734
	84-07-09·762	681·8	337-53-00·		T. P. No. 240	936·4	2·9714382
			106-37-00·		T. P. No. 241	987·5	2·9945507

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	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 240. . . .	46-31-05·181	524·9	131-31-02·2	.....	T. P. No. 241.....	1734·7	3·2392170
	84-07-04·721	330·1					
Turning Point No. 241. . .	46-31-16·531	1674·5	157-27-47·3	.....	T. P. No. 242	3713·3	3·5697579
	84-07-23·294	1628·9					
Monument No. 25..... ...	46-31-54·599	5531·1	84-52-52·6	264-52-09·3	Monument No. 26..... .	4188·4	3·6220470
	84-07-34·704	2426·4	55-41-00·		T. P. No. 242.....	757·2	2·8792200
Turning Point No. 242.....	46-31-50·385	5104·3	105-15-38·4	.....	T. P. No. 243.....	2732·3	3·4365280
	84-07-43·649	3051·8					
Monument No. 26.....	46-31-50·906	5157·5	64-26-58·5	244-26-32·9	Monument No. 27.....	2735·1	3·4369707
	84-08-34·368	2403·5	233-48-00·		T. P. No. 243.....	1128·0	3·0522901
			98-36-00·		T. P. No. 244.....	956·7	2·9807717
Turning Point No. 243.....	46-31-57·482	5823·2	74-15-45·7	.....	T. P. No. 244..... ...	1928·4	3·2852038
	84-08-21·350	1492·8					
Turning Point No. 244.....	46-31-52·318	5300·2	59-49-19·0	.....	T. P. No. 245.....	1986·5	3·2980799
	84-08-47·897	3348·7					
Monument No. 27.....	46-31-39·260	3978·3	71-18-57·7	251-18-06·5	Monument No. 28.....	5208·7	3·7167324
	84-09-09·658	675·5	148-53-00·		T. P. No. 245.....	378·6	2·5781900
Turning Point No. 245.....	46-31-42·460	4301·5	77-43-00·3	.....	T. P. No. 246.....	3390·0	3·5301947
	84-09-12·456	871·1					

Garden River Church Spire	46-31-48·20 84-09-38·17	4882·9 2669·0					
Monument No. 28	46-31-22·783 84-10-20·218	2308·7 1413·7	121-04-50·0 228-16-00· 139-50-00·	301-03-43·3	Monument No. 29 T. P. No. 246 T. P. No. 247	7500·0 1910·8 2036·7	3·8750619 3·2812056 3·3089359
Turning Point No. 246	46-31-35·338 84-09-59·826	3580·0 4183·4	95-55-55·9		T. P. No. 247	2754·4	3·4400238
Turning Point No. 247	46-31-38·146 84-10-39·006	3864·5 2727·4	140-01-34·3		T. P. No. 248	6255·1	3·7962312
Monument No. 29	46-32-00·992 84-11-52·090	100·4 3641·7	81-43-51·8 203-45-00·	261-42-53·0	Monument No. 30 T. P. No. 248	5719·7 2708·0	3·7573718 3·4326487
Turning Point No. 248	46-32-25·459 84-11-36·489	2579·1 2550·8	74-29-34·8		T. P. No. 249	8415·4	3·9250741
Monument No. 30	46-31-52·864 84-13-13·044	5355·3 912·1	43-31-48·6 127-43-00·	223-30-09·7	Monument No. 31 T. P. No. 249	13847·0 1717·2	4·1413684 3·2348179
Turning Point No. 249	46-32-03·234 84-13-32·473	327·8 2270·3	30-59-15·1		T. P. No. 250	14148·4	4·1506974
Monument No. 31	46-30-13·740 84-15-29·379	1392·1 2055·4	30-16-25·6 319-15-00·	210-16-06·3	Monument No. 32 T. P. No. 250	3691·5 1370·1	3·5672048 3·1367447
Turning Point No. 250	46-30-03·495 84-15-16·595	354·0 1160·8	49-07-37·4		T. P. No. 251	3559·5	3·5513948
Monument No. 32	46-29-42·269 84-15-55·978	4282·1 3916·7	60-22-22·2 340-23-00·	240-22-04·4	Monument No. 33 T. P. No. 251	1970·6 190·3	3·2946019 2·2794122
Turning Point No. 251	46-29-40·500 84-15-55·065	4103·0 3852·7	78-42-52·7		T. P. No. 252	2762·8	3·4413481
Monument No. 33	46-29-32·652 84-16-20·460	3307·7 1431·8	100-33-04·6 105-15-00·	280-31-59·7	Monument No. 34 T. P. No. 252	6371·4 966·5	3·8042350 2·9852169

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	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 252.....	46-23-35·161	3562·0	89-49-20·3	.....	T. P. No. 253.....	4410·0	3·6444425
	84-16-33·788	2364·2					
Indian Home Flagpole, Ont.	46-30-02·29	232·0					
	84-17-14·57	1019·0					
Monument No. 34.....	46-29-44·159	4473·4	117-44-58·0	297-43-47·4	Monument No. 35	7697·3	3·8863407
	84-17-49·986	3497·0	315-08-00·		T. P. No. 253	1306·1	3·1159764
			155-23-59·2	335-23-51·5	Azimuth Monument	1776·6	3·2494470
Turning Point No. 253.....	46-29-35·021	3547·9	107-44-14·7	.....	T. P. No. 254.	8309·1	3·9195552
	84-17-36·817	2576·1					
Azimuth Monument.....	46-30-00·099	10·2					
	84-18-00·554	38·7					
Monument No. 35.	46-30-19·525	1978·0	70-02-48·0	250-02-01·4	Monument No. 36.....	4781·0	3·6795146
	84-19-27·368	1914·4	05-12-00·		T. P. No. 254.....	1986·9	3·2981701
			287-56-45·1	107-57-48·1	Azimuth Monument	6384·0	3·8050947
Turning Point No. 254.....	46-29-59·993	6077·7	123-37-48·4	.....	T. P. No. 255.....	5058·4	3·7040143
	84-19-29·942	2094·8					
Spire, R. C. Church, Sault Ste. Marie, Ont.....	46-30-27·24	2759·5					
	84-19-32·34	2262·1					
Tower on Post Office, Sault Ste. Marie, Ont..... ..	46-30-29·11	2949·1					
	84-19-39·47	2760·8					

Flagpole, International Hotel, Sault Ste. Marie, Ont.....	46-30-48·34 84-20-08·85	4896·7 619·1					
Spire, R.C. Church, Sault Ste. Marie, Mich.....	46-29-54·72 84-20-27·50	5543·3 1923·9					
Monument No. 36.....	46-30-03·415 84-20-31·606	345·8 2211·0	91-03-02·3 182-22-10·6 112-32-20·9	271-01-42·7	Monument No. 37..... T. P. No. 255..... U. S. Canal Office.	7677·4 2456·5	3·8852126 3·3903215
Turning Point No. 255.....	46-30-27·643 84-20-30·154	2800·5 2109·2	94-14-25·2	.....	T. P. No. 256.....	8143·0	3·9107860
Flagpole, Court House, Sault Ste. Marie, Mich.....	46-29-53·99 84-20-41·91	5469·5 2931·8					
U. S. Canal Office Tower, Sault Ste. Marie, Mich ...	46-30-10·19 84-20-55·25	1032·1 3865·8					
Wireless Station on Hill, Sault Ste. Marie, Mich.	46-29-16·46 84-21-21·40	1668·0 1497·7					
Water Tower, Sault Ste. Marie, Mich.	46-29-29·41 84-21-30·15	2979·3 2109·6					
Flagpole, Fort Brady, Sault Ste. Marie, Mich.....	46-29-36·03 84-21-33·27	3649·9 2327·8					
Monument No. 37...	46-30-04·790 84-22-21·331	485·2 1492·5	107-39-54·5 173-16-00·	287-38-48·0	Monument No. 38..... T. P. No. 256.....	6732·3 2936·0	3·8281643 3·4677587
Turning Point No. 256.....	46-30-33·570 84-22-26·252	3400·9 1836·3	54-28-46·0	.....	T. P. No. 257.....	6614·0	3·8204656
Wireless Station, Canal Bank, Sault Ste. Marie, Mich.	46-30-05·00 84-22-01·18	506·2 82·3					
Kelley and Meyer Stack, Sault Ste. Marie, Mich.	46-29-40·41 84-22-43·56	4093·8 3047·6					

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Flagpole, School, Algonquin, Mich.	46-29-26·44 84-23-12·96	2678·5 906·2					
Stack, Upper Penninsula Lumber Co., Mich.....	46-29-34·92 84-23-26·82	3537·7 1876·6					
Monument No. 38.....	46-30-24·946 84-23-53·037	2527·2 3710·0	34-19-40·7 346-57-00·	214-18-53·0	Monument No. 39..... T. P. No 257.....	8164·3 3048·5	3·9119180 3·4840934
Turning Point No. 257.....	46-29-55·631 84-23-43·198	5635·8 3022·0	96-18-42·3	.....	T. P. No. 258.....	6493·6	3·8124879
Monument No. 39.....	46-29-18·387 84-24-58·834	1862·9 4116·8	55-50-32·6 165-28-00·	235-49-37·1	Monument No. 40 ..... T. P. No. 258.....	6468·3 4634·2	3·8107913 3·6659727
Turning Point No. 258.....	46-30-02·668 84-25-15·457	270·3 1081·4	55-21-34·0	.....	T. P. No. 259.....	7373·7	3·8676847
Monument No. 40.....	46-28-42·530 84-26-15·313	4308·4 1071·5	62-19-52·8 154-26-00·	242-18-13·9	Monument No. 41 ..... T. P. No. 259.....	10777·0 4352·4	4·0324907 3·6387242
Turning Point No. 259..... .	46-29-21·285 84-26-42·156	2156·2 2943·8	30-08-03·2	.....	T. P. No. 260.....	15272·0	4·1838975
East Stack of Waterworks, Sault Ste. Marie, Mich.	46-29-16·69 84-25-01·26	1690·9 88·3					

Monument No. 41.	46-27-53·109	5380·2	108-44-06·1	288-41-52·4	Monument No. 42.	13628·0	4·1344318
	84-28-31·654	2215·9	00-00-00·		T. P. No. 260	4276·9	3·6311286
Turning Point No. 260.	46-27-10·891	1103·3	98-05-05·1		T. P. No. 261	20662·5	4·3151823
	84-28-31·654	2216·2					
Monument No. 42.	46-28-36·276	3674·9	141-14-23·5	321-05-48·7	Monument No. 43	79019·0	4·8977317
	84-31-36·053	2523·3	52-41-00·		T. P. No. 261	9490·1	3·9772726
Turning Point No. 261	46-27-39·472	3998·7	140-44-45·6		T. P. No. 262	81796·0	4·9127333
	84-33-23·860	1670·3					
Stack at Bay Mills, Mich.	46-25-58·94	5971·1					
	84-34-52·02	3643·7					
Monument No. 43.	46-38-43·892	4446·5	67-37-00·		T. P. No. 262	10598.4	4·0252405
	84-43-25·085	1750·3					
Turning Point No. 262.	46-38-04·030	408·1					
	84-45-45·512	3176·5					
Thessalon Light	46-14-16·12	1633·2					
	83-34-05·73	402·9					
Sulphur Island Light	46-08-41·47	4201·1					
	83-36-28·15	1981·6					
Pilot Island, Front Range Light.	46-10-34·58	3502·9					
	84-07-59·60	4194·5					
Pilot Island, Rear Range Light.	46-10-16·37	1658·1					
	84-08-07·04	495·4					
Light No. 1, West Neebish Channel.	46-12-08·55	866·1					
	84-08-11·52	810·4					
" No. 2, "	46-12-11·20	1134·5					
	84-08-08·54	600·7					

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Light No. 4, West Neebish Channel.	46-12-38·72	3922·2					
	84-08-58·78	4133·8					
" No. 3, "	46-12-36·19	3666·0					
	84-09-01·60	112·5					
" No. 6, "	46-13-10·82	1096·1					
	84-09-57·44	4039·0					
" No. 5, "	46-13-19·34	1959·3					
	84-10-20·40	1434·4					
" No. 8, "	46-13-37·71	3819·9					
	84-10-20·46	1438·6					
" No. 7, "	46-14-20·56	2083·0					
	84-10-38·35	2695·5					
" No. 10, "	46-14-21·15	2142·4					
	84-10-34·12	2398·3					
" No. 12, "	46-16-02·64	267·4					
	84-11-29·73	2088·9					
" No. 9, "	46-16-00·82	83·0					
	84-11-33·26	2336·6					

Light No. 14,	West Neebish Channel.	46-16-56·87 84-12-27·92	5761·1 1961·3
" No. 11,	"	46-16-55·06 84-12-31·49	5577·7 2211·6
" No. 14½,	"	46-17-07·78 84-12-39·66	788·0 2785·4
" No. 13,	"	46-17-10·83 84-12-49·42	1097·1 3470·8
" No. 15,	"	46-17-58·20 84-12-56·18	5896·3 3944·9
" No. 16,	"	46-17-58·10 84-12-51·60	5886·1 3623·0
" No. 17,	"	46-18-47·57 84-12-54·14	4819·2 3800·8
" No. 18,	"	46-18-47·42 84-12-49·54	4804·1 3477·7
" No. 19,	"	46-19-51·74 84-12-51·62	5241·5 3622·4
" No. 20,	"	46-19-51·64 84-12-46·94	5231·3 3294·0
" No. 21,	"	46-20-44·85 84-12-49·38	4543·3 3463·9
" No. 22,	"	46-21-10·85 84-12-43·57	1098·8 3056·6
" No. 23,	"	46-21-34·23 84-13-01·06	3467·5 74·8

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	° ′ ″		° ′ ″	° ′ ″			
Light No. 25, West Neebish Channel.	46-22-49·62 84-13-41·67	5026·2 2921·3					
" No. 24, "	46-22-50·80 84-13-37·14	5145·7 2603·7					
Winter Point Front Range Light.	46-13-03·26 84-09-01·82	330·4 128·0					
Winter Point Rear Range Light.	46-13-08·22 84-09-10·10	832·7 710·0					
Sailor's Encampment Crib Light.	46-14-58·76 84-06-07·47	5952·4 524·9					
Rains Wharf Back Range Light.	46-15-14·08 84-05-36·45	1426·2 2561·3					
Rains Wharf Front Range Light.	46-15-17·10 84-05-41·05	1732·3 2884·5					
Sailor's Encampment Front Range Light.	46-15-41·17 84-05-54·08	4170·6 3800·0					
Sailor's Encampment Back Range Light.	46-15-48·91 84-05-51·06	4954·7 3588·2					

Dark Hole Rear Range Light.	46–15–48·80 84–06–53·42	4943·6 3753·3
" Front Range Light.	46–15–53·85 84–06–53·85	5455·0 3783·5
Point of Woods Front Range Light.	46–16–18·30 84–07–14·34	1853·7 1007·2
Point of Woods Rear Range Light.	46–16–20·37 84–07–17·49	2063·6 1228·7
Hen and Chickens Rear Range Light.	46–18–30·09 84–07–57·95	3048·2 4068·2
Hen and Chickens Front Range Light.	46–18–40·34 84–07–39·39	4086·6 2765·4
Stribling Point Back Range Light.	46–18–41·86 84–06–26·03	4240·5 1827·4
Stribling Point Front Range Light.	46–18–47·18 84–06–45·17	4780·5 3170·9
Shoal Island Light.....	46–18–48·66 84–04–31·86	4929·5 2236·5
Harwood Point Front Range Light.	46–19–18·90 84–07–11·46	1915·4 804·1
Harwood Point Rear Range Light.	46–19–26·01 84–07–12·08	2634·8 847·8
Light No. 1, Middle Neebish Channel.	46–19–21·79 84–08–57·46	2207·3 4032·8
" No. 2, "	46–19–25·38 84–08–53·86	2571·2 3780·7

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Light No. 3, Middle Neebish Channel.	46-19-32·36	3278·2					
	84-09-34·89	2448·8					
" No. 4, "	46-19-36·55	3702·7					
	84-09-33·73	2367·4					
" No. 5, "	46-19-43·80	4437·0					
	84-10-15·38	1079·4					
" No. 6, "	46-19-47·65	4827·1					
	84-10-13·64	957·3					
" No. 7, "	46-19-58·30	5906·2					
	84-11-02·23	156·5					
" No. 8, "	46-20-06·42	651·6					
	84-10-58·49	4104·3					
" No. 9, "	46-20-05·94	601·7					
	84-11-30·13	2114·5					
Lower Hay Lake Front Range Light No. 10.	46-19-29·91	3030·2					
	84-10-31·81	2232·3					
Lower Hay Lake Rear Range Light No. 11.	46-19-14·80	1499·3					
	84-10-19·45	1365·2					

Lower Hay Lake Light No. 13.	46-20-47·22 84-11-38·35	4783·5 2690·6
Ninemile Point Light No. 16.	46-23-35·70 84-13-47·11	3616·1 3302·2
Sixmile Point Front Light No. 19.	46-26-22·56 84-15-56·52	2285·4 3958·6
Sixmile Point Rear Light No. 20.	46-26-04·26 84-15-43·12	432·1 3020·3
Middle Hay Lake Front Range Light No. 17.	46-26-11·34 84-15-20·90	1148·9 1464·2
Middle Hay Lake Rear Range Light No. 18.	46-26-41·12 84-15-36·74	4165·0 2572 8
Frechette Point Front Range Light No. 21.	46-27-17·92 84-16-42·28	1815·3 2960·3
Frechette Point Rear Range Light No. 22.	46-27-38·54 84-17-04·18	3904·2 292·3
Light No. 23, Lower West Light.	46-28-24·08 84-17-31·60	2439·3 2211·3
Light No. 24, Lower East Light.	46-28-31·31 84-17-25·18	3171·9 1761·8
Light No. 26, Upper East Light.	46-29-08·13 84-17-52·31	823·5 3660·4
Light No. 25, Upper West Light.	46-29-12·67 84-18-07·24	1283·5 506·6
Light No. 27, North Entrance Light.	46-29-32·79 84-18-22·89	3321·5 1601·7

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Marys River. Date .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Bayfield, Front Range Light.	46-29-20·63	2089·9					
	84-16-58·40	4086·6					
Bayfield, Rear Range Light..	46-29-17·59	1781·8					
	84-16-45·72	3199·1					
Lower Entrance, Front Range Light.	46-30-59·94	6072·2					
	84-20-50·97	3564·3					
Lower Entrance, Back Range Light.	46-31-10·63	1076·8					
	84-21-02·83	197·2					
Upper Entrance, Front Range Light.	46-30-50·98	5164·7					
	84-22-21·64	1513·4					
Upper Entrance, Back Range Light.	46-30-58·86	5962·9					
	84-22-07·69	537·7					
South Pier Light	46-30-05·19	525·3					
	84-22-22·49	1573·2					
Brush Point, Front Range Light.	46-27-52·58	5326·8					
	84-27-19·32	1352·3					
Brush Point, Rear Range Light.	46-27-56·44	5717·5					
	87-26-59·73	4181·1					

Pointe aux Pins, Main Light.	46–27–51·77 84–28–21·56	5244·7 1508·9					
Pointe aux Pins, Front Range Light.	46–28–04·53 84–28–19·67	459·0 1376·3					
Pointe aux Pins, Back Range Light.	46–27–59·21 84–28–29·91	5998·3 2093·5					
Cedar Point, Front Range Light.	46–26–21·75 84–30–09·96	2202·8 697·5					
Cedar Point, Rear Range Light.	46–26–16·56 84–29–55·36	1677·5 3877·6					
Birch Point, Front Range Light.	46–26–02·16 84–31–23·27	219·2 1629·9					
Birch Point, Rear Range Light.	46–25–54·89 84–31–14·21	5560·7 995·1					

Locality, Lake Superior. Date .. ..

Turning Point No. 262	46–38–04·030 84–45–45·512	408·1 3176·5	165–19–10·5	T. P. No. 263....	96014	4·9823353
Coppermine Point Light.....	46–59–03·488 84–47–13·627	353·3 944·6	27–40–35·8	" 263.....	39210	4·5933958
Whitefish Point Light	46–46–16·736 84–57–25·912	1695·5 1804·1	209–30–30·0	" 263.....	49368	4·6934450
Turning Point No. 263.....	46–53–20·668 84–51–35·830	2093·8 2488·8	122–07–10·9	" 264.....	1008035	6·0034761
Passage Island Light	48–13–25·321 88–21–56·073	2565·9 3797·2	178–38–12·2 95–39–00·0	" 264..... " 265.....	29906 76772	4·4757633 4·8852001

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Lake Superior. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Turning Point No. 264. . .	48-18-20·355 88-22-06·597	2062·7 446·2	73-33-12·5		T. P. No. 265.....	78915	4·8971596
Turning Point No. 265.....	48-14-38·368 88-40-44·728	3888·4 3027·6	58-46-04·4		" 266.....	188545	5·2754151
Victoria Island Light.....	48-04-53·886 89-21-35·875	5460·6 2436·0	351-55-12·6		" 266	39615	4·5978645
Rock of Ages Light..... ...	47-51-59·720 89-18-52·557	6051·2 3583·6	171-57-13·9		" 266.....	39615	4·5978645
Turning Point No. 266.	47-58-26·815 89-20-14·047	2717·2 955·7	111-42-17·4		" 267.....	40029	4·6023762

Locality, Pigeon Bay. Date..... .....

Monument No. 1.....	48-00-20·421 89-29-30·402	2069·2 2067·6	82-20-17·2 109-29-13·9 191-04-00·	262-16-59·2 289-27-30·7	Monument No. 2	18287	4·2621434
					Azimuth Monument..	10018	4·0007911
					T. P. No. 267.....	3317	3·5207354
Azimuth Monument.....	48-00-53·379 89-31-49·306	5409·1 3352·4					

Turning Point No. 267	48-00-52·545 89-29-21·038	5324·5 1430·4	76-42-48·		T. P. 268	18943	4·2774517
Monument No. 2	47-59-56·274 89-33-56·878	5702·4 3868·4	101-09-05·3 236-16-56·5 193-34-00·	281-08-52·7 56-18-31·3	Monument No. 3 Azimuth Monument T. P. No. 268	1174·2 10428 1378	3·0697256 4·0182025 3·1392335
Turning Point No. 268	48-00-09·493 89-33-52·125	961·9 3544·9	44-53-26·		T. P. No. 269	1719	3·2351816
Monument No. 3	47-59-58·515 89-34-13·816	5929·4 939·6	291-50-56·8 240-29-12·0	60-30-59·4	T. P. No. 269 Azimuth Monument	283 11290·6	2·4512112 4·0527156
Turning Point No. 269, mouth of Pigeon River.	47-59-57·477 89-34-09·959	5824·1 677·5					
South Pigeon	47-59-56·985 89-34-08·122	5773·9 552·5	111-45-46·2		T. P. No. 269	134·5	2·1287682

APPENDIX III.

TABLE OF POSITIONS, AZIMUTHS, AND LENGTHS, PROMINENT POINTS, LIGHTS, BOUNDARY TURNING POINTS, AND MONUMENTS DETERMINED BY THE COMMISSION.

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Boundary Post No. 774, Saint Regis.	44-59-58·228	5897·3	72-28-05·26	252-27-17·17	△ 2 (I.W.C.)	5125·3	3·7097225
	74-39-41·491	2909·8	144-15-45·18	324-15-19·74	1	4424·9	3·6459047
			108-43-16·51	288-42-42·03	3	3699·8	3·5681769
△ 1 (I.W.C.).....	45-00-33·691	3412·1	20-55-26·31	200-55-17·26	3	2574·1	3·4106212
	74-40-16·464	1183·1					
3	45-00-09·951	1007·9	26-50-54·92	206-50-41·31	2	3061·7	3·4859643
	74-40-29·257	2102·7	70-40-39·17	250-40-16·65	5	2425·2	3·3847548
5	45-00-02·026	205·1	334-56-28·75	154-50-37·66	2	2131·3	3·3286411
	74-41-01·106	79·4	48-58-10·91	228-57-41·83	4	3918·4	3·5931060
2	44-59-42·978	4352·7	80-32-51·19	260-32-13·21	4	3915·1	3·5927452
	74-40-48·498	3485·2	144-21-28·58	324-21-05·39	7	4044·4	3·6068560
4	44-59-36·626	3709·3	119-22-09·12	299-21-10·73	11	6809·0	3·8330817
	74-41-42·236	3035·4	200-56-51·38	20-57-06·19	7	4208·2	3·6240932

△ 7	45-00-15·429	1562·7	52-47-01·29	232-46-02·57	△ 6 (U.S.L.S. No. 8)	7494·6	3·8747471
	74-41-21·298	1530·5	85-27-49·78	265 26-36·58	11	7461·8	3·8728416
6 (U.S.L.S. No. 8)	44-59-30·663	3105·6	59-03-13·57	239-02-34·58	8 (U.S.L.S. No. 6)	4621·7	3 6647993
	74-42-44·343	3187·0	159-32-10·29	339-51-55·82	11	4207·9	3·6240656
11	45-00-09·589	971·1	21-31-25·22	201-31-00·70	8 (U.S.L.S. No. 6)	6792·8	3·8320512
	74-43-04·817	346·1	47-39-30·82	227-38-47·58	13	5945·2	3·7741660
8 (U.S.L.S. No. 6)	44-59-07·193	728·3	140-34-54·10	320-34-35·39	13	2996·1	3·4765513
	74-43-39·490	2838·6	116-09-25·69	296-09-06·10	10	2218·8	3·3460884
13	44-59-30·046	3043·0	03-48-14·68	183-48-15·80	10	1339·4	3·1269288
	74-44-05·960	428·1	36 32-51·82	216-32-37·37	12	2466·0	3 3920037
10	44-59-16·850	1706·7	64-57-20·34	244-57-06·77	12	1522·8	3·1826464
	74-44 07·1 7	517·4	120-34-48·76	300-34-26·61	15	2616·2	3·4176700
12	44-59-10·484	1061·7	89-39-57·10	269-39-16·51	14	4127·5	3·6156826
	74-44-26·392	1897 0	156-09-49·31	336-09-40·73	15	2159·8	3·3344077
15	44-59-29·990	3037·4	58-25-51·35	238-25-19·34	14	3819·8	3·5820382
	74-44-38·536	2769·7	117-56-41·39	297-56-03·99	17	4647·9	3·6672513
14	44-59-10·242	1037·4	128-01-58·90	308-01-31·15	16	3581·8	3·5541015
	74-45-23·816	1711·9	168-28-22·84	348-28-14·46	17	4263·8	3·6297924
16	44-59-32·030	3244·1	161-54-02·48	341-53-54·46	18	2625·5	3·4192094
	74-46-03·071	220·8	224-58-00·66	44-58-20·03	17	2786·1	3·4449986
17	44-59-51·492	5215·2	100-40-10·98	280-39-43·58	18	2833·5	3·4523269
	74-45-35·672	2563·3	155-21-20·61	335-21-01·42	19	4675·6	3·6698359
19	45-00-33·452	3388·1	12-37-39·04	192-37-30·82	18	3817·5	3·5817791
	74-46-02·808	201·8	89-05-14·30	269-04-40·20	21 (U.S.L.S. No. 16)	3464·4	3·5396340
West Base, Cornwall (I.W.C.)	45-00-41·465	4199·5	278-40-18·47	98-40-47·20	East Base	2952·3	3·4701554
	74-47-26·840	1928·1	345-21-14·99	165-21-25·02	20 Eccentric	4031·9	3·6055126

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Bank Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
East Base, Cornwall,(I.W.C.)	45-00-37·068	3754·3	330-49-04·85	150-49-27·33	△18 (I.W.C.).....	4686·0	3·6708052
	74-46-46·218	3320·5	28-47-53·50	208-47-34·80	20 Eccentric	3943·2	3·5958509
△20 Eccentric.....	45-00-02·947	298·6	207-07-23·10	27-07-38·40	21 (U.S.L.S. No. 16)	3408·9	3·5326109
	74-47-12·653	909·1	278-38-01·09	98-38-42·26	18...	4232·4	3·6265877
18.....	44-59-56·670	5739·5	98-49-40·66	278-48-59·68	20.....	4214·8	3·6247800
	74-46-14·422	1036·4	144-22-37·22	324-22-11·34	21 (U.S.L.S. No. 16)....	4514·7	3·6546318
21 (U.S.L.S. No. 16)..	45-00-32·904	3332·3	26-55-02·44	206-54-47·33	20.....	3390·6	3·5362713
	74-46-51·021	3665·7	81-17-17·63	261-16-33·43	22....	4542·5	3·6572971
20..... ...	45-00-03·053	309·1	128-19-42·16	308-18-13·08	22.....	3766·5	3·5759350
	74-47-12·382	889·8	156-56-55·62	336-56-35·65	25 (U.S.L.S. No. 18).....	5181·0	3·7144135
22.....	45-00-26·106	2644·0	105-36-21·96	285-35-48·32	26	3548·3	3·5500151
	74-47-53·515	3844·8	200-50-55·88	20-51-05·00	25 (U.S.L.S. No. 18).....	2602·9	3·4154573
25 (U.S.L.S. No. 18).....	45-00-50·124	5076·4	71-12-45·58	251-12-02·82	26.....	4588·4	3·6616578
	74-47-40·620	2918·0	119-27-51·87	299-27-22·30	27.....	3449·1	3·5377034
27.....	45-01-06·874	696·2	22-53-33·81	202-53-20·61	26.....	3445·9	3·5372979
	74-48-22·424	1610·9	67-35-20·99	247-34-47·63	29.....	3665·0	3·5640858
26.....	45-00-35·529	3598·4	85 12-33·09	265-11-58·98	28.....	3477·1	3·5412208
	74-48-41·081	2951·4	130-56-54·67	310-56-34·51	29.....	2711·4	3·4331980

△ 28 (I.W.C.)	45–00–32·660	3307·7	134–40–54·25	314–40–49·79	△ 30 (I.W.C)	1923·3	3·2840542
	74–49–29·308	2105·6	214–25–04·56	34–25–18·51	29	2506·4	3·3990573
29	45–00–53·074	5375·3	75–35–49·22	255–35–21·81	30	2874·6	3·4585829
	74–49–09·588	688·6	103–42–42·01	283–41–14 00	31	2931·3	3·4670622
31	45–00–59·924	6069·2	357–24–15·37	177–24–16·00	30	1410·5	3·1493657
	74–49–49·232	3536·4	82–29–16·44	262–28–54·01	33	2297·4	3·3612303
30	45–00–46·012	4660·1	63–35–17·93	243–35–05·36	32	1425·3	3·1538963
	74–49–48·343	3173·1	115–20–13·71	295–19–50·66	33	2590·7	3·4134237
32	45–00–39·751	4025·9	73–29–08·84	253–28–46·10	34	2409·7	3·3819713
	74–50–06·111	439·3	148–33–56·32	328–33–45·84	33	2042·4	3·3101304
33	45–00–56·957	5768·7	27–09–08·38	207–08–56·12	34	2728·3	3·4358960
	74–50–20·937	1503·9	60–37–19·65	240–36–44·75	35	4068·6	3·6094477
34	45–00–32·986	3340 9	41–22–43·86	221–22–23·15	36	3183·1	3·5028464
	74–50–38·267	2749·3	100–37–34 08	280–37–11·44	35	2340·5	3·3693056
36	45–00–09·402	952·1	100–39–49·20	280–39–28·89	38	2100·0	3·3222336
	74–51–07·550	542·6	176–00–50·00	356–00–48·07	35	2826·8	3·4513010
35	45–00–37·246	3772·3	37–31–18·84	217–31–00·46	38	3065·7	3·4865227
	74–51–10·285	738·8	86–47–14·82	260–46–40·07	37	3576·6	3·5534757
37	45–00–31·589	3199·5	318–10–01·92	138–10–18·29	38	2494·4	3·3969609
	74–51–59·424	4269·3	14–42–31·66	194–42–26·40	39	2106·0	3·3234594
38	45–00 13 238	1340·5	22–16–10·52	202–16–05·02	40	1474·6	3·1686740
	74–51–36·272	2606·3	85–21–50·09	265–21–28·45	39	2205·6	3·3135273
40	44–59–59·765	6052·8	94–10–54·90	274–10–16·35	42	3928·5	3·5942285
	74–51–44·048	3165·3	125–53–12·73	305–52–56·60	39	2023·8	3·3061573
39	45–00–11·477	1162·4	68–26–43·41	248–26–20·99	42	2449·7	3·3891140
	74–52–06·866	493·4	97–10–45·92	277–10–20·10	41 (Monument No. 16)	2645·0	3·4224299

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△ 42 (I.W.C.)	45-00-02·591	262·5	77-18-44·31	257-18-24·34	△ 44 (I.W.C.)	2080·5	3·3181758
	74-52-38·573	2772·0	164-17-37·73	344-17-34·33	41 (Monument No. 16)	1278·2	3·1066154
41 (Monument No. 16)	45-00-14·740	1492·8	44-56-06·61	224-35-50 04	44	2383·8	3·3772690
	74-52-43·389	3117·8	82-39-54·17	262-39-26·86	43	2797·9	3·4468361
44	44-59-58·077	5881·9	80-32 14·77	260-31-40·13	45	3569·1	3·5525593
	74-53-06·819	490·1	140-37-50·17	320-37-39·43	43	1720·6	3·2356978
43	45-00-11·211	1135·5	20-28-01·53	200-27-50·40	46	3234·6	3·5098254
	74-53-22·009	1581·7	51-43-02·85	231-42-38·95	45	3094·4	3·4905755
46	44-59-41·288	4181·7	59-34-19·88	239-34-03·21	48	1965·6	3·2935091
	74-53-37·747	2712·9	130-37-09·29	310-36-56·52	45	1710·0	3·2330020
45	44-59-52·286	5294·9	10-39-22·95	190-39-19·05	48	2145·8	3·3315937
	74-53-55·810	4010·5	74-39-59·85	254-39-42·40	47 (U.S.L.S. No. 28)	1839·4	3·2646636
47 (U.S.L.S. No. 28)	44-59-47·477	4808·4	319-40-17·58	139-40-31·13	48	2128·0	3·3279818
	74-54-20·494	1472·8	41-39-34·74	221-39-05·15	49	4525·2	3·6556393
48	44-59-31·458	3186·0	47-19-10·39	227-18-33·57	50	5091·9	3·7068797
	74-54-01·331	95·8	68-09-08·24	248-08-25·10	49	4724·6	3·6743645
50	44-58-57·372	5810·7	83-47-37·88	263-47-07·87	52	3069·7	3·4871012
	74-54-53·408	3838·9	159-13-50·28	339-13-43·96	49	1811·2	3·2579700

△ 49 (I.W.C.)	44-59-14·094	1427·5	49-56-54·75	229-56-30·45	△ 52 (I.W.C.)	3147·6	3·4979866
	74-55-02·344	168·6	96-51-01·03	276-50-24·27	51	3764·6	3·5757220
52	44-58-54·093	5478·3	96-49-01·93	276-48-07·21	54	5604·0	3·7484939
	74-55-35·864	2578 1	151-45-57·07	331-45-44·00	51	2808·5	3·4484693
51	44-59-18·523	1876·0	66-52-06·69	246-51-25·03	54 (Monument No. 20)	4605·9	3·6633128
	74-55-54·349	3906·1	89-40-38·17	269-39-56·53	53	4233·3	3·6266775
53	44-59-18·283	1851·7	00-03-53·22	180-03-53·20	54 (Monument No. 20)	1785·6	3·2517702
	74-56-53·248	3827·1	37-53-55·74	217-53-40·07	54A	2592·8	3·4137689
54 (Monument No. 20)	44-59-00·654	66·3	80-42-06·74	260-41-51·10	54A	1611·8	3·2073207
	74-56-53·276	3829·4	128-02-02·67	308-01-42·97	53A	2542·5	3·4052585
53A	44-59-16·120	1632·5	347-17-18·86	167-17-22·91	54A	1872·8	3·2724894
	74-57-21·138	1519·3	83-31-29·23	263-31-15·77	55A	1377·4	3·1390644
54A	44-58-58·081	5882·5	91-41-51·89	271-41-30·21	56	2206·0	3·3435966
	74-57-15·405	1107·3	133-11-24·22	313-11-06·71	55A	2442·3	3·3878071
56	44-58-58·725	5947·5	76-26-23·57	256-25-57·87	58 (Monument No. 21)	2687·9	3·4294112
	74-57-46·082	3312·3	194-47-28·56	14-47-32·73	55A	1661·3	3·2204568
55A	44-59-14·586	1477·3	53-38-00·71	233-37-30·84	58 (Monument No. 21.)	3771·7	3·5,65398
	74-57-40·180	2888·1	73-25-22·39	253-24-36·07	57	4914·0	3·6914336
58 (Monument No. 21)	44-58-52·501	5317·2	69-54-27·18	249-53-51·62	60	3850·4	3·5855018
	74-58-22·432	1612·5	116-30-22·02	296-30-05·57	57	1869·2	3·2716538
57	44-59-00·737	74·8	42-00-46·62	222-00-27·51	60	2903·3	3·4628852
	74-58-45·703	3285·4	79-23-01·09	259-22-38·50	59	2336·6	3·3685787
60	44-58-39·436	3994·1	65-55-17·53	245-55-00·98	62	1843·5	3·2656468
	74-59-12·734	915·4	168-25-35·26	348-25-31·78	59	1762·4	3·2461120
59	44-58-56·485	5720·8	28-12-24·88	208-12 11·79	62	2812·8	3·4491353
	74-59-17·653	1269 0	59-22-40·05	239-22-09·49	61	3611·8	3·5577177

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date. .. ..

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△ 62.(I.W.C.)	44-58-32·009	3241·8	11-12-29·87	191-12-24·34	△ 64 (I.W.C.)	2892·0	3·4611935
	74-59-36·147	2598·7	109-45-31·68	289-45-14·19	61	1889·9	3·2764396
61	44-58-38·317	3380·6	340-42-18·32	160-42-30·28	64	3682·5	3·5661373
	75-00-00·889	64·0	08-54-50·26	188-54-45·06	63	3414·4	3·5333144
63	44-58-05·011	507·5	273-21-25·12	93-21-42·28	64	1748·9	3·2427561
	75-00-08·247	592·8	339-17-50·79	159-17-59·08	66	2387·8	3·3779913
64	44-58-03·999	404·9	22-56 21·05	202-56-12·18	66	2314·1	3·3643820
	74-59-43·965	3161·1	51-54-51·13	231-54-22·83	65	3658·1	3·5632535
65	44-57-41·716	4224·7	266-21-52·71	86-22-12·14	66	1981·3	3·2969446
	75-00-24·006	1726·0	08-57-31·64	188-57-26·27	67	3507·5	3·5449997
66	44-57-42·956	4350·4	07-12-04·64	187-11-58·89	68	5475·8	3·7384502
	74-59-56·508	4063·0	35-06-25·40	215-06-00·60	67	4388·5	3·6423129
67	44-57-07·506	760·2	315-04-22·33	135-04-40·38	68	2602·1	3·4153257
	75-00 31·601	2273·0	53-55-57·77	233-55-40·21	69	2211·9	3·3447609
68	44-56-49·315	4994·4	65-58-14·45	245-57-20·91	70	5969·7	3·7759558
	75-00-06·053	435·4	98-28-41·26	278-28-05·65	69	3665·6	3·5641399
69	44-56-54·647	5534·4	31-34-30.17	211-34-12·23	70	3488·0	3·5425793
	75-00-56·459	4060·7	85-59-04·98	265-58-34·63	71	3097·7	3·4910412

△ 70 (I.W.C.)	44-56-25·304	2562·7	60-01-27·91	240-01-02·68	△ 72 (Whalen)	2966·6	3·4722563
	75-01-21·849	1571·8	155-21-06·55	335-20-54·14	71	3030·8	3 4815525
71	44-56-52·503	5317·2	17-07-33·84	197-07-21·02	72 (Whalen)	4433·5	3·6467448
	75-01-39·423	2835·6	74-21-44·15	254-20-38·84	73	6905·8	3·8392116
72 (Whalen) U.S.L.S.	44-56-10·667	1080·4	68-13-04·72	248-12-16·28	74	5313·3	3·7253662
	75-01-57·571	4141·7	113-57-33·68	293-56-41·20	73	5848·7	3·7670597
73	44-56-34·113	3454·7	354-35-12·75	174-35-16·79	74	4366·1	3·6100946
	75-03-11·876	854·3	52-59-07·23	232-58-25·29	73A	5348·9	3·7282610
74	44-55-51·194	5184·7	60-23-45·14	240-23-06·19	74A	4564·4	3·6593857
	75-03-06·151	442·6	103-31-38·78	283-30-52·81	73A	4816·4	3·6827264
73 A	44-56-02·313	234·3	348-03-37·17	168-03-44·19	74 A	3456·1	3·5385831
	75-04-11·243	809·1	33-02-19·19	213-01-49·31	76 (Bradford)	5584·3	3·7469708
74 A	44-55-28·926	2929·5	70-55-36·72	250-54-59·82	76 (Bradford)	3978·0	3·5996683
	75-04-01·306	93·8	111-56-29·00	291-55-24·74	75	7057·7	3·8486601
76 (Bradford) U.S. L.S.	44 55-16·087	1629·3	98-04-49·15	278-03-33·75	77	7760·4	3·8898854
	75-04-53·554	3853·7	144-41-51·43	324-41-24·07	75	4823·6	3·6833677
75	44-55-54·955	5565·6	10-55-55·71	190-55-43·89	78	6350·2	3·8027866
	75-05-32·300	2323·5	59-49-29·70	239-48-41·65	77	5662·9	3·7530361
78	44-54-53·391	5407·1	83-19-43·32	263-18-59·41	80	4506·8	3·6538651
	75-05-49·034	3528·9	132-32-55·48	312-32-19·26	77	5010·7	3·6999003
80	44-54-48·217	4883·2	161-24-58·52	341-24-51·77	82	2159·0	3·3342566
	75-06-51·233	3687·0	191-19-56·76	11-20-04·45	77	3989·9	3·6009574
77	44-55-26·843	2718·5	38-16-38·61	218-16-24·16	82	2376·5	3·3759299
	75-06-40·337	2902·2	77-28-40·01	257-27-59·81	79	4196·4	3·6228787
82	44-55-08·423	853·0	71-29-27·75	251-29-01·34	84	2838·1	3·4530214
	75-07-00·795	57·4	110-60-19·47	289-59-53·72	79	2793·1	3·4460786

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.... ... .

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	° ′ ″		° ′ ″	° ′ ″			
△ 84 (I.W.C.).....	44-54-59·527	6028·5	102-37-25·86	282-37-03.47	△ 79 A (I.W.C.)....	2338·7	3·3689763
	75-07-38·193	2748·4	182-03-05·76	02-03-06·41	79.....	1857·7	3·2689703
79.....	44-55-17·857	1808·4	34-34-19·08	214-34-00·27	86	3378·6	3·5287398
	75-07-37·269	2681·8	60-11-43·50	240-11-20·45	79 A.....	2706·7	3·4324421
79 A.....	44-55-04·572	462·9	343-16-31·63	163-16-35·86	86.....	1500·0	3·1761084
	75-08-09·907	712·9	37-11-21·99	217-11-14·04	81.....	1340·8	3·1273832
86.....	44-54-50·387	5103·0	11-18-47·20	191-18-40·65	88.....	3402·8	3·5318344
	75-08-03·909	281·2	106-31-17·31	286-31-05·12	81.....	1295·6	3·1124860
81.....	44-54-54·024	5471·4	351-10-54·24	171-10-56·88	88	3749·4	3·5739631
	75-08-21·169	1523·3	35-28-26·81	215-28-15·32	83	2018·2	3·3049663
83.....	44-54-37·796	3827·7	319-43-56·64	139-44-13·77	88....	2701·6	3·4316189
	75-08-37·443	2694·9	40-40-07·57	220-39-40·98	85	4159·5	3·6190394
88.....	44-54-17·441	1766·4	30-17-29·47	210-17-01·44	90 (Allison).....	5667·0	3·7533499
	75-08-13·183	948·8	76-13-09·19	256-12-25·48	85.....	4589·1	3·6617237
85.....	44-54-06·642	672·6	337-10-24·21	157-10-39·89	90 (Allison)..... ...	4122 6	3·6151749
	75-09-15·101	1086·9	39-25-18·65	219-24-52·23	92.....	4243·4	3·6277187
90 (Allison) U.S.L.S.....	44-53-29·123	2949·5	96-55-55·28	276-55-13·19	92.....	4325·6	3·6360489
	75-08-52·886	3807·4	133-05-32·15	313-05-03·97	87	3936·4	3·5950947

△ 87 (I.W.C.)	44-53-55·674	5633·4	33-12-59·45	213-12-45·54	△ 92 (I.W.C.)	2590·6	3·4134079
	75-09-32·818	2362·2	79-05-03·21	259-04-43·14	89	2084·5	3·3190000
92	44-53-34·273	3471·1	95-02-20·49	275-01-52·71	91	2845·0	3·4540763
	75-09-52·531	3782·1	160-29-57·48	340-25-51·33	89	1880·4	3·2742605
89	44-53-51·775	5243 4	04-16-45·67	184-16-43·70	92 A	2692·8	3·4301986
	75-10-01·252	90·2	55-23-09·03	235-22-47·40	91	2680·7	3·4282462
92 A	44-53-25·261	2558·4	68-21-28·32	248-21-08·88	94	2133·6	3·3291195
	75-10-04·042	291·0	120-06-05·26	300-05-45·60	91	2317·9	3·3650880
91	44-53-36·739	3720·8	359-20-47·38	179-20-47 60	94	1949·5	3·2899257
	75-10-31·896	2295·9	73-38-02·70	253-37-35·03	93	2941·9	3·4686209
94	44-53-17·491	1771·3	48-22-02·24	228-21-36·05	96	3574·8	3·5532465
	75-10-31·587	2274·3	111-29-49·42	291-25-21·53	93	3057·6	3·4853784
93	44-53-28·553	2891·7	357-09-28·98	177-09-30·68	96	3499·6	3·5440241
	75-11-11·103	799·5	48-09-43·91	228-09-17·80	95	3575·6	3·5533530
96	44-52-54·040	5473·1	90-50-11·38	270-49-50·30	98 (Monument No. 35)	2150·9	3·3326234
	75-11-08·693	626·0	111-22-15·15	291-21-47·34	95	3047·0	3·4838710
98 (Monument No. 35)	44-52-54·349	5504·3	90-04-03·46	270-03-45·07	97	1876·1	3·2732558
	75-11-38·561	2776·6	147-30-55·24	327-30-48·51	95	1279·0	3·1068630
95	44-53-05·001	506·6	14-17-39·65	194-17-35·11	100	1878·4	3·2737943
	75-11-48·101	3463·6	47-50-30·21	227-50-18·56	97	1604·1	3·2052498
100	44-52-47·028	4762·8	67-50-40·57	247-49-57·65	102	4730·2	3·6748794
	75-11-54·542	3927·5	135 42-33·11	315-42-26·00	97	1038·8	3·0165265
97	44-52-54·370	5506·2	55-20-18·31	235-19-42·49	102	4144·2	3·6477941
	75-12-04·616	332·3	86-20-46·95	266-20-02·81	99	4513·5	3·6545126
102	44-52-29·410	2978·7	88-46-30·12	268-45-56·35	101	3447·9	3·5375591
	75-12-55·376	3987·8	159-14-07·08	339-13-58·76	99	2395·4	3·3793728

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

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	° ′ ″		° ′ ″	° ′ ″			
△ 99 (I.W.C.)..	44-52-51·526	5218·5	356-53-54·41	176-53-55·60	△ 102A (I.W.C.)	2251·6	3·3524864
	75-13-07·170	516·4	48-18-43·59	228-18-18·14	101.....	3178·7	3·5414177
102A.....	44-52-29·326	2970·1	40-17-46·23	220-17-21·06	104.	3973·6	3·5991792
	75-13-05·478	394·3	88-37-28·66	268-37-02·01	101.....	2720·4	3·4346379
101.	44-52-28·680	2904·5	357-06-02·95	177-06-04·42	104	2969·2	3·4726338
	75-13-43·243	3114·2	58-24-53·03	238-24-23·48	103.....	3541·1	3·5491403
104....	44-51-59·400	6015·7	84-42-23·01	264-41-53·85	106.....	2990·9	3·4758041
	75-13-14·158	1019·7	109-19-38·65	289-19-07·63	103	3355·8	3·5258007
103.....	44-52-10·365	1049·9	352-13-10·85	172-13-12·71	106.....	1399·4	3·1459411
	75-14-25·127	1809·4	55-14-59·68	235-14-39·22	105.....	2541·8	3·4051354
106.....	44-51-56·674	5739·8	45-33-22·77	225-32-57·05	108...	3678·3	3·5656411
	75-14-22·497	1620·4	88-26-03·37	268-25-41·06	105.....	2278·7	3·3576923
105.....	44-51-56·059	5677·5	07-52-51·43	187-52-48·02	108.....	2537·3	3·4043679
	75-14-54·123	3898·3	51-38-37·24	231-38-15·06	107.....	2888·5	3·4606708
108.....	44-51-31·242	3164·0	64-57-58·66	244-57-15·24	110·····.....	4894·9	3·6897497
	75-14-58·953	4246·7	110-36-20·16	290-36-01·39	107.....	2048·2	3·3113730
107.....	44-51-38·360	3884·8	42-02-20·52	222-01-55·87	110.....	3759·8	3·5751661
	75-15-25·568	1841·9	70-24-15·16	250-23-50·37	109.....	2687·3	3·4293144

△ 109 (I.W.C.)	44-51-29·459	2983·6	359-34-15·03	179-34-15·17	△ 110 (I.W.C.)	1891·2	3·2767265
	75-16-00·712	51·2	53-09-35·44	233-09-18·41	111	2174·0	3·3372628
110	44-51-10·786	1092·5	57-43-12·09	237-42-47·96	112	2915·6	3·4647262
	75-16-00·516	37·1	108-31-13·73	288-30-56·56	111	1849·9	3·2671384
111	44-51-16·588	1679·8	18-20-05·05	198-19-58·09	112	2259·4	3·3540020
	75-16-24·861	1791·3	77-17-34·41	257-17-11·42	113	2407·6	3·3815898
112	44-50-55·410	5611·5	50-55-32·43	230-54-53·77	114	5088·3	3·7065754
	75-16-34·729	2502·3	134-35-49·76	314-35-33·73	113	2300·3	3·3617874
113	44-51-11·357	1150·3	25-36-44·77	205-36-22·14	114	5348·1	3·7281995
	75-16-57·466	4140·1	61-30-47·07	241-30-06·34	115	4733·7	3·6752043
114	44-50-23·737	2403·9	40-41-11·01	220-40-50·98	116	3140·5	3·4969985
	75-17-29·550	2129·3	144-12-33·84	324-12-15·74	115	3161·6	3·4999119
115	44-50-49·059	4968·5	02-17-29·33	182-17-27·39	116	4950·0	3·6946029
	75-17-55·212	3978·0	46-54-58·83	226-54-32·72	117	3652·7	3·5626106
117	44-50-24·422	2473·4	314-46-24·47	134-46-48·64	116	3479·6	3·5415276
	75-18-32·235	2322·8	359-09-54·02	179-09-54·65	119	4398·9	3·6433465
116	44-50-00·222	22·6	12-36-31·97	192-36-21·28	118	5009·1	3·6997555
	75-17-57·960	4176·8	51-00-55·90	231-00-32·36	119	3095·7	3·4907471
119	44-49-40·991	4151·6	335-56-11·17	155-56-24·01	118	3220·5	3·5079232
	75-18-31·346	2259·2	16-10-15·64	196-10-03·46	120	4473·5	3·6506511
118	44-49-11·954	1210·6	62-05-11·99	242-04-46·97	120	2896·1	3·4618118
	75-18-13·129	946·5	118-42-09·88	298-41-40·46	119A	3430·0	3·5352988
119A	44-49-28·218	2857·9	351-28-50·27	171-28-54·67	120	3036·5	3·4823781
	75-18-54·870	3954·7	66-52-45·12	246-52-23·94	121	2355·0	3·3719837
120	44-48-58·566	5931·4	46-39-19·87	226-38-20·77	122	8314·5	3·9198385
	75-18-48·629	3505·6	128-28-14·40	308-27-48·82	121	3340·8	3·5238513

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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	° ′ ″		° ′ ″	° ′ ″			
△121 (I.W.C.).....	44-49-19·087	1933·1	23-46-35·29	203-46-01·76	△122 (I.W.C.).....	8507·8	3·9298198
	75-19-24·917	1795·9	57-49-27·61	237-48-26·82	123 (East Base).....	7345·9	3·8660463
122.....	44-48-02·207	223·4	56-25-36·73	236-25-02·44	124.....	4211·7	3·6244551
	75-20-12·487	900·6	144-15 08·73	324-14-41·48	123 (East Base).....	4772·6	3·6787591
124.....	44-47-39·207	3970·8	137-25-11·92	317-24-47·75	125 (West Base).....	3654·9	3·5628766
	75-21-01·147	82·7	186-37-10·18	06-37-17·22	123 (East Base).....	6244·3	3·7954825
123 (East Base) Cardinal..	44-48-40·452	4096·8	02-23-43·54	182-23-42·10	126.....	3536·5	3·5485728
	75-20-51·162	3688·3	42-16-51·40	222-16-20·20	125 (West Base).....	4746·0	3·6763233
126.....	44-48-05·563	563·3	25-07-22·79	205-07-04·63	128.....	4379·0	3·6413723
	75-20-53·212	3836·9	90-24-54·56	270-24-24·80	125 (West Base).....	3045·2	3·4836141
125 (West Base) Cardinal..	44-48-05·779	585·3	343-25 31·43	163-25-43·02	128.....	4159·4	3 6190350
	75-21-35·443	2555·8	36-51-26·13	216-50-43·43	127.....	7287·6	3·8625871
128.....	44-47-26·414	2675·2	18-29-13·87	198-28-55·83	130.....	5827·7	3·7654953
	75-21-18·991	1369·7	71-38-37·89	251-37-43·59	127.....	5855·9	3·7675941
127.....	44-47-08·197	830·1	314-46-25·29	134-47-01·53	130.....	5227·5	3·7182976
	75-22-36·050	2600·4	67-18-00·37	247-16-48·89	129.....	7935·1	3·8995533
130.....	44-46-31·839	3224·4	50-13-17·60	230-11-44·17	132 (Red Mill).....	12458·9	4·0954798
	75-21-44·607	3217·8	93-13-29·30	273-11-41·59	129.....	11049·0	4·0433172

△129 (I.W.C.)	44-46-37·947	3842·8	350-21-02·43	170-21-16·69	△132 (Red Mill)	8715·5	3 9402949
	75-24-17·530	1264·8	55-15-59·55	235-14-45·96	131	9174·5	3·9625815
131	44-45-46·319	4690·9	290-28-42·71	110-30 10·54	132 (Red Mill)	9609·0	3·9826799
	75-26-02·024	146·0	45-13-48·76	225-13-00·79	133	6926·3	3·8405013
132 (Red Mill) U.S.L.S.	44-45-13·105	1327·1	58-46-17·15	238-44-09·71	134	15284·5	4·1842507
	75-23-57·286	4134·2	83-48-28·55	263-46 12·76	133	14001·4	4·1461712
133	44-44-58·148	5888·8	352-24-52·56	172-25-00·89	134	6470·1	3·8109135
	75-27-10·158	733·3	47-48-48·77	227-47-13·76	135	13153·7	4·1190487
134	44-43-54·818	5551·5	48 34-20·17	228-32-46·33	136	12846·8	4·1087951
	75-26-58·327	4210·0	77-08-36·82	257-06-53·50	135	10873·2	4·0363573
135	44-43-30·903	3129·6	350-55-29 29	170-55-38·75	136	6157·6	3·7894131
	75-2 -25·148	1815·9	46-55-05 51	226-54-19·69	137	6438·0	3·8087537
137	44 42-47·476	4808·1	286-30-38·90	106-31-34·17	136	5917·9	3·7721640
	75-30-30·261	2185·4	347-30-09 00	167-30-20·35	138	5383·3	3·7310493
136	44-42-30·861	3125·3	51-36-49·27	231-36-05·35	138	5753·5	3·7599348
	75-29-11·700	845·1	78-19-04·13	258-17-36·96	139	9139·2	3·9609065
138	44-41-55·578	5628·6	39-47-44·09	219-46-47·98	140	9007·1	3·9545869
	75-30 14·134	1021·0	111-11-17·41	291-10-34·17	139	4762·3	3·6778170
139	44-42-12·570	1273·0	08-42-10 05	188-41-57·18	140	8742·7	3·9416443
	75-31-15·611	1127·6	45-22-29·69	225-21-02·38	141	12604·9	4·1005380
140	44-40-47·235	4783·5	41-46-46·18	221-46-12·74	142	5159·3	3·7125934
	75-31-33·918	2450·8	88-24-18·88	268-23-04·46	141	7651·2	3·8837308
141	44-40-45·119	4569·2	310-46-40·14	130-47-21·12	142	5562·4	3·7452597
	75-33-19·764	1428·1	38 29-09·06	218-28-13·37	143	9201·7	3·9638685
142	44-40-09·243	936·0	44-37-05·30	224-35-30·52	144	13882·5	4·1424674
	75-32 21·482	1552·5	70-15-12·89	250-13-36·23	143	10560·2	4·0236718

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△143 (I.W.C.)	44 39-33·989	3442·2	358-15-48·32	178-15-50·18	△144 (I.W.C.)	6316·6	3·8004821
	75-34-38·986	2818·2	43-13-51·56	223-12-46·13	145	9828·6	3·9924903
144	44-38-31·645	3204·7	43-49-53·29	223-49-01·38	146	7716·1	3·8873959
	75-34-36·339	2627·6	83-01-20·69	263-00-13 41	145	6975·1	3·8435494
145	44-38-23·267	2356·3	341-28-20·01	161-28-35·37	146	4976·3	3·6969052
	75-36-12·089	874·0	45-42-45·76	225-42-18·17	147	3967·6	3·5985221
146	44-37-36·676	3714·2	39-15-18·51	219-14-44·95	148	5462·4	3·7373807
	75-35-50·225	3632·5	113-46-53·48	293-46-10·53	147	4831·5	3·6840867
147	44-37-55·911	5662·4	351-06-41 56	171-06-50·94	148	6252·9	3·7960831
	75-36-51·363	3714·6	49-30-05 55	229-29-27·81	149	5110·4	3·7084584
148	44-36-54·907	5560·7	54-16-56·09	234-15-35·15	150 (Morristown)	10273·0	4·0116989
	75-36-38·007	2749·3	120-30-33·83	300-29-46·71	149	5631·9	3·7506533
149	44-37-23·134	2342·8	21-29-11·01	201-28-37·17	150 (Morristown)	9518·8	3·9785839
	75-37-45·092	3261·5	46-51 07·52	226-50-09·60	151	8177·4	3·9126140
150 (Morristown) U.S.L.S.	44-35-55·670	5637·8	70-06-27·93	250-05-36·90	153 (Monumeut No. 55)	5593·2	3·7476622
	75-38-33·277	2407·8	142-46-31·93	322-46-07·86	151	4099·8	3·6127602
151	44-36-27·904	2825·8	00-00-24·81	180-00-24·80	152	6436·4	3·8086443
	75-39-07·557	546·6	28-15-59·72	208-15-32·76	153 (Monument No. 55)	5867·7	3·7684658

△152 (I.W.C.)	44-35-24·348	2465·5	38-01-03·22	218-00-18·19	△154 (I.W.C.)	7540·6	3·8774024
	75-39-07·568	547·9	114-32-29·59	294-32-02·64	153 (Monument No. 55)	3053·9	3·4848544
153 (Monument No. 55)	44-35-36·871	3733·9	14-30-22·44	194-30-04·35	154	7446·7	3·8719635
	75-39-45·957	3325·8	63-32-37·85	243-31-52·36	155	5237·8	3·7191490
155	44-35-13·824	1399·9	329-54-30·66	149-54-58·05	154	5634·6	3·7508600
	75-40-50·750	3672·9	39-40-42·57	219-40-11·78	157	4973·6	3·6966729
154	44-31-25·682	2600·7	53-54-11·74	233-53-16·92	156	6999·5	3·8450667
	75-40-11·725	848·8	99-54-27·16	279-53-28·98	157	6091·3	3·7847121
157	44-34-36·023	3648·0	356-10-13·30	176-10-16·66	156	5183·3	3·7146065
	75-41-34·619	2505·9	38-48-17·13	218-47-50·53	159	4378·9	3·6413608
156	44-33-44·954	4552·5	44-29-58·18	224-29-20·98	158	5478·1	3·7386294
	75-41-29·838	2160·4	119-39-15·92	299-38-45·97	159	3556·0	3·5509524
159	44-34-02·324	235·2	07-31-28·72	187-31-21·47	158	5716·0	3·7570935
	75-42-12·523	906·8	48-09-32·46	228-08-16·18	161	10568·7	4·0240232
158	44-33-06·367	644·7	39-34-30·86	219-33-31·04	160	9697·0	3·9866379
	75-42-22·859	1655·5	79-00-41·34	258-59-32·32	161	7258·2	3·8608293
161	44-32-52·694	5336·3	351-08-27·35	171-08-36·54	160	6164·1	3·7898672
	75-44-01·243	89·9	47-49-07·51	227-48-08·30	163	8251·8	3·9165484
160	44-31-52·552	5321·8	49-07-40·92	229-06-35·96	162	8877·3	3·9482789
	75-43-48·139	3487·2	94-27-05·50	274-25-57·11	163	7085·4	3·8503662
163	44-31-57·970	5870·7	356-49-07·87	176-49-11·29	162	6368·7	3·8040482
	75-45-25·655	1858·6	41-38-37·90	221-37-16·17	165	12713·3	4·1042571
162	44-30-55·179	5587·9	21-13-29·81	201-12-56·45	164	9530·6	3·9791198
	75-45-20·778	1505·6	70-21-24·93	250-19-59·79	165	9345·3	3·9705917
165	44-30-24·140	2444·5	316-59-51·65	137-00-43·41	164	7849·3	3·8948300
	75-47-22·223	1610·6	41-29-31·38	221-28-48·62	167	6675·8	3·8245025

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△164 (I.W.C.)	44-29-27·449	2779·8	31-14-00·33	211-13-20·25	△166 (I.W.C.)	8000·8	3·9031307
	75-46-08·376	607·3	94-20-32·83	274-18-58·32	167	9804·2	3·9914127
166	44-28-19·890	2014·1	84-31-54·39	264-29-50·74	169	12859·0	4·1092065
	75-47-05·584	404·9	143-24-39·13	323-23-44·72	167	9443·4	3·9751285
167	44-29-34·757	3519·7	352-57-47·97	172-57-56·57	168	7262·5	3·8610887
	75-48-23·236	1684·4	39-08-17·49	219-07-08·22	169	11358·0	4·0553077
168	44-28-23·580	2387·8	342-51-31·12	162-51-55·91	170	8711·7	3·9401039
	75-48-10·967	795·3	78-45-37·47	258-44-19·62	169	8216·5	3·9146888
169	44-28-07·752	785·1	302-17-57·18	122-19-39·81	170	12574·8	4·0995016
	75-50-02·095	151·9	350-05-08·99	170-05-26·21	171	10359·2	4·0153264
170	44-27-01·375	139·1	29-06-08·63	209-05-18·36	172	10713·6	4·0299455
	75-47-35·572	2580·4	68-31-23·85	248-29-58·46	171	9507·4	3·9780618
171	44-26-26·984	2732·6	328-14-38·69	148-15-13·79	172	6913·9	3·8397224
	75-49-37·512	2721·4	27-56-30·65	207-55-59·36	173	6922·4	3·8402565
173	44-25-26·593	2692·9	268-01-22·28	88-02-28·66	172	6886·5	3·8380001
	75-50-22·206	1611·5	353-06-48·84	173-07-00·14	174	9773·7	3·9900591
172	44-25-28·928	2929·5	29-53-37·93	209-52-42·86	174	11464·3	4·0593467
	75-48-47·373	3138·0	72-26-03·51	252-24-36·73	175	9439·0	3·9749268

△175 (I.W.C.)	44-25-00·780	79·1	335-06-57·83	155-07-29·52	△174 (I.W.C.)	7814·4	3·8928935
	75-50-51·352	3727·4	45-27 19·39	225-26-28·96	177	7341·7	3·8657977
174	44-23-50·775	5141·7	59-03-23·92	239-02-11·91	176	8716·2	3·9403263
	75-50-06 068	440·6	102-49-42·98	282-48-20·87	177	8738·5	3·9414343
177	44-24-09·918	1004·3	350-44-16·21	170-44-26·39	176	6506·4	3·8133433
	75-52-03·424	248·7	49-52-15·44	229-51-25·41	179	6791·6	3·8319709
176	44-23-06·505	658·8	37-54-04·99	217-52-48·13	178	13000·4	4·1139583
	75-51-49·004	3558·7	108-08-33·32	288-07-33·21	179	6566·4	3·8173267
179	44-23-26·687	2702·4	08-03-42·99	188-03-26·22	178	12426·2	4·0943397
	75-53-14·935	1084·6	48-54-56·26	228-53-52·14	181 (Bluff) U.S.L.S.	8834·8	3·9461944
181 (Bluff) U.S.L.S.	44-22-29·344	2971·4	322-52-07·10	142-52-54·44	178	8147·9	3·9110477
	75-54-46·614	3385·8	42-57-01·46	222-55-17·93	183	15794·6	4·1985082
178	44-21-25·192	2551·2	34-47-00·95	214-45-49·19	180	13083·8	4·1167333
	75-53-38·920	2827·4	72-06-45·26	252-04-14·42	183	16478·0	4·2169051
180	44-19-39·064	3955·7	87-54-42·81	267-52-19·16	182	14955·0	4·1747825
	75-55-21·597	1569·9	124-39-16·89	304-37-57·85	183	9992·1	3·9996586
182	44-19-33·632	3405·8	142-57-18·97	322-56-54·19	184	4278·3	3·6312688
	75-58-47·178	3429·8	227-09-54·78	47-10-59·41	183	9165·4	3·9621501
183	44-20-35·156	3560·0	73-09-56·52	253-08-27·10	184	9715·8	3·9874771
	75-57-14·696	1068·2	115-00-41·96	294-57-10·17	185	24282·7	4·3852970
184	44-20-07·352	744·4	116-38-28·31	296-30-35·05	187	20132·7	4·3039018
	75-59-22·638	1645·3	135-48-25·20	315-46-22·86	185	18235·8	4·2609256
185	44-22-16·428	1663·7	349-33-50·05	169-34-16·81	186	15362·8	4·1864719
	76-02-17·637	1281·2	52-24-05 78	232-23-14·83	187	6681·9	3·8249028
186	44-19-47·228	4782·5	58-27-09·32	238-25-03·72	188	15340·4	4·1858378
	76-01-39·354	2860·9	143-47-52·30	323-46-34·61	187	13672·6	4·1358517

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date.....

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	° ′ ″		° ′ ″	° ′ ″			
△187 (I.W.C.)	44-21-36·162	3662·1	14-40-18·22	194-39-30·26	△188 (I.W.C.)	19703·5	4·2945435
	76-03-30·505	2216·5	46-05-35·10	226-03-40·36	189	16563·5	4·2191527
188	44-18-27 930	2828·4	56-23-41·99	236-22-05·35	190	12085·7	4·0822730
	76-04-39·133	2845·5	137-28-38·03	317-27-31·28	189	10275·0	4·0117838
189	44-19-42·700	4324·1	12-19-32·89	192-19-02·96	190	14599·4	4·1643339
	76-06-14·668	1066·3	56-35-08·67	236-33-55·68	191	9100·0	3·9590397
190	44-17-21·852	2212·9	54-20-04·11	234-18-35·09	192	11420·6	4·0576892
	76-06-57·512	4183·7	154-09-25·09	334-08-42·05	191	10278·9	4·0119480
191	44-18-53·201	5387·5	16-46-10·24	196-45-24·23	192	16617·4	4·2205648
	76-07-59·136	4299·8	59-31-14·17	239-29-12·96	193	14646·0	4·1657168
192	44-16-16·076	1627·9	63-27-29·18	243-26-05·02	194	9809·6	3·9916500
	76-09-05·027	365·8	137-17-05·96	317-15-50·80	193	11541·8	4·0622743
194	44-15-32·772	3318·6	138-42-40·27	318-41-29·20	195	11224·5	4·0501657
	76-11-05·608	408·1	184-11-02·11	04-11-11·14	193	12898·4	4·1105357
193	44-17-39·805	4030·8	338-19-15·72	158-20-22·12	196	18743·7	4·2728564
	76-10-52·670	3831·0	62-02-51·63	242-01-31·51	195	9450·2	3·9754431
195	44-16-56·046	5675·5	310-21-29·04	130-23-55·52	196	20048·0	4·3020721
	76-12-47·416	3449·5	334-33-02·32	154-34-14·53	197	17529·1	4·2437592

△197 (I.W.C.)	44-14-19·729	1997·7	249-50-36·25	69-51-50·49	△196 (I.W.C.)	8250·7	3·9164911
	76-11-03·953	287·8	320-13-56·49	140-14-54·76	198	9510·9	3·9782237
196	44-14-47·791	4839·6	09-18-49·29	189-18-33·34	198	10288·7	4·0123593
	76-09-17·551	1277·9	60-12-26·71	240-10-28·14	199	14260·9	4·1541484
198	44-13-07·527	762·1	66-02-32·25	246-00-35·55	200	13341·0	4·1251862
	76-09-40·415	2943·6	105-58-32·75	285-56-50·16	199	11141·5	4·0469442
199	44-13-37·784	3826·1	09-52-10·10	189-51-55·97	200	8612·0	3·9351004
	76-12-07·511	546·9	49-43-20·71	229-42-36·04	201	6113·9	3·7863194
201	44-12-58·746	5948·8	324-51-36·11	144-52-06·64	200	5541·1	3·7435930
	76-13-11·555	841·5	58-09-22·61	238-08-46·29	203	4466·0	3·6499217
200	44-12-13·997	1417·3	38-03-57·18	218-03-11·57	202	7732·4	3·8883116
	76-12-27·774	2023·0	107-18-27·43	287-17-20·59	203	7314·0	3·8641552
203	44-12-35·473	3592·2	344-58-27·73	164-58-48·95	202	8555·4	3·9322417
	76-14-03·640	265·1	77-49-49·31	257-48-38·64	205	7552·7	3·8780993
202	44-11-13·874	1404·8	85-33-32·18	265-31-42·50	204	11501·0	4·0607394
	76-13-33·201	2418·9	124-47-51·40	304-46-19·53	205	11691·0	4·0678479
204	44-11-05·049	511·1	108-00-17·20	287-59-33·88	206	4762·3	3·6778198
	76-16-10·557	769·3	193-49-57·37	13-50-15·19	205	7789·2	3·8914941
205	44-12-19·738	1998·7	46-22-55·92	226-21-54·77	206	8829·2	3·9459201
	76-15-44·992	3277·5	90-53-14·82	270-52-12·83	207 (Monument No. 85)	6477·6	3·8114132
207 (Monument No. 85)	44-12-20·719	2098·1	359-11-50·83	179-11-51·66	206	6191·7	3·7918077
	76-17-13·905	1013·1	78-23-10·71	258-22-13·33	209	6120·7	3·7868037
206	44-11-19·581	1982·9	92-26-32·52	272-24-51·77	211	10541·5	4·0229014
	76-17-12·715	926·5	129-11-28·17	309-10-29·97	209 (Monument No. 86)	7847·5	3·8947310
209 (Monument No. 86)	44-12-08·542	864·8	01-30-22·49	181-30-20·44	208	8145·2	3·9109016
	76-18-36·205	2637·5	44-36-02·08	224-35-19·52	211	6335·4	3·8017764

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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	° ′ ″		° ′ ″	° ′ ″			
△208 (I.W.C.)	44-10-48·135	4874·3	73-21-44·74	253-20-12·93	△213 (I.W.C.)	10021·9	4·0009494
	76-18-39·143	2852·3	130-36-57·50	310-36-17·00	211	5578·3	3·7465014
213	44-10-19·776	2002·6	219-31-18·44	39-32-09·76	211	8430·6	3·9258584
	76-20-50·887	3709·0	275-55-20·20	95-56-49·87	210	9422·4	3·9741603
210	44-10-10·156	1028·5	76-31-22·41	256-29-21·50	215	13009·2	4·1142516
	76-18-42·307	3083·6	151-49-55·05	331-49-16·75	211	8481·7	3·9284813
211	44-11-23·991	2429·5	334-18-05·73	154-19-24·32	212	18969·2	4·2780491
	76-19-37·257	2714·6	39-26-16·33	219-24-53·69	215	13609·3	4·1338363
215	44-09-40·178	4068·6	312-08-04·99	132-09-58·02	214 (West Base)	15960·4	4·2030435
	76-21-35·848	2613·2	291-17-26·03	111-20-07·21	212	18109·5	4·2579063
212	44-08-35·178	3562·3	50-41-11·97	230-40-23·84	214 (West Base)	6515·6	3·8139506
	76-17-44·455	3241·8	351-12-42·62	171-12-50·57	216 (East Base)	5450·7	3·7364520
216 (East Base.) Cape Vincent. U.S.L.S. Secondary.	44-07-41·982	4251·3	102-05-50·34	282-04-54·27	214 (West Base)	6007·1	3·7786682
	76-17-33·038	2409·8					
214 (West Base.) Cape Vincent. U.S.L.S. Secondary.	44-07-54·407	5509·5					
	76-18-53·571	3907·1					
223	44-05-44·949	4551·8	233-25-14·07	53-27-27·78	221	17450·0	4·2417929
	76-26-28·839	2104·6	264-33-11·37	84-36-08·50	222 (Tibbetts Point Light)	18659·0	4·2708843

△222 (Tibbetts Point Light) U.S.L.S. Secondary.	44-06-02·361 76-22-14·301	239·2 1043·6	152-10-58·23 197-07-59·10	332-10-14·77 17-08-36·95	△221 219	9759·6 13460·5	3·9894329 4·1290609
219	44-08-09·385 76-21-19·930	950·5 1453·4	11-36-45·79 63-35-56·45	191-36-29·20 243-34-35·12	220 221	8635·8 9512·6	3·9363039 3·9782991
221	44-07-27·598 76-23-16·737	2794·6 1226·8	269-45-41·96 301-55-29·09	89-47-33·13 121-56-33·82	218 220	10600·1 7992·7	4·0253086 3·9026958
220	44-06-45·849 76-21-43·756	4642·7 3192·6	126-08-31·95 221-48-16·52	306-07-27·36 41-48-52·95	217 218	8379·7 5726·9	3·9232280 3·7579221
217	44-07-34·645 76-23-16·529	3508·2 1205·7	209-59-55·09 273-37-18·22	30-01-05·21 93-38-59·25	215 218	14679·7 10606·0	4·1667179 4·0255511
218	44-07-28·003 76-20-51·421	2835·6 3750·6	166-23-57·61 209-48-56·08	346-23-20·67 29-50-26·01	215 21υ	13771·0 18927·6	4·1389656 4·2770954
Whiskey	44-22-56·452 75-53-03·624	5716·5 263·1	164-59-06·59 259-21-10·15	344-58-58·68 79-22-02·34	179 176	3170·1 5514·1	3·5010733 3·7414754
Sport	44-22-37·550 75-53-48·402	3802·5 3515·7	206-01-53·4 239-30-57·6	26-02-16·8 59-31-28·9	179 Whiskey	5538·0 3773·8	3·7433548 3·5767836
Grenadier	44-22-58·296 75-54-18·582	5903·5 1349·7	271-57-24·5 313-47-02·1	91-58-16·9 133-47-23·2	Whiskey Sport	5447·1 3036·1	3·7361638 3·4823138
Yeo	44-22-32·070 75-54-49·221	3247·7 3575·1	219-57 28·1 262-49-58·7	39-57-49·5 82-50-41·2	Grenadier Sport	3465·1 4452·3	3·5397122 3·6485814
Little	44-22-46·778 75-55-18·835	4736·9 1368·1	255-04-07·6 304-41-54·8	75-04-49·8 124-42-15·5	Grenadier Yeo	4528·9 2616·3	3·6560002 3·4176806
Club	44-22-18·793 75-55-56·903	1903·2 4133·2	224-17-35·1 254-41-56·6	44-18-01·8 74-42-43·9	Little Yeo	3959·4 5096·8	3·5976279 3·7072968
Mary	44-21-53·322 75-55-24·964	5399·6 1813·3	138-02-06·5 184-42-10·8	318-01-44·2 04-42-15·1	Club Little	3469·4 5431·7	3·5402561 3·7349378

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date ....

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	° ′ ″		° ′ ″	° ′ ″			
△Pole	44-21 46·466	4705·4	179-58-24·1	359-58-24·0	△Club	3273·9	3·5150944
	75-55-56·880	4132·2	253-19-37·1	73-19-59·5	Mary	2420·4	3·3838618
Park	44-21-24·458	2476·7	182-32-22·8	02-32-23·8	Pole	2230·9	3·3484852
	75-55-58·240	4231·3	219-35-28·6	39-35-51·8	Mary	3793·3	3·5790222
Point	44-21-26·703	2704·1	231-09-18·7	51-09-50·9	Mary	4298·4	3·6333063
	75-56-11·044	802·5	283-43-40·2	103-43-49·1	Park	957·8	2·9812557
Laundry	44-21-21·626	2190·0	171-34-06·5	351-34-05·8	Point	519·7	2·7157579
	75-56-09·996	726·4	251-26-24·9	71-26 33·1	Park	901·1	2·9547520
Mon	44-21-23·106	2339·9	247-49-24·1	67-49-32·7	Point	965·5	2·9847686
	75-56-23·350	1696·5	278-45-58·6	98-46-07·9	Laundry	981·8	2·9920255
Sand	44-21-13 761	1393·4	164-17-30·0	344-17-27·4	Mon	983·1	2·9926027
	75-56-19·686	1430·4	205-35-47·0	25-35-53·0	Point	1453·5	3·1624099
Marsh	44-21-25·455	2577·8	294-10-49·3	114-10-54·4	Mon	580·7	2·7639425
	75-56-30·640	2226·4	326-05-40·2	146-05-47·9	Sand	1426·9	3·1543833
Tank	44-20-57·128	5785·1	202-46-31·2	22-46-42·8	Marsh	3111·3	3·4929482
	75-56-47·216	3430·8	229-53-59·6	49-54-18·8	Sand	2615·3	3·4175156
Island	44-20-42·302	4283·8	291-39-53·7	111-40-11·2	183	1959·3	3·2920980
	75-57-39·750	2888·8	62-02-30·4	242-02-06·4	Lower	2822·1	3·4505791

△183	44-20-35·156	3560·0	69-13-18·7	249-12-30·0	△Rock	5421·5	3·7341192
	75-57-14·696	1068·2	82-05-21·0	262-04-39·5	Lower	4355·2	3·6390039
Lower	44-20-29·239	2961·0	29-41-25·9	209-41-18·6	Rock	1524·1	3·1830179
	75-58-14·052	1021·3	70-30-36·4	250-30-27·2	Shack	1017·4	3·0074938
Rock	44-20-16·165	1636·8	168-16-53·4	348-16-51·5	Shack	1005·3	3·0023928
	75-58-24·441	1776·6	194-03-00·0	14-03-03·4	Upper	1431·8	3·1558763
Upper	44-20-29·880	3025·9	53-45-59·7	233-45-54·4	Shack	684·1	2·8351356
	75-58-19·656	1428·8	166-42-07·4	346-42-06·2	68 Eccentric	584·3	2·7666710
Shack	44-20-25·887	2621·4	171-10-25·3	351-10-22·6	Moore : (69 Eccentric)	1810·8	3·2578811
	75-58-27·249	1980·3	203-13-01·4	23-13-05·4	68 Eccentric	1058·8	3·0248158
68 Eccentric	44-20-35·495	3594·5	23-13-00·7	203-12-56·8	Q.Q	1049·3	3·0208909
	75-58-21·504	1563·0	139-34-52·6	319-34-46·0	Moore : (69 Eccentric)	1072·3	3·0303095
Q.Q	44-20-25·973	2630·2	171-00-45·8	351-00-43·1	Moore : (69 Eccentric)	1802·8	3·2559469
	75-58-27·197	1976·7	195-33-05·7	15-33-09·5	D.D	1481·8	3·1707901
Moore : (69 Eccentric)	44-20-43·557	4410·8	182-57-27·5	02-57-27·7	C.C	540·1	2·7325297
	75-58-31·069	2257·9	297-28-45·6	117-28-52·1	D.D	765·2	2·8838010
D.D	44-20-40·069	4057·7	117-03-02·8	297-02-55·8	P.P	814·8	2·9110514
	75-58-21·728	1579·1	143-53-40·9	323-53-34·7	C.C	1104·8	3·0432709
P.P	44-20-43·728	4428·1	115-50-32·6	295-50-28·4	O.O	476·7	2·6782585
	75-58-31·714	2304·8	188-08-13·9	08-08-14·6	C.C	527·3	2·7220892
C.C	44-20-48·883	4950·1	58-02-30·4	238-02-25·6	O.O	593·7	2·7735419
	75-58-30·686	2230·0	104-05-42·0	284-05-34·0	B.B	863·2	2·9361153
O.O	44-20-45·780	4635·8	109-49-56·3	289-49-49·4	N.N	763·4	2·8827829
	75-58-37·618	2733·6	147-32-36·9	327-32-33·7	B.B	621·5	2·7934558
N.N	44-20-48·338	4895·0	235-23-22·7	55-23-26·4	B.B	467·3	2·6396165
	75-58-47·500	3451·4	346-51-53·8	166-51-54·6	Z	371·8	2·5701608

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Lawrence River. Date ... .

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	° ′ ″		° ′ ″	° ′ ″			
△B.B.	44-20-50·959	5160·4	25-34-09·0	205-34-06·1	△Z.	695·5	2·8422923
	75-58-42·207	3066·9	92-41-39·1	272-41-29·7	A.A.	976·3	2·9895688
Z.	44-20-44·763	4533·1	109-57-58·8	289-57-49·0	Y.	1087·9	3·0365758
	75-58-46·338	3367·4	134-55-30·9	314-55-24·4	A.A.	953·4	2·9792671
A.A.	44-20-51·412	5206·4	49-01-18·2	229-01-14·9	Y.	460·2	2·6629683
	75-58-55·626	4042·3	77-58-40·2	257-58-35·0	M.	560·6	2·7486396
Y	44-20-48·432	4904·5	88-10-32·4	268-10-25·4	X.	736·4	2·8670997
	75-59-00·407	29·5	132-39-16·2	312-39-14·3	M.	273·1	2·4362970
M.	44-20-50·259	5089·6	68-42-56·4	248-42-51·2	X.	574·3	2·7591657
	75-59-03·171	230·3	85-33-53·6	265-33-48·4	L.	544·4	2·7359270
X.	44-20-48·201	4881·2	103-18-36·4	283-18-34·3	W.	219·1	2·3406269
	75-59-10·535	765·4	177-22-35·1	357-22-35·0	L.	166·6	2·2215634
L.	44-20-49·842	5047·2	60-34-42·4	240-34-40·4	W.	236·0	2·3729563
	75-59-10·641	773·3	102-12-42·0	282-12-39·1	K.	305·7	2·4852314
W.	44-20-48·698	4931·4	99-15-17·8	279-15-14·2	V.	378·2	2·5777724
	75-59-13·470	978·8	152-42-50·6	332-42-49·7	K.	203·2	2·3079375
K.	44-20-50·482	5112·2	66-51-15·9	246-51-13·2	V.	304·7	2·4838574
	75-59-14·752	1072·2	83-45-20·5	263-45-17·7	J.	290·8	2·4635993

△J	44–20–50·169	5080·4	354–13–28·4	174–13–28·5	△V	88·6	1·9473531
	75–59–18·730	1361·2	84–18–44·0	264–18–42·9	I	113·3	2·0543919
V	44–20–49·299	4992·4	89–39–26·5	269–39–24·0	U	265·3	2·4237487
	75–59–18·607	1352·4	122–17–20·0	302–17–18·8	I	144·0	2·1582402
I	44–20–50·057	5069·2	61–20–26·4	241–20–25·0	U	163·7	2·2139261
	75–59–20·282	1474·1	95–49–36·3	275–49–35·1	H	130·5	2·1157442
U	44–20–49·282	4990·5	88–53–26·4	268–53–23·4	T. (Monument No. 72)	309·6	2·4908188
	75–59–22·258	1617·5	188–30–59·9	08–31–00·0	H	92·8	1·9673805
H	44–20–50·188	5082·3	81–41–52·3	261–41–49·0	G	345·8	2·5388270
	75–59–22·069	1603·7	73–10–46·2	253–10–43·1	T. (Monument No. 72)	337·7	2·5285875
G	44–20–49·695	5032·5	338–26–36·7	158–26–36·9	T. (Monument No. 72)	51·4	1·7109448
	75–59–26·778	1945·9	97–04–09·6	277–04–08·8	F	81·1	1·9091296
T. (Monument No. 72)	44–20–49·224	4984·6	93–46–22·3	273–46–20·1	S	223·7	2·3497448
	75–59–26·518	1927·2	120–10–29·6	300–10–28·6	F	115·0	2·0605716
F	44–20–49·793	5042·3	70–49–44·9	250–49–43·7	S	131·1	2·1177365
	75–59–27·886	2026·5	113–04–41·7	293–04–38·7	E	339·5	2·5307836
S	44–20–49·368	4999·3	92–27–55·2	272–27–52·0	R	340·1	2·5316229
	75–59–29·591	2150·3	133–04–06·0	313–04–04·2	E	257·9	2·4114890
E	44–20–51·108	5175·5	43–08–48·2	223–08–46·7	R	221·4	2·3450809
	75–59–32·184	2338·9	115–01–15·9	295–01–06·1	D	1124·0	3·0507775
R	44–20–49·513	5014·1	91–00–43·8	271–00–34·0	Q	1021·3	3·0091679
	75–59–34·267	2490·2	126–17–45·6	306–17–37·3	D	1075·9	3·0317859
D	44–20–55·802	5650·9	13–58–19·4	193–58–17·9	Q	637·7	2·8046442
	75–59–46·200	3356·9	93–50–18·4	273–50–02·4	C. (Monument No. 73)	1665·0	3·2214246
Q	44–20–49·690	5031·8	72–44–10·0	252–43–57·5	P	1355·5	3·1321137
	75–59–48·319	3511·1	115–51–04·1	295–50–49·6	C. (Monument No. 73)	1674·9	3·2239992

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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	° ′ ″		° ′ ″	° ′ ″			
△C. (Monument No. 73).....	44-20-56·902	5762·1	349-21-09·7	169-21-11·7	△P	1152·5	3·0616251
	76-00-09·062	658·5	54-36-43·2	234-36-33·0	O.....	1302·7	3·1148316
P.....	44-20-45·718	4629·6	106-31-29·2	286-31-16·9	O.....	1329·9	3·1237998
	76-00-06·132	445·5	150-48-48·9	330-48-42·5	B.....	1368·0	3·1360719
B.....	44-20-57·510	5823·8	36-40-45·7	216-40-39·8	O.....	1017·5	3·0075463
	76-00-15·313	1112·9	106-01-28·7	286-01-08·4	A.....	2191·9	3·3408185
O.....	44-20-49·451	5007·9	100-44-56·0	280-44-36·8	N.....	2036·4	3·3088594
	76-00-23·677	1720·8	133-28-21·1	313-28-06·7	A.....	2065·5	3·3150277
71 Eccentric.....	44-20-36·350	3681·1	51-26-21·0	231-26-02·2	Stone	2503·5	3·3985492
	76-00-29·593	2150·9					
N.....	44-20-53·201	5387·5	06-44-56·5	186-44-52·8	Stone.....	3289·9	3·5171795
	76-00-51·208	3721·4	71-17-31·5	251-17-04·8	Sir.....	2931·3	3·4670555
Sir	44-20-43·916	4447·2	314-13-43·8	134-14-06·8	Stone	3335·5	3·5231583
	76-01-29·413	2137·8	37-51-42·5	217-51-12·0	View.....	5167·2	3·7132525
Stone..	44-20-20·938	2120·4	72-30-45·3	252-29-51·8	View.....	5831·2	3·7657549
	76-00-56·528	4108·6	153-15-50·0	333-14-53·3	185	13096·2	4·1171442
View.....	44-20-03·628	367·5	149-00-51·3	328-59-57·2	187.....	10931·4	4·0386768
	76-02-13·045	948·1	178-34-45·1	358-34-41·8	185.....	13452·3	4·1287973

△Grand	44-19-14·742	1492·8	47-35-52·0	227-35-02·1	△188	7028·7	3·8468910
	76-03-27·758	2018·0	103-08-59·4	283-07-02·7	189	12460·0	4·0955181
Long	44-19-06·449	653·2	263-53-20·1	83-54-35·7	Grand	7902·1	3·8977435
	76-05-15·832	1150·6	325 37-18·5	145-37-44·1	188	4726·0	3·6744953
Round	44-18-16·701	1691·3	195-37-57·2	15-38-10·7	Long	5231·4	3·7186165
	76-05-35·222	2561·3	254-24-56·6	74-25-35·8	188	4234·2	3·6267676
Monument No. 76	44-17-51·114	5176·2	208-42-19·9	28-42-33·5	Round	2954·2	3·4704421
	76-05-54·735	3981·0	235-51-01·3	55-51-54·1	188	6642·7	3·8223470
End	44 18-04·564	462·3	245-02-20·6	65-03-09·5	188	5608·5	3·7488478
	76-05-49·061	3568·2	16-51-35·0	196-51-31·1	Monument No. 76	1423·2	3·1532707
Mion	44-18-00·890	90·2	256-32-13·5	76-32-28·4	End	1598·4	3·2036783
	76-06-10 436	759·2	310-55-33·7	130-55-44·6	Monument No. 76	1511·2	3·1793141
Peak	44-17-51·154	5180·4	210-20-17·8	30-20-23·3	Mion	1142·3	3·0577979
	76-06-18·370	1336·0	270-08-00·3	90-08-16·8	Monument No, 76	1718·8	3·2352280
Monument No. 77	44-17 56·049	5675·8	259-24-38·9	79-25-04·0	Mion	2668·2	3·4262202
	76-06-46·501	3381·9	283-37-06 1	103-37-25·7	Peak	2105·0	3·3232611
Grind	44-17-43·942	4449·8	191 53-12·5	11-53-15·0	Monument No. 77	1252·9	3·0979166
	76-06-50·050	3640·4	239-12-49·2	59-13-16·9	Mion	3353·4	3·5254840
Death	44-17-46·240	4682·4	241-08-36·5	61-08-53·8	Monument No. 77	2058·3	3·3135101
	76-07-11·290	821·2	278-33-56·7	98-34-11·5	Grind	1562·2	3·1937285
Dock	44-17-29·563	2993·8	183-01-07·4	03-01-08·3	Death	1691·2	3·2281838
	76-07-12·515	910·1	328-17-26·9	48-17-42·5	Grind	2188·5	3·3401528
Monument No. 79 Eccentric	44-17-42·786	4332·7	263-06-28·0	83-06-55·8	Death	2917·7	3·4650360
	76-07-51·117	3718·2	295-29-28·3	115-29-55·2	Dock	3110·6	3·4928376
Jones	44-18-23·507	2380·6	123-53-30·4	303-52-47·4	191	5393·3	3·7318531
	76-06-57·564	4185·0	201-14-48·1	21-15-18·1	189	8604·7	3·9347333

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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△Melville.....	44-18-33·272	3369·4	246-58-25·1	66-59-10·7	△191.....	5160·8	3·7127137
	76-09-04·458	324·1	276-06-15·2	96-07-43·9	Jones.....	9280·4	3·9675671
Leek.....	44-17-46·980	4757·5	165-59-46·1	345-59-34·9	Melville.	4831·4	3·6840750
	76-08-48·380	3512·0	245-20-08·2	65-21-25·6	Jones.....	8867·6	3·9478064
Monument No. 79 Eccentric	44-17-42·786	4332·7	95-49-41·1	275-49-01·1	Leek.....	4186·5	3·6218464
	76-07-51·117	3717·8	133-47-38·9	313-46-47·7	Melville....	7388·2	3·8685401

Locality, Prince Edward Bay, Lake Ontario. Date .....

Duck Island, U.S. L. S....	43-56-05·448	551·5					
	76-37-20·685	1513·8					
False Ducks Light, U.S.L.S.	43-56-53·437	5411·1	275-55-16·89	96-02-36·65	Duck Island (U.S. L. S.).....	46623·9	4·6686086
	76-47-54·421	3981·6					
Nut.....	44-05-56·797	5751·3	335-33-35·5	155-37-53·8	Duck Island U.S. L. S.....	65755·3	4·8179309
	76-43-32·462	2369·1	19-12-26·1	199-09-24·1	False Ducks Light (U.S. L. S.)..	58255·3	4·7653356
Versey.....	44-02-06·096	617·1	242-52-44·0	62-59-59·6	Nut..... ...	51350·5	4·7105449
	76-53-58·757	4292·6	319-53-26·2	139-57-39·3	False Ducks Light (U.S. L. S.)..	41374·1	4·6167285
Traverse.	43-56-52·600	5326·1	164-46-51·9	344-45-29·8	Versey.....	32900·2	4·5171989
	76-52-00·536	39·4	213-55-07·5	34-01-00 6	Nut.....	66444·4	4·8224581

△Corn	43–56–26·493	2682·7	203–59–43·4	24–02–08·9	△Versey	37647·0	4·5757309
	76–57–28·322	2072·5	263–40–42·7	83–44–30·2	Traverse	24128·0	4·3825203
Lower	43–58–52·760	5342·2	293–20–46·7	113–25–13·8	Traverse	30657·5	4·4865365
	76–58–25·268	1847·4	344–17–12·4	164–17–51·9	Corn	15385·4	4·1871089
Oats	43–56–32·500	3291·0	212–02–07·3	32–03–31·7	Lower	16756·0	4·2241715
	77–00–26·822	1962·6	272–38–56·4	92–41–00·3	Corn	13074·9	4·1164373
Upper	43–58–37·575	3804·8	334–01–02·3	154–02–03·7	Corn	14764·6	4·1692221
	76–58–56·724	4148·0	27–29–57·7	207–28–55·2	Oats	14277·1	4·1546414
Barn	43–58–09·696	982·0	309–35–20·0	129–37–19·8	Corn	16392·4	4·2146447
	77–00–20·969	1533·8	02–29–29·1	182–29–25·0	Oats	9851·3	3·9934926
Field	43–56–54·384	5506·9	236–50–00·5	56–52–32·4	Upper	19110·8	4·2812795
	76–02–35·490	2596·5	283–13–59·3	103–15–28·6	Oats	9671·2	3·9854799
Edward	44–01–17·631	1785·4	317–21–16·7	137–25–11·2	Traverse	36466·2	4·5618903
	76–57–38·206	2791·7	358–35–40·8	178–35–47·7	Corn	29489·5	4·4696670
Green	44–00–42·533	4306·7	327–00–50·2	147–03–13·6	Traverse	27751·3	4·4432828
	76–55–27·048	1976·7	18–53–43·0	198–52–18·8	Corn	27401·3	4·4377705
Bluff	44–07–01·904	192·9	359–12–31·9	179–12–40·0	False Ducks Light	61620·0	4·7897200
	76–48–06·050	441·3	40–43–01·3	220–38–56·0	Versey	39500·0	4·5965972
Island	44–05–48·564	4917·6	02–50–23·7	182–49–58·2	False Ducks Light	54253·7	4·7344294
	76–47–17·680	1290·4	52–28–11·6	232–23–32·7	Versey	36947·4	4·5675833
Pleasant	44–06–44·775	4534·1	261–28–39·9	81–30–30·5	Bluff	11725·5	4·0691317
	76–50–45·000	3283·5	290–35–57·1	110–38–21·4	Island	16163·4	4·2085330
Sand	44–07–57·800	5853·0	288–48–03·1	108–50–41·6	Bluff	17543·1	4·2441058
	76–51–53·689	3915·7	325–52–20·2	145–53–08·0	Pleasant	8932·4	3·9509669
Barry	44–08–20·330	2058·7	47–25–42·0	227–24–01·5	Pleasant	14299·2	4·1553127
	76–48–20·668	1567·2	81–39–58·5	261–37–30·2	Sand	15702·3	4·1959636

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Prince Edward Bay, Lake Ontario. Date.... ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Bath.....	44-10-02·529	256·2	16-46-07·2	196-45-37·4	Barry...	10808·3	4·0337576
	76-47-37·909	2763·1	55-55-01·7	235-52-03·5	Sand.....	22524·1	4·3526483
Amherst (1912).....	44-06-41·801	4232·9	343-34-15·4	163-37-15·8	Duck Island (U.S. L. S.).....	67171·8	4·8271870
	76-41-40·301	2940·6	24-40-51·6	204-36-31·6	False Ducks Light (U.S. L. S.)....	65549·0	4·8165667

Locality, East end of Lake Ontario. Date..... .

Pigeon Island Light..	44-03-59·264	6001·3	21-38-37·0	201-35-36·3	Duck Island (U.S.L.S).	51609·2	4·7127267
	76-33-00·562	41·0	113-30-17·0	293-24-15·4	Amherst (1912)..... ...	41351·3	4·6164893
A2.....	44-10-24·724	2503·6	332-52-08·8	152-55-19·4	Pigeon Island Light	43848·1	4·6419509
	76-37-34·418	2508·2	38-29-01·2	218-26-10·0	Amherst (1912)....	28828·4	4·4598208
Ninemile Point Light.....	44-09-05·604	567·6	68-11-51·7	248-06-05·0	Amherst (1912)	39125·4	4·5924587
	76-33-22·402	1633·5	113-35-13·7	293-32-18·1	A2.	20042·4	4·3019497
Snake Island Light.....	44-11-08·376	848·1	23-13-41·2	203-12-50·2	Ninemile Point Light.....	13528·2	4·1312403
	76-32-09·225	672·2	79-27-58·2	259-24-11·6	A2.....	24107·6	4·3821547
Maple.....	44-12-30·895	3128·6	353-44-59·1	173-45-20·9	Ninemile Point Light.....	20912·5	4·3204069
	76-33-53·628	3906·5	51-33-54·3	231-31-20·4	A2..... ...	20543·5	4·3126736
A3.....	44-10-23·354	2364·8	237-07-38·0	57-10-49·4	Maple	23811·8	4·3767930
	76-38-28·186	2054·1	289-25-24·8	109-28-57·9	Ninemile Point Light....	23640·6	4·3736580

Center Brother Island Light..	44-12-25·946	2627·6	268-17-37·8	88-20-21·0	Maple	17055·8	4·2318708
	76-37-47·675	3473·1	13-22-44·5	193-22-16·3	A3	12760·2	4·1058588
Kingston (U.S.L.S.) Primary	44-13-47·510	4811·0	37-39-19·7	217-37-20·7	Snake Island Light	20350·0	4·3085618
	76-29-18·618	1356·0					
Mary's	44-10-54·538	5522·6	95-29-47·7	275-27-27·9	Snake Island Light	14681·6	4·1667729
	76-28-48·673	3546·9	172-54-14·8	352-53-53·9	Kingston (U.S.L.S)	17651·2	4·2467744
Ferguson	44-12-19·317	1956·0	46-07-01·4	226-05-36·0	Mary's	12382·3	4·0928018
	76-26-46·206	3365·8	128-50-01·3	308-48-15·0	Kingston (U.S.L.S)	14246·5	4·1537185
Fort	44-13-46·518	4710·6	335-52-47·4	155-53-25·2	Ferguson	9674·7	3·9856394
	76-27-40·480	2947·5	90-48-51·7	270-47-43·2	Kingston (U.S.L.S)	7146·6	3·8541000
Garden	44-12-21·774	2205·0	140-59-57·3	320-58-50·0	Kingston (U.S.L.S)	11173·1	4·0481741
	76-27-42·050	3063·0	180-45-47·4	00-45-48·5	Fort	8582·3	3·9336025
Barriefield Common Front Range Light.	44-14-08·116	822·2	314-18-27·2	134-18-48·7	Fort	3130·9	3·4956650
	76-28-11·249	819·2	66-57-41·9	246-56-54·9	Kingston (U.S.L.S)	5330·6	3·7267757
Barriefield Common Back Range Light.	44-14-20·134	2038·4	338-36-47·1	158-36-59·9	Fort	3655·8	3·5629784
	76-27-58·788	4280·2	60-23-38·9	240-22-43·2	Kingston (U.S.L.S)	6685·6	3·8251411
Knapp Point Light	44-13-56·300	5701·1	60-08-31·0	240-04-51·6	Garden	19204·1	4·2833938
	76-23-53·449	3892·1	86-36-35·0	266-32-55·6	Fort	16560·5	4·2190739
City Hall, Kingston	44-13-47·528	4813·0	359-28-28·2	179-28-29·7	Mary's	17518·5	4·2434959
	76-28-50·878	3705·0	41-53-41·3	221-51-23·0	Snake Island Light	21644·5	4·3353467
Portsmouth Front Range Light.	44-12-38·772	3925·8	301-34-12·7	121-45-56·0	Mary's	20062·9	4·3023939
	76-32-42·859	3122·0	345-00-40·1	165-01-03·5	Snake Island Light	9476·2	3·9766341
Portsmouth Back Range Light.	44-13-12·379	1253·6	311-14-00·4	131-16-32·7	Mary's	21168·0	4·3256805
	76-32-27·119	1975·1	354-04-18·3	174-04-30·8	Snake Island Light	12624·6	4·1012130
Pleasant Point Light	44-06-37·130	3759·8	257-10-20·8	77-12-06·0	Bluff	11312·0	4·0535411
	76-50-37·239	2717·5	288-38-30·9	108-40-49·8	Island	15370·0	4·1866703

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Lake Ontario. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Yates Church, (U.S.L.S.)....	43-20-15·736	1593·2					
	78-23-16·502	1219·5					
East Base.....	43-20-51·584	5222·8	355-22-19·	175-22-22·	Yates Church.....	3641 4	3·5612656
	78-23-20·477	1512·8	88-58-58·0	268-58-38·	West Base.....	2168·1	3·3360772
West Base.....	43-20-51·203	5184·4	325-33-53·	145-34-16·	Yates Church.....	4353·7	3·6388578
	78-23-49·813	3680·8	236-15-42·	56-16-02·	Smith.....	2612·4	3·4170396
Smith.....	43-21-05·532	560·0	000-11-44·	180-11-44·	East Base.....	1412·2	3·1499081
	78-23-20·412	1508·2	89-29-33·	269-29-14·	Sheep.....	2098·6	3·3219284
Sheep.....	43-21-05·347	541·3	2-57-17·	182-57-16·	West Base.....	1434·1	3·1565630
	78-23-48·813	3606·9	190-33-10	10-33-13·	Brook.....	1811·5	3·2580302
Brook.....	43-21-22·936	2322·2	314-55-28·	134-55-44·	Smith.....	2495·2	3·3971132
	78-23-44·323	3274·9	234-08-38·	54-08-55·	Clover.....	2214·5	3·3452752
Clover.....	43-21-35·747	3619·4	000-31-50·	180-31-50·	Smith.....	3059·3	3·4856297
	78-23-20·029	1479·6	103-22-05·	283-21-49·	Woods.....	1721·4	3·2358872
Woods.....	43-21-39·677	4017·4	4-03-01·	184-03-00·	Brook.....	1699·2	3·2302581
	78-23-42·699	3154·5	219-54-44·	39-54-59·	Bank.....	2560·1	3·4082519
Bank.....	43-21-59·070	5981·0	359-13-21·	179-13-21·	Clover.....	2361·7	3·3732317
	78-23-20·463	1511·5	96-20-04·	276-19-35·	Orchard.....	3128·2	3·4952905

Orchard	43-22-02·477	250·7	327-34-13·	147-34-27·	Woods	2735·0	3·4369552
	78-24-02·552	188·6	234-43-43·	54-44-12·	Corner	3811·4	3·5810809
Corner	43-22-24·212	2451·4	000-03-58·	180-03-58·	Bank	2545·6	3·4057848
	78-23-20·424	1508·8	86-53-32·	266-52-43·	Pasture	5296·4	3·7239786
Pasture	43-22-21·370	2163·7	311-18-12·	131-18-32·	Orchard	2898·0	3·4620929
	78-24-32·023	2365·5	26-01-24·	206-01-11·	Knoll	3173·2	3·5015046
Knoll	43-21-53·206	5387·1	255-15-39·	75-16-12·	Orchard	3690·6	3·5671002
	78-24-50·869	3757·9	158-13-42·	338-13-32·	Barn	2891·7	3·4611594
Barn	43-22-19·730	1997·7	266-08-26·	86-08-49·	Pasture	2470·2	3·3927343
	78-25-05·390	398·3	54-52-33·	234-51-53·	Fence	5199·9	3·7159938
Fence	43-21-50·178	5080·4	266-41-49·	86-42-39·	Knoll	5334·5	3·7270959
	78-26-02·961	218·8	187-41-47·	7-41-50·	Corn	2794·3	3·4462662
Corn	43-22-17·526	1774·6	296-26-11·	116-26-57·	Knoll	5529·6	3·7426968
	78-25-57·895	4276·6	77-11-20·	257-10-48·	Road	3593·0	3·5554546
Road	43-22-09·654	977·4	302-12-52·	122-13-21·	Fence	3699·0	3·5680858
	78-26-45·325	3348·1	45-44-56·	225-44-31·	Bean	3718·2	3·5703355
Bean	43-21-44·028	4457·7	263-51-28·	83-52-22·	Fence	5826·3	3·7653909
	78-27-21·376	1579·1	179-30-11·	359-30-11·	Shore	3780·7	3·5775674
Shore	43-22-21 366	2163·4	293-44-23·	113-44-48	Road	2945·0	3·4690848
	78-27-21·826	1611·5	34-34-08·	214-33-45·	House	4431·3	3·6465334
			95-55-56·	275-54-41·	Thirtymile Point Light	8078·2	3·9073155
House	43-21-45·326	4589·2	272-57-01·	92-57-25·	Bean	2550·5	3·4066273
	78-27-55·855	4126·3	129-04-37·	309-03-46·	Thirtymile Point Light	7112·1	3·8519988
Thirtymile Point Light	43-22-29·598	2996·7					
	78-29-10·606	783·5					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date.. .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
North Base (Youngstown)...	43-15-30·455	3083·3	24-57-52·0	204-57-41·1	Monument No. 1.....	2802·5	3·4475500
	79-03-16·082	1190·0	320-53-13·7	140-53-22·4	South Base.....	1488·4	3·1727210
Monument No. 1.....	43-15-05·360	542·7	236-50-48·2	56-51-07·8	South Base.....	2534·3	3·4038518
	79-03-32·064	2373·4	186-12-34·8	06-12-37·9	Quarters...	3100·3	3·4914099
South Base (Youngstown)....	43-15-19·048	1928·5	133-31-21·9	313-31-05·4	Quarters...	2463·2	3·3914962
	79-03-03·394	251·3	51-52-10·3	231-51-50·9	George.....	2660·8	3·4250175
Quarters	43-15-35·802	3624·7	05-14-43·0	185-14-40·2	George	3353·4	3·5254850
	79-03-27·532	2037·4	317-46-01·6	137-46-17·1	Vincent.....	2469·4	3·3925978
Vincent	43-15-17·742	1796·3	52-28-10·3	232-27-52·1	George.....	2479·9	3·3944259
	79-03-05·103	377·6	03-38-49·4	183-38-47·0	Worth	4134·9	3·6164608
George...	43-15-02·820	285·5	00-45-41·1	180-45-40·9	Oak.....	1944·4	3·2887886
	79-03-31·674	2344·5	326-55-12·8	146-55-28·6	Worth.....	3121·0	3·4942960
Oak...	43-14-43·617	4416·0	06-24-17·1	186-24-16·0	Steps	1072·7	3·0304761
	79-03-32·023	2370·1	291-12-54·5	111-13-10·5	Worth	1855·4	3·2684357
Worth..... ...	43-14-36·985	3744·7	77-57-35·6	257-57-18·5	Steps	1890·9	3·2766776
	79-03-08·656	640·8	00-05-41·0	180-05-41·0	Bow...	2849·4	3·4547465
Steps....	43-14-33·089	3350·1	03-30-13·3	183-30-11·6	Gully.....	2938·9	3·4681805
	79-03-33·640	2490·2	223-04-25·9	143-04-43·0	Bow.....	3070·7	3·4872388

Bow	43-14-08·842	895·3	76-42-11·0	256-41-52·3	Gully	2080·2	3·3181149
	79-03-08·720	645·7	18-59-56·8	198-59-44·3	Elinor	4140·6	3·6170680
Gully	43-14-04·116	416·7	348-51-32·0	168-51-38·3	Elinor	3502·6	3·5443876
	79-03-36·066	2670·0	315-26-17·8	135-26-42·2	View	3760·2	3·5752057
Elinor	43-13-30·173	3054·8	327-15-09·9	147-15-27·7	Wood	3562·0	3·5516947
	79-03-26·926	1993·2	248-53-16·4	68-53-34·5	View	2102·8	3·3227967
View	43-13-37·653	3812·3	34-56-28·2	214-56-05·4	Jack	4320·2	3·6355014
	79-03-00·431	31·9	00-32-13·7	180-32-13·4	Wood	3753·4	3·5744282
Wood	43-13-00·582	59·0	94-57-49·3	274-57-26·7	Jack	2447·9	3·3888012
	79-03-00·906	67·0	34-18-01·2	214-17-38·6	Rose	4341·1	3·6376017
Jack	43-13-02·673	270·7	00-06-09·8	180-06-09·7	Rose	3798·0	3·5795578
	79-03-33·844	2506·2	325-03-17·7	145-03-39·8	Snow	4166·8	3·6197986
Rose	43-12-25·160	2547·3	304-34-02·6	124-34-36·1	Stella	4407·6	3·6442029
	79-03-33·936	2513·4	260-55-09·5	80-55-31·6	Snow	2423·9	3·3845060
Snow	43-12-28·937	2929·8	11-01-38·4	191-01-33·1	Monument No. 5. Eccentric	2998·1	3·4768470
	79-03-01·619	119·8	336-48-12·7	156-48-24·1	Stella	3137·0	3·4965114
Monument No. 5 Eccentric	43-11-59·871	6061·7	326-20-04·1	146-20-18·9	Dagon	2882·7	3·4597967
	79-03-09·361	693·3	268-07-08·5	88-07-25·2	Stella	1810·1	3·2576915
Stella	43-12-00·457	46·2	37-35-57·8	217-35-36·1	Gypsy	3851·7	3·5856577
	79-02-44·938	3328·8	04-54-46·3	184-54-44·4	Dagon	2467·6	3·3922773
Dagon	43-11-36·174	3662·4	74-29-54·3	254-29-34·5	Gypsy	2219·5	3·3462550
	79-02-47·791	3540·7	06-54-03·0	186-53-58·9	Left	3661·0	3·5636006
Gypsy	43-11-30·313	3068·9	21-41-51·0	201-41-46·2	Root	1444·0	3·1595756
	79-03-16·661	1234·3	330-48-23·4	150-48-39·1	Left	3483·3	3·5419948
Left	43-11-00·276	27·9	127-16-35·7	307-16-15·1	Root	2806·2	3·4481118
	79-02-53·728	3981·0	52-10-56·8	232-10-37·2	Acorn	2697·3	3·4309236

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Root	43-11-17·062	1727·4	358-14-57·4	178-14-58·3	Acorn	3355·0	3·5256886
	79-03-23·867	1768·0	324-59-13·9	144-59-32·5	Medina	3507·8	3·5450379
Medina	43-10-48·684	4929·1	75-53-15·1	255-52-57·5	Acorn	1969·6	3·2943852
	79-02-56·705	4201·8	02-17-28·8	182-17-27·8	Nell	2504·5	3·3987287
Acorn	43-10-43·940	4448·8	03-21-40·6	183-21-38·9	Monument No. 7 Eccentric.	3214·6	3·5071339
	79-03-22·484	1666·0	318-09-54·0	138-10-10·7	Nell	2714·0	3·4336154
Monument No. 7 Eccentric.	43 10-12·244	1239·5	344-52-33·0	164-52-42·1	Brock	3776·6	3·5771068
	79-03-25·027	1855·0	239-17-40·6	59-17-59·1	Nell	2324·6	3·3663484
Brock's Monument (U.S.L.S.)	43-09-36·235	3668·7	268-31-45·2	88-32-09·5	Heights	2631·4	3·4201875
	79-03-11·736	869·7	191-50-49·9	11-50-59·3	Nell	4937·9	3·6935425
Nell	43-10-23·966	2426·5	341-15-39·9	161-15-54·8	Heights	5032·0	3·7017395
	79-02-58·055	4302·2	11-50-49·7	191-50-40·4	Brock	4937·9	3·6935450
Brock	43-09-36·232	3668·3	315-43-32·6	135-43-47·7	Chance	2341·0	3·3694064
	79-03-11·734	869·7	268-31-39·0	88-32-03·3	Heights	2631·2	3·4201526
Heights	43-09-36·897	3735·6	29-44-31·0	209-44-21·8	Chance	2008·2	3·3028145
	79-02-36·247	2686·8	352-55-08·2	172-55-11·2	Ogden	2639·4	3·4215065
Chance	43-09-19·672	1991·7	349-12-18·4	169-12-23·2	Bolt	2794·2	3·4462520
	79-02-49·687	3683·2	303-31-19·1	123-31-31·3	Ogden	1585·4	3·2001309

Ogden	43-09-11·023	1116·1	23-07-52·9	203-07-45·5	Bolt	2032·5	3·3080400
	79-02-31·858	2362·0	347-04-25·4	167-04-29·0	Kiln	1744·8	3·2417469
Bolt	43-08-52·560	5321·5	317-41-57·0	137-42-08·8	Monument No. 11 Eccentric	1902·8	3·2793862
	79-02-42·629	3160·2	261-55-40·9	81-55-51·9	Kiln	1200·7	3·0794215
Kiln	43-08-54·223	5489·8	37-41-09·5	217-40-58·6	Trans	1943·4	3·2885597
	79-02-26·594	1971·5	356-40-05·0	176-40-05·8	Monument No. 11 Eccentric	1578·6	3·1982694
Trans	43-08-39·032	3951·8	333-13-44·0	153-13-54·6	College	2540·2	3·4048731
	79-02-42·619	3159·8	271-41-47·8	91-41-59·6	Monument No. 11 Eccentric	1280·3	3·1073267
Monument No. 11 Eccentric	43-08-38·656	3913·7	42-29-13·0	222-28-57·6	Monument No. 12	2477·9	3·3940885
	79-02-25·357	1879·8	03-29-00·0	183-28-58·8	College	2234·2	3·3491131
College	43-08-16·629	1683·7	104-40-26·4	284-40-12·2	Monument No. 12	1589·7	3·2013299
	79-02-27·188	2015·6	43-34-27·6	223-33-16·7	Devil	1716·1	3·2345365
Monument No. 12	43-08-20·605	2086·0	57-46-33·5	237-46-18·7	Tie	1898·6	3·2784395
	79-02-47·929	3553·8	347-48-53·9	167-48-57·2	Devil	1684·2	3·2264031
Devil	43-08-04·343	439·7	107-54-30·4	287-54-12·3	Tie	2061·5	3·3141910
	79-02-43·135	3198·7	61-30-39·4	241-30-08·2	Glen	3850·3	3·5854998
Tie	43-08-10·603	1073·5	29-55-38·0	209-55-24·9	Glen	2850·7	3·4549556
	79-03-09·592	711·3	358-46-03·0	178-46-03·5	Bess	2666·8	3·4093995
Bess	43-07-45·255	4581·7	93-42-14·2	273-42-00·6	Glen	1480·5	3·1704156
	79-03-08·847	656·2	47-09-55·4	227-09-33·7	DeVeaux	3216·8	3·5074223
Glen	43-07-46·197	4677·3	51-19-57·0	231-19-41·8	Moses	2107·8	3·3238275
	79-03-28·770	2133·5	21-06-40·4	201-06-32·3	DeVeaux	2447·0	3·3886283
Moses	43-07-33·188	3359·9	76-26-23·5	256-26-06·1	Junior	1946·0	3·2891494
	79-03-50·961	3779·5	321-38-08·1	141-38-15·1	DeVeaux	1231·7	3·0904948
DeVeaux	43-07-23·648	2394·3	100-51-32·9	280-51-08·4	Junior	2704·6	3·4321087
	79-03-40·654	3015·0	64-46-50·6	244-46-22·4	David	3386·1	3·5296924

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

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Junior	43-07-28·678	2903·5	11-46-18·8	191-46-15·1	David	1994·3	3·2997824
	79-04-16·469	1221·4	322-15-32·3	142-15-45·7	Pool	2196·7	3·3417692
David	43-07-09·393	951·3	206-08-57·5	116-09-06·6	Whirl	1104·4	3·0431100
	79-04-21·955	1628·6	262-59-38·9	82-59-55·0	Pool	1764·6	3·2466457
Whirl	43-07-04·585	464·2	327-02-04·9	147-02-17·4	Slater	2497·2	3·3974551
	79-04-08·590	637·1	227-16-50·6	47-16-57·6	Pool	1034·6	3·0147831
Pool	43-07-11·516	1166·0	347-55-14·2	167-55-19·7	Slater	2860·4	3·4564268
	79-03-58·341	4326·8	317-58-34·7	137-58-52·9	Burr	2950·5	3·4698989
Burr	43-06-49·864	5048·6	66-16-21·4	246-16-08·7	Slater	1503·8	3·1771801
	79-03-31·713	2352·4	332-01-24·1	152-01-31·5	Stewart	1714·1	3·2340243
Slater	43-06-42·886	4443·2	341-35-21·7	161-35-26·7	Post	1719·9	3·2355113
	79-03-50·272	3729·0	292-37-00·1	112-37-20·2	Stewart	2662·4	3·3733643
Stewart	43-06-34·910	3534·4	66-10-21·7	246-10-06·6	Post	1790·2	3·2529100
	79-03-20·875	1548·6	12-34-41·3	192-34-34·9	Sox	3167·6	3·5007369
Post	43-06-27·764	2811·0	338-11-05·0	158-11-13·7	Sox	2551·0	3·4067123
	79-03-42·951	3186·4	286-49-09·3	106-49-23·8	Clover	1644·5	3·2160405
Clover	43-06-23·062	2335·0	54-32-50·0	234-32-33·9	Red	2141·8	3·3307691
	79-03-21·732	1612·5	18-18-44·4	198-18-38·6	Sox	1993·4	3·2995887

Red	43-06-10·790	1092·4	339-11-49·5	159-11-55·0	Giant	1670·5	3·2228419
	79-03-45·248	3357·0	300-10-00·3	120-10-10·6	Sox	1293·6	3·1117956
Sox	43-06-04·368	442·3	69-27-26·8	249-27-12·5	Rope	1663·4	3·2210105
	79-03-30·174	2238·5	29-56-53·7	209-56-48·9	Giant	1051·9	3·0219990
Rope	43-05-58·600	5932·7	22-14-21·0	202-14-13·6	Tug	2111·1	3·3245160
	79-03-51·168	3796·2	287-36-31·8	107-36-41·3	Giant	1083·3	3·0347363
Giant	43-05-55·362	5605·0	48-23-51·7	228-23-34·8	Tug	2449·4	3·3890571
	79-03-37·252	2763·8	19-14-55·0	199-14-49·0	Roof	1965·0	3·2933591
Tug	43-05-39·298	3978·7	357-35-13·2	177-35-14·0	Tank	2120·5	3·3264346
	79-04-01·936	143·7	280-56-12·7	100-56-23·6	Roof	1205·7	3·0812375
Roof	43-05-37·036	3749·7	72-57-30·1	252-57-16·5	Spir	1545·9	3·1891728
	79-03-45·982	3411·7	30-04-50·1	210-04-40·0	Tank	2183·9	3·3392324
Tank	43-05-18·369	1859·6	165-03-22·4	345-03-18·9	Spir	1487·0	3·1723081
	79-04-00·733	54·5	99-12-21·8	279-12-07·1	Clifton	1615·3	3·2082565
Spir	43-05-32·558	3296·1	45-47-06·3	225-46-55·2	Clifton	1689·7	3·2277978
	79-04-05·900	437·7	03-11-57·2	183-11-56·1	State	2199·3	3·3422781
Clifton	43-05-20·917	2117·8	30-51-02·8	210-50-51·7	Queen	2346·8	3·3704667
	79-04-22·221	1648·9	313-04-23·7	133-04-33·7	State	1489·9	3·1731523
State	43-05-10·866	1100·1	66-29-15·2	246-28-54·1	Queen	2499·3	3·3978166
	79-04-07·555	560·7	34-18-49·1	214-18-35·1	Terrapin	2697·1	3·4308929
Queen	43-05-01·014	102·7	12-08-34·9	192-08-30·3	Lundy	2356·7	3·3723046
	79-04-38·436	2852·4	327-54-47·9	147-54-55·0	Terrapin	1452·4	3·1620758
Lundy	43-04-38·257	3873·4	327-10-12·5	147-10-22·1	Park	1927·0	3·2848906
	79-04-45·115	3348·4	229-43-52·3	49-44-04·0	Terrapin	1660·8	3·2203097
Terrapin	43-04-48·858	4946·5	04-43-34·0	184-43-32·0	Park	2701·9	3·4316676
	79-04-28·041	2081·0	319-50-14·0	139-20-44·5	High	5086·0	3·7063746

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Park	43-04-22·261	2253·9	288-14-10·1	108-14-42·6	High	3723·7	3·5709712
	79-04-31·040	2303·8	233-23-45·2	53-24-13·3	Bench	3802·4	3·5800523
Bench	43-04-44·651	4520·6	351-58-41·9	171-58-46·3	High	3466·5	3·5398903
	79-03-49·911	3704·1	273-17-31·0	93-18-15·0	Grass	4792·9	3·6805969
High	43-04-10·746	1087·9	302-48-42·0	122-49-20·0	Chippawa	4919·4	3·6919163
	79-03-43·394	3221·1	233-43-13·7	53-43-53·3	Grass	5335·6	3·7271857
Chippawa (1912)	43-03-44·411	4496·4	240-57-52·9	60-59-14·8	Conner	10185·3	4·0079754
	79-01-47·701	3541·0	181-39-00·9	01-39-02·4	Grass	5825·3	3·7653187
‡Grass	43-04-41·924	4244·4	275-44-53·0	95-46-13·4	Conner	8781·6	3·9435756
	79-02-45·441	3372·7					
‡Conner	43-04-33·220	3363·2					
	79-00-47·721	3542·0					
Grass, U.S.L.S	43-04-41·924	4244·4	305-51-28·0	125-52-43·0	Foot	10058·0	4·0025094
	79-02-45·441	3372·7	01-39-09·7	181-39-08·1	Chippawa	5825·1	3·7653075
Conner	43-04-33·220	3363·2	60-59-18·2	240-57-56·2	Chippawa	10185·0	4·0079760
	79-00-47·721	3542·0	95-46-13·4	275-44-53·0	Grass	8781·6	3·9435756
Lower	43-03-51·919	5256·6	79-18-22·3	259-17-41·9	Foot	4473·5	3·6506427
	78-59-56·427	4189·0	137-41-04·7	317-40-29·7	Conner	5655·3	3·7524501

Buckhorn	43-03-49·979	5060·0	92-18-24·7	272-17-39·8	Lower	4893·6	3·6896224
	78-58-50·562	3753·3	241-00-49·6	61-01-38·1	Upper	6027·2	3·7801152
Cayuga	43-04-20·382	2063·6	21-08-51·5	201-08-40·5	Buckhorn	3300·4	3·5185636
	78-58-34·523	2562·3	64-38-53·2	244-37-57·3	Lower	6728·2	3·8278987
Sunken	43-03-46·925	4751·0	120-46-49·5	300-45-57·2	Cayuga	6620·5	3·8208916
	78-57-17·894	1328·4					
Upper	43-04-18·822	1905·5	333-33-01·5	153-33-15·9	Sunken	3606·8	3·5571224
	78-57-39·534	2934·4	92-13-14·6	272-12-37·0	Cayuga	4084·7	3·6111617
Mangs	43-04-08·083	818·2	63-06-23·0	243-05-44·1	Sunken	4734·8	3·6753020
	78-56-21·013	1559·7	100-34-27·9	280-33-34·3	Upper	5929·1	3·7729877
Delivery	43-03-25·090	2540·0	126-06-29·8	306-05-21·2	Upper	9233·3	3·9653558
	78-55-59·037	4383·2	159-27-19·7	339-27-04·7	Mangs	4648·4	3·6673056
Wheatfield	43-03-36·667	3712·3	75-34-13·4	255-33-31·5	Delivery	4702·1	3·6722960
	78-54-57·705	4284·1	117-13-30·0	297-12-33·1	Mangs	6954·5	3·8422629
Edgewater	43-03-08·780	888·8	112-20-07·4	292-19-30·4	Delivery	4346·0	3·6380884
	78-55-04·893	363·2	190-42-11·4	10-42-16·3	Wheatfield	2873·4	3·4583927
Central	43-03-09·601	972·1	89-14-14·5	269-13-17·7	Edgewater	6177·5	3·7908150
	78-53-41·702	3096·5	115-54-32·1	295-53-40·2	Wheatfield	6273·1	3·7974802
Point	43-02-33·544	3396·0	206-18-26·2	26-18-42·8	Central	4072·3	3·6098446
	78-54-06·009	446·2	280-20-16·8	100-20-45·7	Gratwick	3189·1	3·5036635
Gratwick	43-02-27·889	2823·5	118-52-38·0	298-51-29·0	Edgewater	8575·2	3·9332420
	78-53-23·764	1764·8	162-29-45·3	342-29-32·1	Central	4428·2	3·6462263
Tonawanda Island	43-01-57·302	5801·5	136-49-55·9	316-49-24·3	Point	5031·1	3·7016662
	78-53-19·660	1460·3	174-22-44·5	354-22-41·7	Gratwick	3111·7	3·4929960
Ranson	43-02-15·120	1530·8	240-14-01·1	60-14-21·9	Gratwick	2604·2	3·4156766
	78-53-54·204	4025·6	305-06-28·1	125-06-51·6	Tonawanda Island	3136·3	3·4964215

‡ Values by G. C. Brown, from I. W. C. survey, 1909-10.

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Thorn	43-01-37·800	3827·1	165-06-44·8	345-06-35·6	Ranson	3909·7	3·5921402
	78-53-40·679	3021·6	218-19-59·2	38-20-13·5	Tonawanda Island	2517·1	3·4008978
Upper Tonawanda	43-01-27·705	2804·8	115-30-54·4	295-30-34·8	Thorn	2373·0	3·3752898
	78-53-11·849	880·2	146-45-54·4	326-45-25·5	Ranson	5739·5	3·7588723
Niagara	43-00-57·660	5837·6	169-46-24·6	349-46-17·8	Thorn	4129·5	3·6158990
	78-53-30·809	2288·7	204-50-40·1	24-50-53·0	Upper Tonawanda	3352·2	3·5253254
Ferry	43-01-05·589	565·9	238-03-13·4	58-03-46·4	Upper Tonawanda	4232·2	3·6265659
	78-54-00·193	14·4	290-11-12·4	110-11-32·5	Niagara	2325·9	3·3665999
Mainland	43-00-46·477	4705·4	187-52-26·1	07-52-28·6	Ferry	1953·4	3·2907844
	78-54-03·795	281·8	245-12-00·7	65-12-23·2	Niagara	2699·6	3·4313065
Little Oak	43-00-03·560	360·6	141-46-04·3	321-45-53·3	Elm	1925·1	3·2844635
	78-53-47·621	3538·7	270-29-57·3	90-30-15·6	Tonawanda, 1875	1986·9	3·2981754
Shrubbery	43-00-16·875	1708·3	316-58-58·4	136-59-09·8	Tonawanda, 1875	1820·2	3·2601166
	78-53-37·595	2793·6	28-55-45·4	208-55-38·5	Little Oak	1540·2	3·1875878
Elm	43-00-18·496	1872·7	116-09-07·9	296-08-42·7	Canal	3064·8	3·4863952
	78-54-03·654	271·7	274-50-29·0	94-50-46·8	Shrubbery	1943·4	3·2885570
Brewery	43-00-43·385	4392·4	323-33-40·3	143-33-58·5	Shrubbery	3336·1	3·5232348
	78-54-04·261	316·6	358-58-28·3	178-58-28·8	Elm	2520·2	3·4014400

Oak Grove	43-00-58·502	5922·9	245-03-58·0	65-04-12·2	Ferry	1702·2	3·2310151
	78-54-20·970	1558·1	320-57-15·4	140-57-26·8	Brewery	1970·7	3·2946187
Canal	43-00-31·837	3223·4	208-28-26·2	28-28-39·7	Oak Grove	3071·1	3·4872989
	78-54-40·678	3022·6	246-37-38·6	66-38-03·4	Brewery	2947·6	3·4694728
Electric	43-00-45·597	4616·5	245-33-19·6	65-33-46·0	Oak Grove	3157·8	3·4993847
	78-54-59·664	4432·7	314-38-23·6	134-38-36·5	Canal	1982·6	3·2972434
Hickory	43-00-15·869	1606·6	203-57-04·8	23-57-17·1	Electric	3293·3	3·5176341
	78-55-17·658	1312·0	239-31-34·5	59-31-59·7	Canal	3188·1	3·5035368
Stack	43-00-23·582	2387·5	237-22-46·5	57-23-18·4	Electric	4135·2	3·6164945
	78-55-46·540	3458·3	289-59-29·2	109-59-48·9	Hickory	2283·8	3·3586565
Willow	42-59-58·205	5892·7	185-34-18·1	05-34-20·4	Stack	2581·4	3·4118591
	78-55-49·913	3709·0	223-16-14·4	43-16-36·4	Hickory	2990·5	3·4757487
School	42-59-59·482	6022·3	227-41-35·2	47-41-59·8	Stack	3625·2	3·5593347
	78-56-22·621	1681·1	273-02-32·2	93-02-54·5	Willow	2434·1	3·3863399
Corn	42-59-38·693	3917·3	164-40-05·8	344-40-00·6	School	2182·4	3·3389384
	78-56-14·856	1104·0	223-10-35·1	43-10-42·1	Willow	2709·0	3·4328091
Schwartz	42-59-24·190	2449·1	210-36-55·9	30-37-15·3	School	4151·9	3·6182466
	78-56-51·074	3795·9	241-23-05·5	61-23-30·2	Corn	3066·3	3·4866126
Wickwire	42-59-05·978	605·3	124-03-10·8	304-02-45·8	Schwartz	3293·1	3·5176095
	78-56-14·365	1067·9	179-22-07·6	359-22-07·2	Corn	3312·3	3·5201342
Bedell	42-58-27·521	2786·1	175-21-30·4	355-21-26·1	Schwartz	5756·2	3·7601323
	78-56-44·807	3331·0	210-09-49·6	30-10-10·4	Wickwire	4503·3	3·6535354
Rattlesnake	42-58-22·639	2292·0	97-29-11·2	277-28-36·6	Bedell	3812·7	3·5812350
	78-55-53·956	4011·1	160-55-37·0	340-55-23·1	Wickwire	4642·5	3·6667500
Motor	42-57-57·694	5840·9	137-39-02·7	317-38-37·5	Bedell	4085·8	3·6112793
	78-56-07·784	578·7	202-09-00·4	22-09-09·6	Rattlesnake	2726·7	3·4356385

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date. .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Grand	42-57-54·929	5561·0	94-27-57·8	274-27-25·0	Motor	3598·8	3·5561629
	78-55-19·530	1452·1	137-37-33·6	317-37-10·2	Rattlesnake	3797·6	3·5795078
Island	42-57-33·555	3397·0	207-02-34·7	27-02-46·2	Motor	2743·9	3·4383636
	78-56-24·562	1826·4	245-53-08·3	65-53-52·6	Grand	5297·8	3·7240972
Nettle	42-56-47·620	4821·2	157-21-47·3	337-21-29·6	Island	5038·8	3·7023271
	78-55-58·482	4349·7	203-01-33·7	23-02-00·2	Grand	7404·6	3·8695018
Strawberry	42-56-55·927	5662·1	76-48-39·8	256-48-06·9	Nettle	3687·3	3·5667141
	78-55-10·214	759·8	173-23-07·3	353-23-01·0	Grand	6013·5	3·7791255
Hoyt	42-56-06·910	699·5	133-40-42·3	313-40-02·7	Nettle	5968·5	3·7758682
	78-55-00·446	33·1	171-40-16·5	351-40-09·8	Strawberry	5015·3	3·7003086
Hertel	42-56-20·340	2059·4	56-05-08·7	236-04-50·1	Hoyt	2436·7	3·3868108
	78-54-33·263	2474·4	142-39-55·5	322-39-30·3	Strawberry	4531·6	3·6562475
Pier	42-55-43·419	4395·7	153-21-35·8	333-21-24·8	Hoyt	2660·7	3·4249980
	78-54-44·409	3304·1	192-30-23·3	12-30-30·9	Hertel	3828·8	3·5830596
Fill	42-55-49·366	4997·7	74-48-02·8	254-47-41·5	Pier	2296·5	3·3610616
	78-54-14·622	1087·9	156-08-42·8	336-08-30·1	Hertel	3428·8	3·5351355
Squaw	42-55-24·212	2451·1	132-10-34·3	312-10-14·6	Pier	2896·3	3·4618498
	78-54-15·559	1157·8	181-34-04·8	01-34-05·5	Fill	2547·6	3·4061260

Rail	42-54-54·001	5467·2	171-31-12·2	351-31-05·4	Pier	5058·4	3·7040149
	78-54-34·383	2558·4	204-36-16·2	24-36-29·1	Squaw	3364·0	3·5268596
Street	42-54-54·596	5527·2	88-10-59·6	268-10-42·2	Rail	1896·9	3·2780343
	78-54-08·906	662·7	170-37-30·5	350-37-26·0	Squaw	3039·0	3·4827239
Little	42-54-29·315	2967·8	46-21-01·2	226-20-40·6	Poplars	3108·0	3·4924815
	78-54-34·010	2531·2	179-21-49·2	359-21-49·0	Rail	2499·4	3·3978331
			216-07-29·6	36-07-46·7	Street	3168·8	3·5008907
			316-00-31·8	136-01-48·9	Buffalo, 1875	12135·1	4·0840476
Fort Porter	42-54-10·171	1029·9	341-45-39·2	161-45-46·8	North Base	2655·0	3·4240617
	78-54-03·215	239·2	130-13-18·5	310-12-57·5	Little	3001·6	3·4773565
			152-23-36·8	332-23-58·1	Rail	5007·2	3·6995957
Poplars	42-54-08·124	822·5	326-22-52·2	146-23-31·5	Breakwater	7763·8	3·8900728
	78-55-04·224	314·3	267-22-54·5	87-23-36·1	Fort Porter	4545·7	3·6576005
North Base	42-53-45·264	4582·7	321-46-14·4	141-46-37·2	South Base	4027·9	3·6050770
	78-53-52·052	3874·7	113-19-53·2	293-19-04·0	Poplars	5850·3	3·7671747
South Base	42-53-14·010	1418·3	74-32-17·6	254-31-45·0	Breakwater	3701·5	3·5683714
	78-53-18·573	1382·5					
Breakwater	42-53-04·260	431·4	166-37-12·9	346-36-54·2	Little	8851·3	3·9470090
	78-54-06·489	482·9	194-30-50·1	14-30-59·9	North Base	4288.2	3·6322714
			271-04-48·0	91-05-46·3	Buffalo, 1875	6380·6	3·8048626
*Foot	43-03-43·716	4425·8	186-41-13 3	06-41-18·7	Conner	5046·3	3·7029718
	79-00-55·638	4130·6	279-09-41·4	99-10-23·9	Burnt	4679·8	3·6702284
Burnt	43-03-36·352	3680·4	84-56-15·9	264-55-53.7	Baily	2429·0	3·3854320
	78-59-53·407	3964·6	171-54-14·5	351-54-12·4	Lower	1591·9	3·2019218
Bailey	43-03-34·234	3465·9	230-47-45·4	50-48-05·6	Lower	2832·8	3·4522213
	79-00-25·997	1930·1	300-57-21·3	120-57-45·5	Boom	3067·8	3·4868326
Boom	43-03-18·654	1888·4	73-54-30·0	253-54-12·7	Camp	1961·1	3·2925069
	78-59-50·557	3753·6	173-15-55·2	353-15-53·1	Burnt	1804·3	3·2562977

*Beginning of Triangulation up West side of Grand Island.

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Camp	43-03-13·286	1345·1	215-36-31·7	35-36-47·1	Burnt	2872·5	3·4582608
	79-00-15·935	1183·1	03-04-12·1	183-04-10·0	Cobb	4294·4	3·6329037
Cobb	43-02-30·930	3131·6	153-59-21·5	333-59-10·5	Navy	2727·6	3·4357873
	79-00-19·032	1413·4	203-37-55·4	23-37-36·0	Boom	5274·1	3·7221500
Navy	43-02-55·142	5582·7	234-16-38·6	54-17-09·0	Boom	4077·4	3·6103824
	79-00-35·141	2609·6	28-30-55·1	208-30-36·4	Spruce	4263·5	3·6297686
Spruce	43-02-18·138	1836·3	248-09-27·7	68-09-57·4	Cobb	3481·5	3·5417663
	79-01-02·547	189·3	308-52-33·5	128-52-55·7	Woodpile	3102·9	3·4917618
Woodpile	43-01-58·902	5963·6	29-00-11·7	208-59-49·7	Windsor	4934·0	3·6931970
	79-00-30·023	2230·0	176-10-53·3	356-10-49·4	Navy	5706·6	3·7563752
Windsor	43-01-16·278	1648·0	141-22-03·3	321-21-46·1	Lutz	2998·0	3·4768329
	79-01-02·226	165·4	179-46-54·8	359-46-54·6	Spruce	6262·9	3·7967768
Lutz	43-01-39·409	3989·8	245-09-21·3	65-10-00·5	Woodpile	4698·1	3·6719274
	79-01-27·424	2037·1	30-33-43·4	210-33-26·7	Meyers	3575·2	3·5533022
Meyers	43-01-09·001	911·4	258-42-12·8	78-42-46·7	Windsor	3762·6	3·5754935
	79-01-51·894	3855·0	311-36-06·2	131-36-29·4	Eagle Park	3371·6	3·5278407
Eagle Park	43-00-46·838	4747·0	201-26-45·7	21-26-56·5	Windsor	3196·9	3·5047240
	79-01-17·960	1334·3	54-49-19·7	234-48-59·3	Lee	2727·0	3·4356832

Lee	43-00-31·369	3175·8	175-36-40·5	355-36-13·6	Meyers	3821·2	3·5821955
	79-01-47·958	3563·3	291-37-37·4	111-38-00·4	Road	2696·4	3·4307852
Road	43-00-21·552	2182·1	173-49-31·6	353-49-29·1	Eagle Park	2580·0	3·4116274
	79-01-14·225	1056·8	30-21-46·3	210-21-28·8	Mennonite	3756·5	3·5747858
Mennonite	42-59-49·591	5020·7	171-56-42·6	351-56-36·5	Lee	4271·8	3·6306157
	79-01-39·902	2965·2	277-49-02·6	97-49-25·7	Sheenwater	2544·2	3·4055435
Sheenwater	42-59-46·172	4674·5	145-46-31·8	325-46-03·2	Lee	5537·7	3·7433272
	79-01-05·987	444·9	15-51-08·5	195-50-54·5	Black Creek	5591·0	3·7474902
Black Creek	42-58-53·047	5370·7	160-09-13·2	340-09-04·0	Mennonite	5810·4	3·7642075
	79-01-26·532	1972·1	225-18-11·5	45-18-37·6	Staley	3990·2	3·6009951
Staley	42-59-20·766	2102·4	127-18-41·2	307-18-06·0	Mennonite	4815·0	3·6825976
	79-00-48·371	3595·1	332-20-38·3	152-21-08·9	Bluff	7181·5	3·8562166
Bluff	42-58-17·933	1815·6	119-57-26·3	299-56-29·7	Black Creek	7120·8	3·8525302
	79-00-03·536	262·8	173-40-51·8	353-40-47·8	Club	3915·2	3·5927560
Club	42-58-56·370	5707·0	301-18-20·2	121-18-50·5	Persons	3871·4	3·5878693
	79-00-09·333	693·9	86-39-07·0	266-38-14·4	Black Creek	5748·5	3·7595547
Persons	42-58-36·498	3695·2	299-20-19·7	119-20-55·1	Oakfield	4424·0	3·6458139
	78-59-24·839	1845·8	56-50-47·3	236-50-20·9	Bluff	3436·5	3·5361132
Oakfield	42-58-15·034	1527·2	17-26-01·3	197-25-57·4	Palmers	2505·8	3·3989488
	78-58-32·968	2451·1	92-27-41·1	272-26-39·4	Bluff	6739·8	3·8286448
Palmers	42-57-51·470	5210·9	145-44-13·6	325-43-45·1	Persons	5516·2	3·7416378
	78-58-43·065	3202·1	276-13-28·7	96-13-55·2	Sidway	2906·1	3·4633085
Sidway	42-57-48·352	4895·0	28-45-44·5	208-45-28·1	Shipyard	3724·6	3·5710835
	78-58-04·213	313·3	141-41-39·1	321-41-19·5	Oakfield	3449·0	3·5376958
Shipyard	42-57-16·101	1629·9	162-58-03·0	342-57-53·0	Palmers	3745·1	3·5734613
	78-58-28·312	2105·6	249-52-21·6	69-52-55·2	Beaver	3901·3	3·5912079

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Niagara River. Date... ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Beaver.....	42 57-29·358	2972·1	135-47-24·0	315-47-06·8	Sidway.....	2682·9	3·4286070
	78-57-39·054	2904·2	354-14-43·7	174-15-15·2	Stockdale.....	3429·2	3 5351958
Stockdale.....	42-56-55·657	5634·8	117-19-20·7	297-18-44·0	Shipyard.....	4510·2	3·6541988
	78-57-34·431	2561·(	268-08-52·9	88-09-27·6	Pleasant..	3791·5	3·5788147
Pleasant	42-56-56·864	5756·9	128-31-24·6	308-30-46·8	Beaver.....	5282·5	3·7228414
	78-56-43·479	3233·9	200-44-27·6	20-44-40·5	Island.....	3972·2	3·5990282
	....	.....	285-37-05·0	105-37-35·7	Nettle.....	3475·1	3·5409683

Locality, Lake Erie. Date ....

Erie Standpipe (U.S.L.S.)...	42-07-53·156	5380·8	.....	.....	.....	.....	
	80-05-49·837	3755·2	....	.....	....	.....	
Island.....	42-09-13·679	1384·8	7-53-43·7	187-53-33·6	Erie Standpipe.....	8229·0	3·9153467
	80-05-34·836	2624·0	283-15-52·0	103-16-20·3	West Base.....	3266·7	3·5141154
	....		305-06-33·0	125-07-13·5	Soldier	5554·2	3·7446183
Soldier	42-08-42·118	4263·4	48-52-19·4	228-51-28 9	Erie Standpipe.....	7534·1	3·8770294
	80-04-34·524	2600·7	150-51-12·0	330-50-59·9	West Base....	2799·6	3·4470997
	....		150-51-05·	....	Erie Light No. 1.....	2804·4	3·4478334
	....		195-06-35·	.....	Presque Isle Pierhead Light.....	3855·0	3·5860283

West Base	42-09-06·272	634·8	241-58-19·2	61-58-39·0	East Base	2514·9	3·4005126
	80-04-52·626	3964·2					
East Base	42-09-17·945	1816·6	13-17-19·4	193-17-11·8	Soldier	3726·5	3·5712986
	80-04-23·154	1744·1	275-47-15·8	95-48-26·3	Camp	7948·7	3·9002969
			336-23-53·6	156-24-10·6	Perry	4773·1	3·6788025
			62-05-07·		Erie Light No. 1	2515·1	3·4005475
			66-17-50·		Erie Light No. 2	1649·5	3·2173566
Perry	42-08-34·736	3516·1	105 06-44·5	285-06-19·8	Soldier	2866·7	3·4573808
	80-03-57·788	4353·7	153-40-49·7	333-40-02·6	Fog	11912·1	4·0759888
			239-13-26·5	59-14-19·9	Camp	6980·5	3·8438845
			137-19-40·		Erie Light No. 2	5047·4	3·7030665
			158-28-47·		Presque Isle Pierhead Light	4803·9	3·6815953
Camp	42-09-10·013	1013·4	122-13-28·8	302-11-48·3	Fog	13330·5	4·1248477
	80-02-38·169	2875·0					
Fog	42-10-20·208	2045·6	86-35-14·3	266-34-45·4	Surf	3247·6	3·5115425
	80-05-07·925	596·8					
Surf	42-10-18·296	1852·0	75-11-44·2	255-11-19·0	Wave	2919·1	3·4652365
	80-05-50·973	3838·2					
Wave	42-10-10·926	1106·0	59-25-24·0	239-25-14·0	Wind	1298·5	3·1134283
	80-06-28·448	2142·4					
Wind	42-10-04·401	445·5	67-25-04·0	247-24-56·0	Pier	974·0	2·9885474
	80-06-43·292	3260·2					
Pier	42-10-00·706	71·5	2-34-19·0		Presque Isle Light	446·5	2·6498483
	80-06-55·233	4159·4					
Presque Isle Light	42-09-56·299	5699·0					
	80-06-55·499	4179·8					
Erie Light No. 1	42-09-06·312	638·9					
	80-04-52·657	3966·5					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Lake Erie. Date..... ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Erie Light No. 2....	42-09-11·394 80-04-43·206	1153·4 3254·6					
Presque Isle Pierhead Light..	42-09-18·884 80-04-21·183	1911·6 1595·5					

Locality, Saint Clair River. Date ....

△105, Elwood (U.S.L.S.)....	42-51-23·382 82-28-29·147	2367·1 2171·3					
106 (U.S.L.S.).....	42-51-17·730 82-27-48·809	1794·9 3635·8	100-47-10·9	280-46-43·5	△105, Elwood.....	3058·6	3·485527
104 (I.W.C. 1911).....	42-51-50·319 82-27-44·638	5094·1 3324·5	05-22-49·5 50-33-46·1	185-22-46·6 230-33-15·8	106, New Calf..... 105, Elwood.....	3313·9 4292·7	3·520340 3·632728
101, Offset..... ..	42-52-06·159 82-28-32·503	623·7 2420·6	294-12-59·7 326-25-18·9	114-13-52·3 146-25-48·6	104, (I.W.C. 1911).. ..... 106, New Calf.....	3908·8 5884·7	3·592048 3·769723
99, Lower.....	42-52-38·346 82-27-59·192	3882·2 4408·5	347-25-55·1 37-16-56·5	167-26-05·0 217-16-33·8	104, (I.W.C. 1911)..... ..... 101, Offset	4981·6 4095·3	3·697368 3·612287

△98, Westcott	42-52-36·352	3680·4	265-09-13·6	85-09-35·4	△99, Lower	2390·7	3·378522
	82-28-31·184	2321·8	01-50-25·8	181-50-24·9	101, Offset	3058·3	3·485486
97, Field	42-53-05·767	584·0	06-16-37·1	186-16-34·3	99, Lower	2792·9	3·446055
	82-27-55·091	4101·7	42-03-59·4	222-03-34·8	98, Westcott	4011·3	3·603282
96, Monument No. 47	42-53-13·811	1398·3	286-53-27·2	106-53-51·7	97, Field	2802·2	3·447506
	82-28-31·106	2315·9	00-04-47·0	180-04-47·0	99, Lower	4305·6	3·634029
95, Stag	42-53-43·201	4373·7	13 30-36·8	193-30-28·5	97, Field	3897·7	3·590803
	82-27-42·861	3190·6	50-21-50·9	230-21 18·1	96, Monument No. 47	4664·0	3·668756
94, Marys	42-54-09·747	986·9	321-32-29·3	141-32-48·8	95, Stag	3432·0	3·535546
	82-28-11·536	858·6	14-25-42·1	194-25-28·8	96, Monument No. 47	5847·4	3·766962
93, Point	42-54-21·096	2135·8	16-11-43·8	196-11-33·6	95, Stag	3995·1	3·601524
	82-27-27·892	2076·1	70-31-28·2	250-30-58·5	94, Marys	3445·6	3·537260
92, Chimney	42-54-32·104	3250·3	296-19-09·3	116-19-29·9	93, Point	2513·2	3·400230
	82-27-58·159	4328·4	23-44-37·2	203-44-28·1	94, Marys	2472·7	3·393167
91, Ruin	42-54-39·646	4013·8	11-24-28·3	191-24-24·8	93, Point	1915·9	3·282370
	82-27-22·800	1696·8	73-49-15·3	253-48-51·2	92, Chimney	2740.0	3·437755
90, Cottage	42-54-51·795	5243·8	303-12-27·2	123-12-44·4	91, Ruin	2245·6	3·351324
	82-27-48·046	3575·5	20-40-58·4	200-40-51·5	92, Chimney	2130·9	3·328556
89, Hill	42-54-55·606	5629·6	12-49-22·1	192-49-18·7	91, Ruin	1657·1	3·219335
	82-27-17·858	1328·7	80-15-28·3	260-15-07·7	90, Cottage	2279·4	3·357811
88, Salt	42-55-10·169	1029·5	309-30-15·6	129-30-31·9	89, Hill	2317·6	3·365043
	82-27-41·888	3116·8	13-50-17·7	193-50-13·4	90, Cottage	1915·8	3·282352
87, Green	42-55-21·839	2211·0	13-24-44·9	193-24-35·1	89, Hill	2730·3	3·436211
	82-27-09·347	695·5	63-59-37·5	243-59-15·4	88, Salt	2694·2	3·430427
86, Sand	42-56-00·998	101·0	344-31-38·4	164-31-48·4	87, Green	4113·6	3·614222
	82-27-24·096	1792·6	14-25-39·8	194-25-27·7	88, Salt	5313·5	3·725382

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date .....

Station.	Latitude. and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△85, Turn	42-55-52·738	5339·2	20-52-34·7	200-52-23·8	△87, Green	3348·0	3·524783
	82-26-53·313	3966·2	110-03-51·7	290-03-30·8	86, Sand	2438·1	3·387042
83, Monument No. 50	42-56-10·191	1031·8	30-21-30·4	210-21-20·9	85, Turn	2047·7	3·311269
	82-26-39·402	2931·1	74-22-02·4	254-21-32·0	86, Sand	3452·7	3·538157
84, Wire	42-56-24·148	2444·9	312-30-54 1	132-31-08·2	83, Monument No. 50	2090·9	3·320332
	82-27-00·119	8·9	350-57-07·5	170-57-12·1	85, Turn	3220·1	3·507864
82, Road	42-56-41·520	4203·4	358-37-58·5	178-37-59·2	83, Monument No. 50	3172·7	3·501429
	82-26-40·419	3006·2	39-48-07·6	219-47-54·2	84, Wire	2289·2	3·359686
81, Council	42-56-28·107	2845·5	44-33-53·4	224-33-37·0	83, Monument No. 50	2545·9	3·405838
	82-26-15·387	1144·7	126-06-17·6	306-06-00·5	82, Road	2304·5	3·362581
80, Dry	42-56-55·805	5649·6	359-30-57·2	179-30-57·4	81, Council	2804·3	3·447826
	82-26-15·706	1168·0	51-48-20·7	231-48-03·8	82, Road	2338·9	3·369020
79, Elm	42-56-46·397	4697·2	48-44-30·7	228-44-11·4	81, Council	2807·8	3·448369
	82-25-47·011	3496·4	114-03-12·3	294-02-52·8	80, Dry	2337·1	3·368685
78, Sewer	42-57-12·263	1241·5	347-16-17·0	167-16-22·4	79, Elm	2684·7	3·428897
	82-25-54·964	4087·6	42-47-45·0	222-47-30·9	80, Dry	2270·7	3·356161
77, Barn	42-56-59·300	6003·6	37-04-25 8	217-04-16·8	79, Elm	1637·3	3·214123
	82-25-33·741	2509·5	129-44-39·5	309-44-25·1	78, Sewer	2052·8	3·312337

△75, Chain	42-57-24·337	2463·9	35-11-44·3	215-11-27·9	△77, Barn	3101·7	3·491605
	82-25-09·704	721·8	70-02-42·6	250-02-11·8	78, Sewer	3581·0	3·554006
76, Tunnel	42-57-36·188	3663·7	303-58-33·7	123-58-50·0	75, Chain	2146·8	3·331789
	82-25-33·643	2501·6	00-06-42·1	180-06-42·0	77, Barn	3734·6	3·572241
73, Train	42-57-40·247	4074·8	33-12-02·6	213-11-52·9	75, Chain	1925·0	3·284432
	82-24-55·530	4129·3	81-45-08·7	261-44-42·7	76, Tunnel	2863·8	3·456946
74, Elevator	42-57-55·080	5576·4	311-14-27·3	131-14-43·0	73, Train	2277·8	3·357520
	82-25-18·563	1380·2	348-02-53·4	168-02-59·4	75, Chain	3181·3	3·502610
72, Black	42-58-19·144	1938·3	343-56-38·8	163-56-49·2	73, Train	4097·8	3·612548
	82-25-10·771	800·9	13 22-41·0	193-22-35·7	74, Elevator	2504·2	3·398675
71, Grand	42-58-08·146	824·8	66-37-47·1	246-37-19·1	74, Elevator	3334·4	3·523012
	82-24-37·399	2780·5	114-10-17·1	294-09-54·4	72, Black	2719·4	3·434479
69, Wreck	42-58-36·266	3671·6	08-37-55·7	188-37-51·7	71, Grand	2879·5	3·459318
	82-24-31·586	2348·1	59-14-57·9	239-14-31·2	72, Black	3389·9	3·530187
70, Fish	42-58-49·293	4990·5	293-08-59·1	113-08-27·4	69, Wreck	3356·7	3·525906
	82-25-13·107	974·4	327-29-19·9	147-29-44·2	71, Grand	4939·8	3·693709
67, Club	42-59-14·145	1432·1	08-56-26·1	188-56-20·6	69, Wreck	3882·2	3·589071
	82-24-23·471	1744·7	55-42-49·8	235-42-16·0	70, Fish	4465·9	3·649907
65, Edward	42-59-43·050	4358·6	328-10-05·9	148-10-22·6	67, Club	3444·4	3·537118
	82-24-47·912	3561·0	18-59-26·0	198-59-08·8	70, Fish	5755·7	3·760099
68, Monument No. 55	42-59-25·874	2619·4	230-42-13·0	50-42-32·5	65, Edward	2745·9	3·438677
	82-25-16·504	1226·7	286-45-38·6	106-46-14·8	67, Club	4116·8	3·614561
66, Yard	42-59-54·180	5485·2	288-51-53·8	108-52-24·1	65, Edward	3484·3	3·542116
	82-25-32·276	2398·6	337-45-08·6	157-45-19·4	68, Monument No. 55	3096·3	3·490836
63, Lake	43-00-12·479	1263·4	01-06-44·1	181-06-43·6	65, Edward	2980·1	3·474225
	82-24-47·134	3502·6	61-05-39·4	241-05-08·6	66, Yard	3832·4	3·583474

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Saint Clair River. Date.....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△Fort Gratiot Light.....	43-00-22·409	2268·7	291-47-43·9	111-48-07·9	△63, Lake.....	2707·3	3·432537
	82-25-20·962	1557·7	16-23-39·4	196-23-31·7	66, Yard	2979·1	3.474086
62, Monument No. 58.....	43-00-47·378	4796·6	317-44-50·4	137-45-19·9	63, Lake.....	4773·2	3·678806
	82-25-30·324	2252·9	344-36-47·0	164-36-53·4	Fort Gratiot Light.....	2621·9	3·418613
61, Monument No. 57	43-00-12·803	1296·3	105-52-10·8	285-51-39·4	Fort Gratiot Light.	3557·5	3·551150
	82-24 34·910	2594·2	130-22-28·6	310-21-50·8	62, Monument No. 58.....	5404·3	3·732743

Locality, False Detour Passage. Date..... ....

Harbour.....	45-54-46·607	4660·4	294-18-34·5	114-20-53·0	Wheeler	14971·8	4·1752769
	83-33-40·856	2888·8					
Wheeler.....	45-53-45·115	4569·9	196-16-02·7	16-16-15·3	Kitchener.	4430·6	3·6464578
	83-30 27·947	1976·7					
Kitchener.....	45-54-27·102	2745·4	167-34-17·4	347-33-59·0	Mary	8417·0	3·9251570
	83-30-10·397	735·2	220-20-05·8	40-21-21·1	Gladys.....	11448·0	4·0587221
Mary.....	45-55-48·248	4887·5	202-38-32·8	22-39-02·6	Brace.....	7599·4	3·8807788
	83-30-36·024	2546·9	266-51-00·7	86-52-34·4	Gladys.....	9235·1	3·9654400
Gladys.....	45-55-53·237	5392·7	135-58-08·7	315-57-04·7	Brace.....	9053·4	3·9568126
	83-28-25·570	1807·4	175-24-08·2	355-23-55·0	Caroline.....	16221·6	4·2100931

Brace	45-56-57·485	5822·8	207-18-40·3	27-19-31·1	Caroline	10874·0	4·0363892
	83-29-54·621	3859·9	282-45-56·9	102-47-59·5	Creek	12359·8	4·0920099
Caroline	45-58-32·862	3328·7	286-44-19·5	106-46-11·8	Cockburn	11524·5	4·0616198
	83-28-43·981	3106·6	330-19-38·6	150-20-50·4	Creek	14265·3	4·1542813
Creek	45-56-30·488	3088·2	160-05-33·2	340-04-30·8	Marble	17986·0	4·2549341
	83-27-04·054	286·4	203-40-06·7	23-40-47·2	Cockburn	9907·6	3·9959663
Thompson	45-59-47·743	4836·3	84-15-50·6	264-10-41·5	Marble	30498·5	4·4842800
	83-21-21·034	1485·2	162-11-16·7	342-07-49·9	Bigsby	66049·0	4·8198655
Cockburn	45-58-00·065	6·6	146-06-16·7	325-58-50·1	Sulphur Island Light	78332·0	4·8939392
	83-26-07·751	547·6	179-58-52·3	359-58-52·1	Bigsby	73780·0	4·8679388
			127-48-58·5	307-47-15·6	Marble	12785·2	4·1067060

Locality, North Channel, Lake Huron. Date

Marble	45-59-17·427	1765·4	149-32-40·3	329-26-56·7	Sulphur Island Light	66314·1	4·8216059
	83-28-30·785	2173·6	188-39-32·5	08-41-15·3	Bigsby	66706·4	4·8241675
Glen	46-00-31·830	3224·7	155-39-43·4	335-35-53·9	Sulphur Island Light	54451·1	4·7360076
	83-31-09·454	667·3	199-57-17·5	20-00-54·6	Bigsby	62149·4	4·7934370
Thessalon Light	46-14-16·121	1633·2	306-42-27·3	126-48-12·1	Bigsby	41932·7	4·6225524
	83-34-05·732	402·9	03-22-38·2	183-22-05·5	Raynolds	54195·3	4·7339623
Raynolds	46-05-22·044	2232·9	164-50-45·6	344-48-56·3	Thessalon	40842·7	4·6111148
	83-34-51·028	3597·1	231-43-24·7	51-49-41·6	Bigsby	46884·0	4·6710239
Sulphur Island Light	46-08-41·472	4201·1	258-31-50·1	78-39-17·3	Bigsby	44530·0	4·6486514
	83-36-28·145	1981·6	336-56-59·2	156-59-13·0	Shoal	33446·9	4·5243553
			32-26-22·3	212-24-45·7	△345	17602·8	4·2455806
			118-18-10·1	298-14-45·6	Serpent	22668·0	4·3554135
Shoal	46-03-37·609	3809·7	161-19-65·7	341-16-12·4	Thessalon	52787·0	4·7225275
	83-33-22·444	1582·3	217-39-35·4	37-44-48·4	Bigsby	50036·1	4·6992834

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, North Channel, Lake Huron. Date ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Thessalon Church Spire.....	46-15-33·31	3374·3					
	83-33-14·88	1045·6					
Bigsby, (I.W.C.).....	46-10-08·416	852·4	66-03-17·2	245-54-13·5	△345, (U.S.L.S.).....	58138·1	4·7644609
	83-26-08·095	569·6	102-26-09·7	282-18-02·9	Thessalon..... ..	48603·4	4·6866671
Thessalon, (I.W.C.).....	46-11-51·186	5185·4	09-19-03·5	189-18-06·3	△345, (U.S.L.S.)..... ..	34531·7	4·5382184
	83-37-22·802	1604·0	62-15-22·7	242-12-37·5	Serpent, (U.S.L.S.).....	18204·6	4·2601795
△345, (U. S. L. S.).....	46-06-14·788	1498·0	108-51-54.0	288-45-53·1	Kocruish	37261·7	4·5712622
	83-38-42·146	2970·1	157-38-39·5	337-36-51·6	Serpent, (U.S.L.S.)	27679·0	4·4421507

Locality, Potaganissing Bay, Lake Huron. Date ....

Serpent, (U. S. L. S).....	46-10-27·466	2782·5	17-27-36·3	197-26-10·1	Chippewa.....	28086·8	4·4485033
	83-41-11·740	826·1	61-15-07·9	241-10-54·7	Kocruish.....	28201·0	4·4502652
Kocruish.....	46-08-13·421	1359·6	351-57-39·3	171-58-15·0	△305, (U. S. L. S).....	24967·6	4·3973771
	83-47-02·834	199·5	308-59-48·0	129-02-34·9	Chippewa	20991·3	4·3220407
△305, (U. S. L. S).....	46-04-09·363	948·5	131-43-41·0	311-41-46·2	Burnt Island.....	15047·0	4·1774495
	83-46-13·313	938·6	228-05-24·5	48-07-35·6	Chippewa.....	17232·6	4·2363502
Chippewa.....	46-06-02·955	299·2	53-39-13·5	233-36-05·9	△285, (U. S. L. S).....	22796·7	4·3578754
	83-43-11·327	798·2	86-28-43·9	266-24-38·0	Burnt Island.....	24100·6	4·3820282

Burnt Island, (U. S. L. S.)	46-05-48·201	4882·5	334-36-23·2	154-37-21·5	△285, (U. S. L. S.)	13310·0	4·1241732
	83-48-52·658	3711·3	91-10-52·3	271-08-10·1	Whiskey	15867·6	4·2005115
Whiskey	46-05-51·368	5203·4	277-20-06·0	97-22-34·0	Burnt	14600·4	4·1643642
	83-52-37·767	2661·7	319-05-10·8	139-06-27·8	Maple	11506·3	4·0609340
			299-44-53·5	119-48-34·0	△285, (U. S. L. S.)	24857·6	4·3954578
Maple	46-04-25·516	2584·6	225-29-43·9	45-30-54·9	Burnt	9741·7	3·9886363
	83-50-50·883	3587·6	284-32-43·2	104-35-06·6	△285, (U. S. L. S.)	14509·6	4·1616579
△285, (U. S. L. S.)	46-03-49·494	5013·4	145-54-58·0	325-53-45·6	Burnt	12650·8	4·1021166
	83-47-31·716	2236·5	59-55-39·7	239-53-44·5	Trout	13039·1	4·1152489
Burnt	46-05-32·915	3334·3	13-49-50·8	193-49-08·0	Trout	17520·9	4·2435557
	83-49-12·305	867·1	47-10-45·3	227-08-14·2	Andrews	20177·5	4·3048673
Trout	46-02-44·961	4551·5	24-12-29·7	204-11-15·0	Drummond	17737·3	4·2488874
	83-50-11·682	824·1	107-15-13·2	287-13-24·9	Andrews	11112·2	4·0457973
Monument No. 8	46-03-53·485	5418·0	335-37-42·0	155-39-28·8	Drummond	25378·9	4·4044719
	83-54-23·056	1626·0	86-59-58·5	266-58-14·8	Fort St. Joe	10171·2	4·0073715
			355-57-44·8	175-57-51·3	Squaw	9074·0	3·9577973
Squaw	46-02-24·129	2444·2	128-16-41·5	308-14-51·3	Fort St. Joe	13752·6	4·1383813
	83-54-14·000	987·5	230-09-46·8	50-10-52·9	Andrews	8436·4	3·9261577
Andrews	46-03-17·471	1769·7	100-14-26·1	280-11-29·7	Fort St. Joe	17552·6	4·2443402
	83-52-42·149	2972·8	350-14-26·9	170-15-01·0	Drummond	19757·9	4·2957329
Drummond, (U.S.L.S.)	46-00-05·245	531·2	137-37-11·3	317-33-40·9	Fort St. Joe	30588·7	4·4855617
	83-51-54·709	3862·2					
Fort St. Joe, (U.S.L.S.)	46-03-48·204	4883·2					
	83-56-47·096	3320·9					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, West Neebish Channel, Saint Marys River. Date .....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
△81, (U.S.L.S.)	46-17-34·34	3478·7	20-13-02·1	200-12-51·7	△82	2925·9	3·4662565
	84-12-41·66	2925·5	90-01-20·4	270-00-52·4	Bush	2715·0	3·4337645
82, (U.S.L.S.)	46-17-07·20	729·3	148-11-04·6	328-10-47·1	Bush	3232·3	3·5095015
	84-12-56·06	3937·3	223-44-11·9	43-44-25·2	Oak	1865·9	3·2708972
Bush	46-17-34·34	3478·7	295-01-51·6	115-02-22·4	Oak	3304·5	3·5191005
	84-13-20·32	1426·8					
Oak	46-17-20·54	2080·7	333-36-47·7	153-36-56·4	Spoil	1916·4	3·2824889
	84-12-37·68	2646·3	12-13-50·1	192-13-46·4	Dam	1677·0	3·2245430
Spoil	46-17-03·60	364·8	99-46-06·4	279-45-44·4	△82	2173·3	3·3371185
	84-12-25·56	1795·3	93-41-21·6	273-41-09·2	Dam	1209·5	3·0826005
Dam	46-17-04·37	442·6					
	84-12-42·74	3002·0					

Locality, Saint Marys River. Date .....

Lot	46-30-13·713	1389·1	299-24-33·5	119-25-28·8	△14, Ripley (U.S.L.S.)	6124·2	3·7870494
	84-19-06·332	442·9	332-27-50·0	152-28-22·9	East Base "	6872·1	3·8370928
Power	46-29-44·869	4545·6	209-52-29·9	29-52-47·2	Lot	3370·0	3·5276228
	84-19-30·328	2121·7	270-41-30·2	90-42-42·9	△14, Ripley	7014·3	3·8459873

Pile	46-30-19·521	1977·7	282-43-12·7	102-43-39·7	Lot	2671·0	3·4266687
	84-19-43·577	3048·2	345-12-28·4	165-12-38·0	Power	3630·6	3·5599946
Pier	46-30-17·140	1736·2	266-09-19·3	86-09-56·6	Pile	3602·3	3·5565775
	84-20-34·957	2445·2	305-51-44·6	125-52-31·5	Power	5579·5	3·7465959
Island	46-30-36·438	3691·3	289-49-12·6	109-50-01·9	Pile	5052·5	3·7035107
	84-20-51·528	3604·3	329-20-02·0	149-20-14·0	Pier	2272·8	3·3565598
Pearl	46-30-52·656	5334·3	16-37-25·6	196-37-14·5	Pier	3754·8	3·5745913
	84-20-19·601	1371·1	53-39-37·5	233-39-14·3	Island	2772·4	3·4428501
Knoll	46-30-45·871	4647·0	262-51-46·3	82-52-43·3	Pearl	5538·5	3·7433896
	84-21-38·176	2669·9	303-20-47·3	123-21-33·2	Pier	5293·9	3·7237776
Smoke	46-31-05·061	512·8	287-00-57·9	107-01-40·5	Pearl	4293·0	3·6327589
	84-21-18·295	1279·5	35-34-33·0	215-34-18·6	Knoll	2390·2	3·3784297
Iron	46-30-58·855	5962·6	259-40-44·8	79-41-20·6	Smoke	3511·0	3·5454254
	84-22-07·685	537·4	302-30-27·5	122-30-48·9	Knoll	2447·4	3·3887026
Rocks	46-30-26·043	2638·1	191-55-52·8	11-55-45·5	Iron	3397·4	3·5311447
	84-22-17·724	1239·5	234-00-41·2	54-01-09·9	Knoll	3418·6	3·5338493
Bridge	46-30-22·010	2229·7	99-55-00·2	279-54-36·0	Rocks	2373·7	3·3754188
	84-21-44·297	3098·7	190-02-38·6	10-02-43·0	Knoll	2454·9	3·3900410

Locality, Taquamenaw Bay, Lake Superior. Date

R. (1913)	46-26-37·179		183-26-53·2	03-26-59·0	△10, (U.S.L.S.)	9382·1	3·9722992
	84-30-55·216		90-36-56·9	270-33-42·3	△ 1, "	18805·7	4·2742879
Taquamenon Island (U.S.L.S.)	46-31-55·220	5594·1	99-21-47·3	279-18-24·8	Emerson Smokestack	20456·0	4·3108191
	84-56-54·800	3831·7	355-21-09·8	175-21-09·5	Taquamenon Eccentric	414·7	2·6177498
Emerson Smokestack, (U.S.L.S.)	46-32-27·970	2834·0	280-25-35·3	100-29-05·2	Taquamenon Eccentric	20560·2	4·3130273
	85-01-43·520	3042·6					

TABLE of Positions, Azimuths, and Lengths, based on North American Datum.—*Continued.*

Locality, Taquamenaw Bay, Lake Superior. Date..... ....

Station.	Latitude and Longitude.	Seconds in Feet.	Azimuth.	Back Azimuth.	To Station.	Distance in Feet.	Logarithms.
	° ′ ″		° ′ ″	° ′ ″			
Taquamenon Eccentric.....	46-31-51·140	5180·8	02-18-38·2	182-18-31·4	Woscom.....	16332·4	4·2130514
	84-56-54·320	3797·9	348-35-15·2	168-35-46·7	Rock.....	15353·5	4·1862151
Woscom.....	46-29-10·05	1018·0	135-43-27·0	315-40-04·0	Emerson Smokestack.....	28017·2	4·4474239
	84-57-03·72	260·2	81-10-18·0	261-07-36·0	Creek.....	15841·8	4·1998017
Rock.....	46-29-22 58	2287·4	128-56-57·6	308-52-56·3	Emerson Smokestack.....	29898·5	4·4756491
	84-56-10·90	762·8	289-25-15·0	109-28-35·0	Rose.....	20536·7	4·3125308
Creek.....	46-28-45·99	4659·1	170-06-18·0	350-05-37·0	Emerson Smokestack.....	22828·2	4·3584625
	85-00-47·40	3317·6	229-09-05·0	49-09-05·0	△36.....	70·5	1·8481891
Rose.....	46-28-15·08	1527·6	134-22-35·0	314-18-43·0	Taquamenon Eccentric.....	31315·0	4·4957540
	84-51-34·20	2393 7					