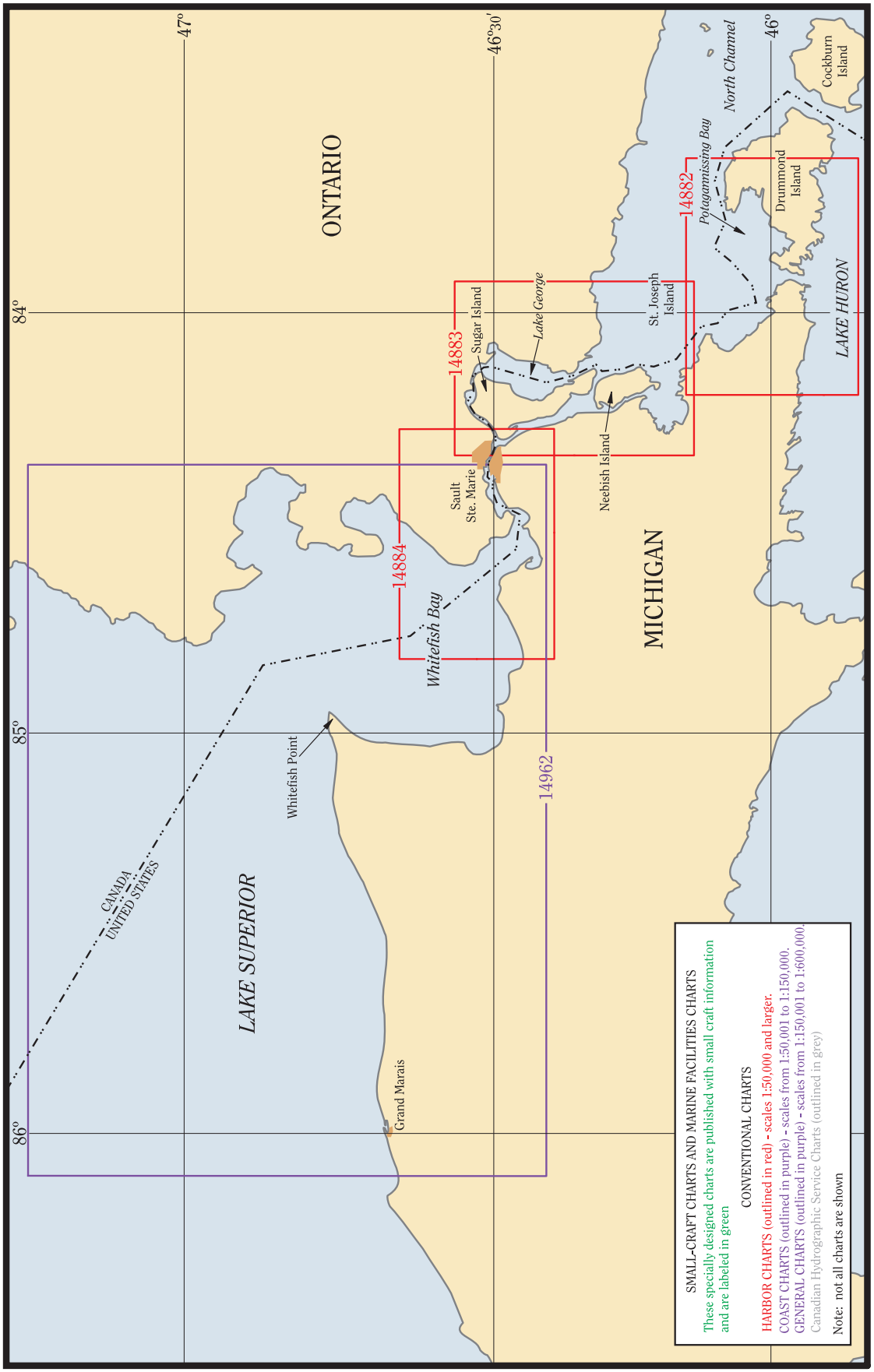
ONTARIO
MICHIGAN
LAKE SUPERIOR
LAKE HURON
CANADA
UNITED STATES
Whitefish Point
Grand Marais
Whitefish Bay
Sault Ste. Marie
Sugar Island
Lake George
Neebish Island
St. Joseph Island
Potagannissing Bay
North Channel
Drummond Island
Cockburn Island
14884
14883
14882
14962
86°
85°
84°
47°
46°30'
46°
SMALL-CRAFT CHARTS AND MARINE FACILITIES CHARTS
These specially designed charts are published with small craft information and are labeled in green
CONVENTIONAL CHARTS
HARBOR CHARTS (outlined in red) - scales 1:50,000 and larger.
COAST CHARTS (outlined in purple) - scales from 1:50,001 to 1:150,000.
GENERAL CHARTS (outlined in purple) - scales from 1:150,001 to 1:600,000.
Canadian Hydrographic Service Charts (outlined in grey)
Note: not all charts are shown

St. Marys River

Chart Datum, St. Mary's River

(1) Depths and vertical clearances given in this chapter are referred to the sloping surface of the river above the locks when Lake Superior is at Low Water Datum, elevation 601.1 feet (183.2 meters), and the gage above the U.S. locks reads 600.6 feet (183.1 meters), and below the locks when the gage below the U.S. locks reads 578.4 feet (176.3 meters) and Lake Huron is at Low Water Datum, 577.5 feet (176.0 meters). These elevations are above mean water level at Rimouski, Quebec, on International Great Lakes Datum 1985 (IGLD 1985). (See Chart Datum, Great Lakes System, indexed as such, chapter 1.)

Charts 14882, 14883, 14884

(2) **St. Marys River** forms the outlet of Lake Superior, connecting it with Lake Huron. From **Whitefish Bay** at the SE corner of Lake Superior, the river flows in a general SE direction to empty into Lake Huron at Point De Tour, a distance of 63 to 75 miles depending on the route traveled. The river is bounded on the W side for its entire length by the E end of the upper peninsula of Michigan and on the E side by the Ontario mainland in the upper part and **Drummond Island, MI** and **St. Joseph Island, Ont.** in the lower part.

Canadian Waters

(3) The **International Boundary** enters the St. Marys River near the S tip of St. Joseph Island. As one proceeds upstream in the river the Boundary enters Course 9 of the dredged channel E of Neebish Island, MI. The Boundary is approximately on centerline of the channel through Course 8 and 7 to the vicinity of the lower end of Sugar Island, MI. There, the Boundary departs from the ships channel, and skirting the E shore of Sugar Island enters Lake George. The Boundary skirts the N shore of Sugar Island and re-enters the ships channel in Course 1. The Boundary lies in St. Marys Falls with the American Locks to the S and the Canadian Locks to the N. Thence the Boundary lays roughly centerline between the land masses of Michigan and Ontario until it reaches Whitefish Bay of Lake Superior.

(4) For a detailed description of shoreline, waterways, and ports in Canadian waters relating to the St. Marys River see **Canadian Sailing Directions-Great Lakes, Volume II.**

(5) **De Tour Passage,** at the mouth of the river, extends N from Lake Huron. The W side of the passage extends from **Point De Tour** to **Gaffney Point,** 4 miles N, and the E side extends from **Barbed Point** to **Black Rock Point,** 3 miles N.

(6) After passing through De Tour Passage, the river turns NW and widens. Between Black Rock Point and the S end of St. Joseph Island, the river extends across the mouth of Potagannissing Bay. From **Old Fort St. Joe Point** at the S end, the river extends along the W side of St. Joseph Island for about 19 miles to **Stribling Point** at the N end. About 3 miles NW of Old Fort St. Joe Point, the river narrows between **Hay Point** and **Point aux Frenes Munuscong Lake** is the widening in the river between Point aux Frenes and the foot of Neebish Island, about 8 miles N.

(7) **Neebish Island,** about 8 miles long and 4 miles wide, is in midriver opposite the N end of St. Joseph Island. Narrow channels lead around either side of the island. **Sugar Island,** just N of Neebish Island, is about 15 miles long N and S and has a maximum width of about 8 miles at the N end. **Lake George** separates the E side of the island from the Ontario mainland, and **Lake Nicolet,** through which flows the main channel of the river, is W of the island. A narrow channel leads from the N end of Lake George around the N end of Sugar Island and joins with the channel that leads N from Lake Nicolet.

(8) From the junction, the river extends 2 miles W between the cities of Sault Ste. Marie in Michigan and Ontario to **St. Marys Falls** and the canals and locks which overcome them. Above the locks, the river extends 5 miles SW to the narrows between **Pointe aux Pins** and **Brush Point,** thence W for 3 miles before turning NW around **Pointe aux Chenes** and extending about 5 miles to the head of the river in Whitefish Bay.

Channels

(9) A series of dredged deep-draft channels lead through the St. Marys River to connect the deep water of Lake Huron with that of Lake Superior. A detailed

description of the various channel reaches is given later in the chapter. These channels are well marked by lighted and unlighted buoys and lighted ranges.

(10) Throughout much of the river, dumping grounds for dredging spoils are close outside the dredged channels and may be very shoal or in the form of small islands. These areas must be avoided.

(11) All salt water vessels transiting the lock systems along the St. Marys River which are not equipped with either bow or stern thrusters, are required to be assisted by one or more tugs to ensure that full control of the vessel is maintained at all times. Tugs are also required for all power vessels which experience control problems at low speeds, or in close quarters.

Limiting Dimensions (in feet) of Through Channel:

(12) **In MacArthur Lock**–length, 800; width, 80; depth, *31.

(13) **In Poe Lock**–length, 1,200; width, 110; depth *32.

(14) **In Davis and Sabin Locks**–length, 1,350; width, 80; depth, 23.

(15) **In Canadian Lock**–length, 225; width, 49; depth, 9½.

In improved river channels:

(16) Upbound (westerly side)–width, 300; depth, 27.

(17) Upbound (easterly side)–width, 200; depth, 21.

(18) Downbound–width, 300; depth, 27.

(19) *Governing depth in South Canal approaches to lock is 27½ feet.

(20) **Note.–The depths given in this chapter for the improved dredged channels in the St. Marys River are the Federal project depths. The Corps of Engineers makes periodic bar sweeps through all the improved dredged reaches of the St. Marys River, and these channels are well maintained at the project depths. Any depths found to be less than the project depths are published in the Local Notice to Mariners.**

Fluctuations of water level

(21) Each year the St. Marys River rises and falls about 1 foot as measured by the monthly mean levels. Since 1900, the difference between the highest and the lowest monthly mean levels above the locks has been about 4 feet and below the locks about 6 feet. From day to day, the level fluctuates somewhat due to changes of wind and barometric pressure; such fluctuations frequently amount to several inches and sometimes to 1 foot or more. In addition to these changes in level, barometric pressure changes occasionally cause a considerable oscillation to take place within a short period; such changes amounting to over 5 feet have been known to occur within 3 hours. As much of the present sailing route in the St. Marys River has been made navigable by dredging, the changes in level have a direct effect on the available depth.

Currents

(22) As the speed limits established for the St. Marys River in **33 CFR 161.880 and 161.886**, chapter 2, refer to the speeds over the bottom, and as the currents in the river are variable, masters are cautioned to regulate the speed of their vessels by running on time from point to point instead of relying on the number of revolutions per minute of the propeller.

(23) The swiftest currents in the navigable channels of the St. Marys River are found at Little Rapids cut (course 2), West Neebish Channel Light 29, Six Mile Point, and West Neebish Channel rock cut (course 6). The strength of the current depends largely upon the discharge of the river and the elevation of the water surface at the mouth of the river. The discharge of the river is now under control and is varied according to water-level requirements. When the water surface at the upper end of Lake Huron is high, because of E or S winds or because of barometric variations, the current velocity is temporarily checked. When the stage on Lake Superior is such that a large flow is being permitted, the current is strong and is further increased if the level of Lake Huron is low.

(24) The attention of masters is also directed to the fact that at times the current over the rapids at Sault Ste. Marie is slight, while a very strong set is often experienced when passing the inlets of both the Michigan and Ontario power canals, adjacent S and N of the locks at Sault Ste. Marie, respectively. This is especially true of the Ontario canal where vessel masters have encountered difficulty through attaching too much importance to the rapid's current and not enough to that of the power canal.

(25) It is well to note that E and S winds make high water below the locks and low water above the locks and that W and N winds have the opposite effect.

(26) Currents for the following locations in the St. Marys River are given at high water flow of 110,000 cubic feet per second (cfs), medium water flow of 76,000 cfs, and low water flow of 57,000 cfs, respectively.

(27) Little Rapids cut (course 2): 2.2 mph (2.0 knots), 1.6 mph (1.4 knots), and 1.4 mph (1.2 knots)

(28) West Neebish Channel Light 29: 1.8 mph (1.6 knots), 1.3 mph (1.1 knots), and 1.0 mph (0.9 knots)

(29) Six Mile Point: 1.6 mph (1.4 knots), 1.1 mph (1.0 knots), and 1.0 mph (0.8 knots)

(30) West Neebish Channel rock cut (course 6): 1.5 mph (1.3 knots), 1.1 mph (0.9 knots), and 0.8 mph (0.7 knots)

(31) Middle Neebish Channel dike (course 6): 1.4 mph (1.2 knots), 1.0 mph (0.9 knots), and 0.9 mph (0.8 knots).

Ice

(32) The upper and lower parts of the St. Marys River reach average ice thicknesses of 14 and 17 inches and average maximum thicknesses of 20 and 26 inches, respectively. The river is not much affected by wind, and the channel track remains well defined with a stable ice sheet outside the channel. Broken pieces of ice accumulate in the channels and may become concentrated in some bottleneck areas. In some reaches, brash ice may accumulate up to 4 feet thick around mid-January. (See Winter Navigation, chapter 3.)

Vessel Traffic Service

(33) A **Vessel Traffic Service (St. Marys River),** operated by the U.S. Coast Guard, has been established for St. Marys River and lower Whitefish Bay from De Tour Reef Light to Ile Parisienne Light, except for the waters of the St. Marys Falls Canal. The Service is designed to prevent collisions and groundings and to protect the navigable waters concerned from environmental harm resulting from such collisions or groundings.

(34) The Vessel Traffic Service provides for a Vessel Traffic Center (VTC), that may regulate the routing and movement of vessels by movement reports of vessels, specific reporting points, and VHF-FM radio communications. The Service includes one- and two-way traffic areas, areas of allowed and prohibited anchorage, and speed limits.

(35) The Vessel Traffic Center, call sign "Soo Traffic," is operated continuously, and maintains radiotelephone communications with vessels on VHF-FM channel 16 and channel 12.

(36) Participation in the Service is mandatory for certain vessels. (See **33 CFR 161.801,** chapter 2, for classes of vessels affected.)

(37) This Service is intended in no way to relieve any person of complying with the navigation rules for harbors, rivers, and inland waters generally; the Inland Navigation Rules; Vessel Bridge-to-Bridge Radiotelephone Regulations; the Federal Boating Safety Act of 1971, or any other law or regulation.

(38) See St. Marys Falls Canal, this chapter, for procedures and regulations affecting vessel operations approaching and traversing St. Marys Falls Canal.

(39) The initial reporting point for upbound vessels is abeam De Tour Reef Light; for downbound vessels, abeam Ile Parisienne Light in Whitefish Bay. Permanent reporting points have been established throughout the waterway. Temporary or seasonal reporting points are established as conditions dictate. (See **33 CFR 161.801 through 161.894,** chapter 2, for rules affecting vessel operations in the Vessel Traffic Service.)

Pilotage

(40) The waters of St. Marys River, bounded at the lower end by latitude 45°59'N., and at the upper end by longitude 84°33'W., are Great Lakes designated waters. Registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot. Registered pilots for the St. Marys River are supplied by Western Great Lakes Pilots Association. (See appendix for address.) Pilot exchange points are at the lower entrance to the river off De Tour, Mich., and at the upper entrance to the river about 3.5 miles SE of Point Iroquois. The pilot boat at De Tour, LINDA JEAN, has a green hull and a white cabin. The pilot boat at the head of the river, J. P. IX, docks just above the locks at Sault Ste. Marie. (See Pilotage, chapter 3, and **46 CFR 401,** chapter 2.)

Chart 14882

(41) **De Tour Passage** forms the mouth, or S end, of St. Marys River. The passage has deep water for a width of over 2,500 feet between the E end of the upper peninsula of Michigan on the W and the W end of Drummond Island on the E. The shoals that border the passage are well marked.

(42) **De Tour Reef**, a rocky ledge covered 15 feet, is 0.7 mile SE of **Point De Tour** on the W side of the entrance to De Tour Passage. **De Tour Reef Light** (45°56.9'N., 83°54.2'W.), 74 feet above the water, is shown from a white square tower on a concrete crib on De Tour Reef; a fog signal, a radiobeacon, and a radar beacon (Racon) are at the light.

(43) **De Tour Shoal,** 0.8 mile N of De Tour Reef, is marked on the E side by a buoy that marks the W edge of the deep water through the passage.

(44) **Crab Island Shoal**, with boulders just below the surface, is on the E side of the passage, 1.3 miles E of Point De Tour. A lighted bell buoy marks the W edge of the shoal. Adjacent W of the buoy, De Tour Passage has been dredged to a depth of 30 feet.

(45) **Frying Pan Shoal,** boulders covered 18 feet, extends about 0.25 mile from shore on the W side of the passage 2.2 miles N of De Tour Reef Light. **Frying Pan Island,** 0.3 mile N of Frying Pan Shoal, is marked on the E side by a light. An abandoned fueling dock on the SE side of the island has a depth of about 21 feet alongside.

(46) **De Tour Village, Mich.,** is on the W side of De Tour Passage NW of Frying Pan Island. A ferry for passengers, autos, and limited freight operates year round from the village across the passage to Drummond Island. Small craft landing at De Tour Village must take care to avoid submerged cribs and dock ruins. A Michigan State

Waterways Commission small-craft harbor protected by a breakwater is about 400 yards N of the ferry pier. Transient berths, gasoline, diesel fuel, water, electricity, sewage pump-out facility, marine supplies, a launching ramp, a 25-ton lift for hull and engine repair, and harbormaster services are available. The harbormaster monitors VHF-FM channels 16 and 9.

(47) A **U.S. Customs** representative is available at De Tour village. The breakwater is marked by a light on its S end.

(48) The W shore of Drummond Island fronts De Tour Passage from **Barbed Point** N for 3 miles to **Black Rock Point** Dolomite is shipped from an 800-foot dock of Osborne Materials Co., 1.3 miles N of Barbed Point. The dock has a deck height of 10 feet and reported depths of 23 feet alongside. A conveyor system can load vessels at 4,000 tons per hour. Buoys mark shoals N and S of the dock.

(49) **Gaffney Point** (46°00.7'N., 83°54.5'W.) is on the W side of De Tour Passage 1.4 miles N of De Tour Village. **Watson Reefs** is a narrow shoal about 0.2 mile offshore between Gaffney Point and the village. Buoys mark the NE and SE sides of the shoal, and a light is near the center. **Pipe Island,** marked on the SW side by a light, is 0.6 mile NE of Gaffney Point. A buoy marks the extent of shoals SW of the island. **Pipe Island Twins** is a pair of small islands about 0.5 mile NE of Pipe Island with shoals between. The E island is marked at the N end by a light, and shoals that extend N from the light are marked by a lighted buoy. **Pipe Island Shoal,** with a least depth of 11 feet, is 0.5 mile SE of Pipe Island. A lighted buoy marks the SE side of the shoal.

(50) **Squaw Island,** marked at the S end by a light, is 1.4 miles N of Pipe Island. Detached 18- and 22-foot spots are 0.3 and 0.6 mile WNW of Squaw Island, respectively.

(51) A coaling station of the Interlakes Steamship Company is at a 1,000-foot wharf 0.6 mile NW of Gaffney Point. The reported controlling depth is 26 feet along the lower 700 feet of the wharf face. A shoal with a least depth of 22 feet is about 400 feet NE of the face.

(52) **Sweets Point** is about 2 miles NW of Gaffney Point. Shoals extend about 0.6 mile N from the point and are marked near the outer end by a light.

(53) **Raber Point** (46°04.0'N., 84°01.9'W.), 7 miles NW of Gaffney Point, is the S entrance point to **Raber Bay. Lime Island** is in the middle of the river, 1.7 miles NE of Raber Point. An 800-foot wharf is on the W side of Lime Island. The wharf, marked at its S end by two lights, has least depths of about 17 feet along the upper 300 feet and 25 feet along the lower 500 feet. In 1988, it was reported that the wharf was no longer in operation.

(54) At the N end of De Tour Passage, the upbound and downbound vessel channels are divided by the Pipe Island group. The upbound channel leads N on the E side of Pipe Island Shoal. Abreast Pipe Island Twins Light, the channel turns NW, leads S of Squaw Island, and rejoins the downbound channel N of Sweets Point. **Pipe Island Course,** downbound, leads SE from Sweets Point between Gaffney Point and Pipe Island to the N end of De Tour Passage. These channels have a depth of 29 feet.

(55) **Lime Island Channel,** upbound and downbound, leads NW from Sweets Point to the turn between Raber Point and Lime Island and has a depth of 29 feet. At the turn, a lighted midchannel buoy separates the two-way traffic.

(56) **Round Island Course,** upbound and downbound, leads N from the turn at the upper end of Lime Island Channel for 3.5 miles to the turn between Point aux Frenes and Hay Point. The depth in the channel is 28 feet. **Round Island,** marked by a light, is on the W side of the channel near its midlength.

(57) **Point aux Frenes** (46°07.9'N., 84°01.7'W.) is on the W side of the river at the turn from Round Island Course into Munuscong Lake. Lights mark the course changes in the turn.

Charts 14882, 14883

(58) **Munuscong Lake** is a widening in St. Marys River from Point aux Frenes upstream to Neebish Island. **Lower Course 8,** upbound and downbound, leads from the turn at Point aux Frenes NW for 4.6 miles through Munuscong Lake. The depth in the channel is 28 feet. The channel is marked at the lower end by a **128°** lighted range on **Hay Point.**

Chart 14883

(59) Near the middle of Munuscong Lake, at the upper end of Lower Course 8, the dredged channel of the St. Marys River divides to lead around either side of **Neebish Island.** The upbound channel leads generally N between the E side of Neebish Island and St. Joseph Island, thence WNW between the N side of Neebish Island and the S end of **Sugar Island,** thence N again in Lake Nicolet to the junction with the downbound channel. The channel is about 17.5 miles long between the junctions with the downbound channel. The courses through this stretch are well marked by lighted and unlighted buoys and ranges.

(60) **Course 10,** marked by a **321°** lighted range on the S end of Neebish Island, leads NW for 2.1 miles from the junction with the downbound channel at the upper end of Lower Course 8. The channel has a depth of 27 feet for a least width of 500 feet.

(61) **Course 9** leads 3.6 miles NNE to **Johnson Point** on the SE side of Neebish Island. The E side of the channel has a depth of 21 feet for a width of 200 feet. The W side has a depth of 27 feet for a least width of 300 feet. The W side of the channel is marked by a **017°** lighted range at the upper end, and the E side is marked by an unlighted range.

Wharf

(62) An L-shaped **Public wharf**, known locally as **C Line Dock**, NW of the front range light has a 46-foot (14 m) south face with a least depth of 2 feet at the shore end; 45-foot (14 m) west face with a least depth of 4 feet (1.2 m); 16-foot (4.9 m) north face with a least depth of 5 feet (1.5 m); deck height 5 feet (1.5 m). A launch ramp is near by.

(63) **Course 8** leads NW for 1 mile from Johnson Point to **Mirre Point.** The NE side of the channel has a depth of 21 feet for a width of 400 feet, and the SW side has a depth of 28 feet for a least width of 600 feet. The deep side of the channel is marked by a **134°56'** lighted range at the lower end and a **314°** lighted range at the upper end.

(64) **Course 7, Munuscong Channel,** leads N for 3.2 miles from Mirre Point to **Stribling Point** (46°18.8'N., 84°06.9'W.), the NW point of St. Joseph Island. The E side of the channel has a depth of 21 feet for a width of 200 feet, and the W side has a depth of 27 feet for a least width of 300 feet. The E side of the channel is marked by a **177°** range at the lower end and a **357°** range at the upper end. The deep side is marked by a **177°** lighted range at the lower end and a **357°** lighted range at the upper end.

(65) At the turn from the upper end of Course 7 into Course 6, a passage leads NE between Stribling Point and **Harwood Point,** the SE point of Sugar Island, to connect with St. Joseph Channel and the channel that leads N to Lake George. **St. Joseph Channel** separates St. Joseph Island from the mainland and leads E to connect with North Channel. (Several localities in St. Joseph Channel are described in chapter 10.)

(66) **Lake George** separates the E side of Sugar Island from the Ontario mainland. A channel, well marked by lighted and unlighted buoys, leads N from Harwood Point to the lake, and thence from the N end of the lake around the N side of Sugar Island to connect with St. Marys River at Sault Ste. Marie. The channel has a depth of about 10 feet. The buoys marking Lake George channel are not charted because the positions are frequently shifted to mark the best water.

(67) **Course 6, Middle Neebish Channel,** leads WNW for 3.2 miles from Stribling Point between the N side of Neebish Island and the S side of Sugar Island to the lower end of **Lake Nicolet.** The N side of the channel has a depth of 21 feet for a least width of 200 feet and is marked at the lower end by a **112°** range. The S side of the channel has a depth of 28 feet for a least width of 300 feet and is marked at the lower end by a **111°55'** lighted range and at the upper end by a **292°** lighted range. A dike, marked at the center and ends by lights, borders the N side of the channel for 1.2 miles near midlength of the course. The range structures at the upper end of the course are in the open water of Lake Nicolet. They are well protected with riprap and should not be passed close aboard.

(68) **Course 5** leads NW from the lower end of Lake Nicolet for about 4.5 miles to the junction with the downbound channel near midlake. The E side of the channel has a depth of 21 feet for a width of 200 feet and is marked at the lower end by a **150¼°** range. The W side of the channel has a depth of 27 feet for a least width of 300 feet and is marked at the lower end by a **150°** lighted range.

(69) **West Neebish Channel,** downbound, diverges from the upbound channel near the middle of Lake Nicolet and leads generally S for about 16.5 miles between the W side of Neebish Island and the mainland to the lower junction with the upbound channel S of Neebish Island in Munuscong Lake. The courses through this stretch are well marked by lighted and unlighted buoys, lights, and lighted ranges.

(70) **Course 4** is a continuation of the downbound portion of Course 4, upbound and downbound, which leads through the middle of Lake Nicolet. From the junction with the upbound channel, Course 4 leads SSE for 2.5 miles to the lower part of the lake. The channel has a depth of 27½ feet and is marked by a **160°** lighted range.

(71) **Course 5** leads S from the lower part of Lake Nicolet for 4.4 miles to the rock cut on the W side of Neebish Island. The channel has a depth of 27½ feet and is marked by a **181°30'** lighted range.

(72) **Course 6** leads SE from the head of the rock cut for 2.7 miles to a point about 0.5 mile N of **Sawmill Point.** The upper part of this course, through the cut, is bordered on either side by a vertical rock masonry wall marked by lights. The channel has a depth of 28½ feet and is marked at the lower end by a leading light.

(73) A well-protected small-craft anchorage with mud bottom and 3 to 15 feet of water is reported on the NE side of Course 6 about 1.2 miles above Rock Cut Lower Leading Light between a spoil island and a dike.

(74) **Course 7** leads S from the turn 0.5 mile N of Sawmill Point for 2.4 miles to **Moon Island.** The channel has a depth of 28½ feet and is marked by a leading light on the N end of Moon Island.

(75) **Course 8** leads SE from Moon Island for 4.6 miles through the upper part of Munuscong Lake to the junction with the upbound channel S of Neebish Island. The channel has a depth of 27½ feet.

(76) **Course 4,** upbound and downbound, leads through the middle part of Lake Nicolet from the vicinity of **Ninemile Point** (46°23.6'N., 84°13.7'W.) NNW for 3.5 miles to **Six Mile Point.** The channel has a depth of 29 feet for a width of 1,500 feet. The upbound, E, side of the channel is marked by a **339½°** lighted range, and the downbound side is marked by a **160°** lighted range at the S end of Lake Nicolet.

(77) An **anchorage,** with a depth of 28 feet and marked by buoys, is adjacent to the downbound side of Course 4 opposite Ninemile Point.

Charts 14883, 14884

(78) **Course 3** and **Course 2, Little Rapids Cut,** lead NNW from Six Mile Point for about 4.5 miles to the turn above Mission Point. The channel has a depth of 27 feet for a least width of 600 feet. A leading light on the W side of Sugar Island marks Course 3 downbound, and a **323.3°** lighted range at **Frechette Point** (46°27.5'N., 84°16.9'W.) marks Course 3 upbound. A **153°** lighted range at Six Mile Point marks Course 2 downbound.

(79) Small-craft facilities are at Six Mile Point and Frechette Point. A small-craft channel marked by buoys leads NW from Course 2 on the N side of Frechette Point between the mainland and **Island No. 3**. There is no access from this channel at its upper end to the main channel. A marina developed by Michigan State Waterways Commission and private marinas are on the mainland side of this channel, opposite the lower end of Island No. 2. Transient berths, gasoline, diesel fuel, water, electricity, sewage pump-out, minor repairs, launching ramp, and harbormaster services are available. The harbormaster monitors VHF-FM channels 16 and 9. An 8-ton marine railway is available.

(80) **Mission Point** (46°29.2'N., 84°18.2'W.), marked by a light, is on the W side of the river just below the turn at the upper end of Course 2. A ferry operates across the river from Mission Point to **Island No. 1.**

(81) Three ice stabilization islands marked by lights are on the SW side of the river about 0.1, 0.3 and 0.45 mile above Light 99.

(82) In 1981, a submerged obstruction was reported in about 46°29'10"N., 84°18'08"W., about 100 feet off the ferry dock.

Chart 14884

(83) At the upper end of Course 2, Course 1, **Bayfield Channel,** turns WNW in the approach to St. Marys Falls Canal. The channel has a depth of 28 feet W to the outer end of East Center Pier of the canal and is marked at the lower end by a **109°** lighted range. **Bayfield Dike,** marked by a light, parallels the N channel limit about 1 mile NW of Mission Point. W of the dike, the N channel limit is marked by lighted buoys.

(84) **St. Marys Falls,** the rapids of St. Marys River, are about 14 miles below the head of the river at Point Iroquois and about 3 miles above Mission Point. The rapids are about 0.8 mile long and 0.3 mile wide, with a fall of 18 to 24 feet depending on the varying water stages. The U.S. Government has constructed canals and locks to overcome these rapids.

(85) **St. Marys Falls Canal,** 1.9 miles long between the upper and lower entrances, is along the S side of St. Marys River abreast the falls. The canal comprises North Canal and South Canal, separated by a center pier and each having two locks. The canals are faced with revetment walls and piers of timber, steel, and concrete. The outer ends of the N, S, and center piers at the canal entrances are marked by lights. The downbound approach to the canal is marked by a **076°** lighted range.

(86) **South Canal,** with a least width of 304 feet, has a depth of 27½ feet in the E entrance and 28 feet in the W entrance. **MacArthur Lock,** near the lower end of the canal, is 800 feet long, 80 feet wide, and has a depth of 31 feet. **Poe Lock,** immediately N of MacArthur Lock, is 1,200 feet long, 110 feet wide, and has a depth of 32 feet. In 1988, the controlling depth in the W approach to MacArthur Lock was 28 feet.

(87) **North Canal,** with a least width of 282 feet, is limited by the locks to a depth of 23.1 feet. **Davis Lock,** N of Poe Lock, is 1,350 feet long, 80 feet wide, and has a depth of 23.1 feet. **Sabin Lock,** paralleling the N side of Davis Lock, has the same dimensions. Sabin Lock is not used for cargo carrier vessel transits. Only small vessels such as tugs may transit the lock.

Communications

(88) The chief lockmaster operates a vessel dispatch station from the administration building on the pier between Poe and MacArthur Locks. The station operates on VHF-FM channels 14 and 16; call sign, WUE-21. The voice call for the station is WUE-21 or Soo Locks. Upbound vessels intending to transit the locks shall contact the lockmaster initially immediately before the turn at Mission Point, at the intersection of Course 1, Bayfield Channel and Course 2, Little Rapids Cut for lock assignment. Downbound vessels shall make initial

contact at Ile Parisienne, then at Big Point for lock assignment. In order that the dispatch made will cause the least delay to the vessel involved, vessel masters are requested to refrain from making their dispatch calls prior to reaching the above locations. This station is considered to have an effective operating range of about 50 miles. Operation is limited to communication with vessels on matters related to canal operation, traffic movement through the locks, and for emergency purposes. Masters are urged to provide supervision of the vessel's radiotelephone when approaching and transiting the canals so as to be promptly advised of changes in lock dispatch, impending bridge closures, etc. Vessels requiring special services while in the locks should contact the station in advance to expedite necessary arrangements by canal authorities.

Lock signals

(89) Upbound signals consisting of two lights, one red and one green, facing E, are on the SE wall ends of each lock to indicate to upbound vessels when it is safe to proceed into lock chambers. These signals are normally set to show red and are changed to green only when it is safe and permissible for each individual vessel to enter the lock. Vessel masters are cautioned not to enter a lock chamber upbound except on a green light signal, even though the lock gates may be open.

(90) In order that masters of downbound vessels approaching the NW pier may know when either the Davis or the Sabin Lock is filling, three signals have been established. These consist of flashing yellow lights, one placed on top of a light pole at the end of the upper nose pier between these two locks, the second at a point about 100 feet upstream of the railroad bridge on the NW pier, and the third on top of a light pole about midway between the railroad bridge and the end of the NW pier. The lights flash during the first 8 minutes of each lock filling, which is the period when flow toward the lock is increasing. In order that masters of downbound vessels approaching the SW or W center piers may know when either the MacArthur or the Poe Lock is filling, a signal consisting of a flashing yellow light is mounted on the top of a light pole at the end of the nose pier between the MacArthur and Poe Locks. The light flashes during the period when either lock is filling.

(91) Upbound vessels approaching the E center pier are cautioned against landing too close to its outer end because of eddy currents. When the N locks are being

emptied, an eddy moving upstream is formed along the SE pier. When the S locks are being emptied, the current at the end of the center pier flows N. When the N locks are emptying, this latter current is usually reversed. Wind conditions alter the situation.

(92) A current sets across the end of the W center pier during the filling of the locks. The current can set in either direction depending on conditions. Vessels bound for Davis Lock should not attempt to make the pier near its end.

(93) Downbound vessels dispatched to MacArthur Lock are cautioned to hold on Vidal Shoals Channel Range until N of the light on SW pierhead. Due to the strong current that sets into the power company canal adjacent to the end of the SW pier, such vessels should pass at least 200 feet N of the end of the pier. A light is about 1,000 feet E of the outer end of SW pier; vessels should land E of the light.

Caution

(94) Downbound vessels approaching MacArthur and Poe Locks may encounter a northerly current, especially near the end of W center pier. Downbound vessels approaching Poe Lock should land downstream of the end of W center pier.

(95) Before entering a lock, all vessels shall put heaving lines, attached to forward and aft cables, out onto the approach pier, and either line or cable shall be continuously carried by the vessel deckhands or canal linesmen until the vessel is moored in the lock chamber in all cases where the mooring is made on the side of the lock adjacent to the approach pier used. Vessels intending to moor on the side of the lock opposite that adjacent to the approach pier shall, in the same manner, put out heaving lines and have the line or cable continuously carried along the approach pier, shall take them in just as the lock is entered, and put them out again on the mooring side of the lock as soon as possible.

(96) Mariners are advised that often times adverse local conditions, i.e. high winds, current conditions, and inclement weather exist as vessels approach, enter and/or depart the Soo Locks. These conditions combined with close quarters slow speed maneuvering, particularly with large vessels not equipped with bow or stern thrusters, may cause control difficulties for certain classes of vessels.

(97) Therefore, any vessel requesting lockage which in the opinion of the Master in consultation with the Pilot on board, where applicable, may experience severe control problems due to the above conditions must request assistance by one or more tugs to ensure full control over the vessel at all times. Vessels Masters and Pilots must consult with the Lockmaster concerning local conditions well in advance of arrival at the lock to allow tug assistance to be arranged if necessary. These guidelines apply to all vessels.

(98) Bow and /or stern thruster use shall be kept to a minimum while transiting the Locks. Thrusters shall not be used while the thrusters are opposite lock gates. They may be used sparingly for short duration within the lock to maintain the ship position near the mooring wall or in an emergency. Thrusters shall be at zero thrust during the period the ship is stopped and moored to the wall with all lines out, and during raising and lowering of pool levels within the chamber.

(99) Vessels leaving the MacArthur Lock and Poe Lock at approximately the same time, the following policy will apply:

(100) 1. The first vessel to leave will be the vessel in the lock which is ready for vessel release first. The vessel in the other lock will be restrained by the gates remaining closed and the wire rope fender remaining in the down position.

(101) 2. On downbound passages, the vessel retained shall not leave the lock until such time as the bow of the vessel leaving first reaches the end of E center pier.

(102) 3. On upbound passages, the vessel retained shall not leave the lock until such time as the bow of the vessel leaving first reaches the railroad bridge.

(103) 4. When a 1,000-foot vessel is ready to depart the Poe Lock and a vessel in the MacArthur Lock leaves first, the 1,000-foot vessel may start to leave once the bow of the other vessel reaches the end of the respective nose pier.

(104) 5. The above policy may be varied on a case by case basis at the direction of the Chief Lockmaster on duty.

(105) 6. Vessels will remain in radio contact with each other and the Chief Lockmaster at all times until clear of the lock area.

Regulations

(106) The use, administration, and navigation of St. Marys Falls Canal and locks are under the direction of the District Engineer, U.S. Army Corps of Engineers, Detroit District. (See **33 CFR 207.440 and 207.441,** chapter 2, for regulations.) Copies of the regulations and the vessel transit forms required in **207.440(k)** are available at the U.S. Canal Office in the operations building adjacent to Davis Lock. A notary public and a **marine post office,** designated Canal Station, are in the operations building.

(107) Upbound recreational small craft desiring lockage shall report to the small-craft dispatch station near the outer end of E center pier. Downbound recreational craft shall report to the dispatch station on SW pier. Rowboats and canoes are prohibited. All craft must have power and an auxiliary movement source such as

oars, a life jacket for each person on board, 75 feet of line to reach the top of the lock wall, and lock report forms available at the dispatch station.

(108) Whenever, in the opinion of the Detroit District Engineer or his authorized representatives at St. Marys Falls Canal, the safety of lock structures or vessels in the canal area might be jeopardized by the continuance of vessel movements during periods of low visibility, all vessel movements in the canal area, and in approaching and entering the canal area, may be stopped. Whenever the stopping of vessel movements becomes advisable, the U.S. Coast Guard will be informed and will take such usual action as is necessary to advise vessels approaching St. Marys Falls Canal and to direct their anchoring. The chief lockmaster in the control tower at St. Marys Falls will personally direct, by radiotelephone, all movements of vessels in the locks area at the time the stop order is issued, and may approve continued movement or order mooring at specified locations.

(109) **Sault Ste. Marie (Canada) Canal** is on the N side of St. Marys River parallel to St. Marys Falls Canal. (See **Canadian Sailing Directions,–Great Lakes, Volume II, Chapter 12, St. Marys River**, for additional Information.)

Bridges

(110) Two bridges cross the St. Marys Falls and Sault Ste. Marie Canals W of the locks, from Sault Ste. Marie, Mich. to Sault St. Marie, Ont. The International Highway Bridge has 3 fixed spans, with clearances of 124 feet over South Canal and North Canal, and 120 feet over the Canadian canal.

(111) The Canadian National Railroad bridge parallels the highway bridge close upstream. Across South Canal, the bridge has a vertical lift span with a clearance of 16 feet down and 123 feet up. Across North Canal, the bridge has a double-leaf bascule span with a clearance of 13 feet. The leaves of the bridge do not open to a vertical position. When open, the S leaf overhangs the channel above a height of about 65 feet above normal water level, and the N leaf overhangs the channel above a height of about 68 feet above normal water level. The vertical lift and bascule spans are each equipped with signal lights that show green when the span is completely open and red at all other times. (See **33 CFR 117.1 through 117.59 and 117.653,** chapter 2, for drawbridge regulations.) Across the Canadian canal, the bridge has a swing span with a clearance of 15 feet. The opening signal for the bridge is three long blasts. The bridge sounds no signals, but shows a green light when open and a red light when closed.

(112) **Sault Ste. Marie, Mich.,** a city on the S side of St. Marys River adjacent to St. Marys Falls Canal, is a **customs port of entry.**

Weather, Sault Ste. Marie and vicinity

(113) Sault Ste. Marie, MI, is located in the extreme northeastern portion of the upper peninsula between Lake Nicolet and Whitefish Bay. Lake Nicolet, along with Munuscong Lake to the south, connect Lake Huron with Lake Superior. Whitefish Bay is the extreme eastern end of Lake Superior. The location averages only one day each year with maximum temperatures in excess of 90°F (32.2°C). July is the warmest month with an average high of 76°F (24.4°C) and an average minimum of 52°F (11.1°C). January is the coolest month with an average high of 22°F (-5.6°C) and an average minimum of 5°F (-15°C). The highest temperature on record for Sault Ste Marie is 98°F (36.7°C) recorded in August 1947 and the lowest temperature on record is -36°F (-37.8°C) recorded in January 1982. About 180 days each year experience temperatures below 32°F (0°C) and an average 46 days each year records temperatures below 5°F (-15°C). Every month has seen temperatures at or below 40°F (4.4°C) and every month except July (extreme minimum of 36°F (2.2°C), 1992) has recorded temperatures below freezing (0°C).

(114) The average annual precipitation for Sault Ste. Marie is 33.35 inches (847 mm). An annual maximum occurs during the summer, due mainly to convective activity, and a marked dry period occurs during the winter months. Precipitation falls on about 231 days each year. The wettest month is September with 3.75 inches (95.3 mm) and the driest, February, averages only 1.56 inches (39.6 mm). An average of 28 thunderstorm days occur each year with June, July and August being the most likely months. Snow falls on about 125 days each year and averages about 119 inches (3023 mm) each year. December and January each average over 30 inches (762 mm) per year and each month, November through March, each average great than one foot (305 mm). Nearly 27 inches (686 mm) of snow fell in one 24-hour period during December 1995 and snowfall amounts of greater than one foot (305 mm) in 24-hours have fallen in each month December through March. About 26 days each year has a snowfall total greater than 1.5 inches (38 mm) and snow has fallen in every month except June, July, and August. Fog is present on average 149 days each year and is more prevalent during the late summer and early autumn.

(115) The prevailing wind direction in Sault Ste. Marie is the northwest. Spring is the windiest period but a maximum gust of 62 knots occurred in November 1975.

(116) (See Page T-14 for **Sault Ste. Marie climatological table**.)

Towage

(117) Tugs to 2,250 hp are available at Sault Ste. Marie and operate throughout the river. Arrangements are made through Great Lakes Towing Company's dispatch office in Cleveland at 800-321-3663 or via remote VHF-FM antenna; at least 4 hours advance notice is requested.

Quarantine, customs, immigration, and agricultural quarantine

(118) (See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(119) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

Coast Guard

(120) Sault Ste. Marie Coast Guard Station, Group Office, and Base are close S of the lower entrance to South Canal. A **Captain of the Port** office is at the base. (See appendix for address.)

(121) Communications to the Coast Guard relating to distress and/or communications other than vessel traffic movement are made on VHF-FM channels 16 and 22; voice call, Coast Guard Group Sault Ste. Marie.

Repairs

(122) An 800-ton floating drydock with a length of 110 feet, width of 40 feet, and 14½ feet over the sills is 2,000 feet SSW of Bayfield Dike Light. The yard is equipped with a 25-ton floating crane and a 40-ton shore crane. Hull and engine repairs are available. Above-the-waterline repairs are available at another yard 2,000 feet NW. A 100-ton crane is available.

(123) **Sault Ste. Marie, Ont.,** is a port city and manufacturing center on the N side of St. Marys River adjacent to Sault Ste. Marie (Canada) Canal.

(124) The following is extracted (partial) from **Canadian Sailing Directions-Great Lakes, Volume II, Chapter 12, St. Marys River**. It is to be noted that the units of miles are nautical miles.

(125) *The city of **Sault Ste. Marie (Ontario)** had a population of 78,568 in 1988. It has several manufacturing industries. Principal imports are coal, iron ore, iron ore concentrates, limestone and petroleum products. Exports are plate and sheet steel, pig iron, primary iron, steel, paper and forest products.*

Customs

(126) *Sault Ste. Marie is a vessel clearing station for commercial vessels and a vessel reporting station for pleasure craft. The main customs office is at 125 Huron Street. A bonded warehouse of Soo Van and Storage is at 440 Bay Street.*

Rescue auxiliary

(127) *Canadian Marine Rescue Auxiliary vessels are based at Sault Ste. Marie during the boating season.*

Communications

(128) *A Canadian Coast Guard marine radio station, call sign VBB, is in Sault Ste. Marie (details are given in Radio Aids to Marine Navigation, Atlantic and Great Lakes).*

Towing facilities

(129) *Tugs are available.*

Transportation

(130) *The city has passenger, freight and express service and a transcontinental bus service. Sault Ste. Marie Airport, about 20 km west of the city, is operated by the Department of Transport.*

Harbour limits

(131) *The harbour is a Public Harbour administered by the Department of Transport. The harbour limits are defined as all the waters of the St. Marys River north of the International Boundary, west of a line drawn due south from the extremity of **Partridge Point** (46°31'N., 84°14'W.), and east of a line drawn south from Pointe aux Pins lighthouse.*

Eastern wharves

(132) *The Public wharf is 0.8 mile SE of the SE entrance pier to the Sault Ste. Marie (Canada) Canal. It is a concrete structure extending 600 feet (183 m) SW from shore with an L-end extending 310 feet (94 m) NW. There are freight sheds and an oil pipeline on the wharf.*

(133) *There is a triangular-shaped basin on the west side of the Public wharf. The basin entrance is about 70 feet (21 m) wide with depths of 13 to 17 feet (4 to 5.2 m). In 1984 there were depths of 15 to 20 feet (4.6 to 6.1 m) along the east face of the wharf and depths of 20 to 24 feet (6.1 to 7.3 m) along the outer face of the L-end. The inner face of the L-end had depths of 12 to 14 feet (3.7 to 4.3 m) and the west face 5 to 14 feet (1.5 to 4.3 m). The basin had depths of 12 to 17 feet (3.7 to 5.2 m) except at the north end which was shallower.*

(134) *The Shell Oil Company wharf is about 0.1 mile west of the Public wharf.*

Western wharves

(135) *The wharves and slip of the Algoma Steel Corporation Ltd. are close north of the west entrance to the Canadian canal. An irregular-shaped wharf area with steel sheeting faces lies 0.2 mile NW of the outer end of the lock approach to the SW pier. The SE face of this*

wharf is 490 feet (149 m) long, the SW face is 355 feet (108 m) long, and the NW face is 200 feet (61 m) long. The wharf has an elevation of 6 feet (1.8 m). Steel is loaded here.

(136) *A slip 1,800 feet (549 m) long and 240 to 150 feet (73 to 46 m) wide is entered 0.15 mile NW of the above-mentioned wharf area. A continuous concrete wharf face with an elevation of about 6 feet (1.8 m) extends from the irregular-shaped wharf and continues along the NE side of the slip. Coal and iron ore are unloaded at these berths. Three mobile ore bridges operate along this side of the slip.*

(137) *On the SW side close inside the entrance to the slip there is a wharf face 400 feet (122 m) long with a deck elevation of*
7 feet (2.1 m). Self-unloading vessels discharge limestone and gypsum at this berth.

Overhead conveyor

(138) *An overhead coal conveyor with a vertical clearance of 125 feet (38 m) spans the Algoma Steel Corporation slip a little less than 0.2 mile from the entrance.*

Charts 14962, 14884

(139) From the St. Marys Falls and Sault Ste. Marie Canals, the upper part of St. Marys River leads SW around Pointe aux Pins, thence NW to its head in the deep water of Whitefish Bay. The dredged channels through this part of the river are well marked by lighted and unlighted buoys and lighted ranges.

(140) **Vidal Shoals** are in the upper approaches to the United States and Canadian canals. Dredged channels lead through the shoals to the respective canals.

(141) **Vidal Shoals Channel,** the approach to St. Marys Falls Canal, with a depth of 28 feet, leads ENE from **Big Point** for 2.2 miles to the canal entrance. The channel is marked by **076°** Vidal Shoals Channel Range.

(142) A privately dredged 21-foot channel leads S from Vidal Shoals Channel to a slip at the C. Reiss Coal Co. 1.7 miles WSW of Poe Lock. In 1966, the slip had a controlling depth of 21 feet for a distance of 600 feet. In 1978, the dock was in poor repair.

(143) **Pointe aux Pins Course,** with a depth of 28 feet, extends from Big Point SW for 2.5 miles to the turn between **Brush Point, MI,** and **Pointe aux Pins, Ont.,** (46°28.5'N., 84°27.9'W.). The channel is marked at the upper end by a **233°** lighted range.

(144) **Pointe Louise Channel** leads SSW for 0.8 mile from Pointe aux Pins to **Pointe Louise,** and thence **Pointe Louise Turn** leads SW for 0.5 mile to connect with Brush Point Course. These channels have a depth of 28 feet.

(145) **Brush Point Course** extends from Pointe Louise Turn SW for 3 miles to the turn SSW of **Pointe des Chenes, Ont.** (46°28.6'N., 84°31.6'W.). The channel has a depth of 28 feet and is marked at the lower end by a **074°** lighted range.

(146) At the turn at the upper end of Brush Point Course the dredged channel flares broadly to W. **Birch Point Course** leads NW from the turn for about 4 miles to the deep water in Whitefish Bay and includes dredged cuts through Point Iroquois Shoals and Gros Cap Reefs, Ont. The channel has a depth of 30 feet and is marked at the lower end by a **138°30'** lighted range on **Birch Point** (46°26.0'N., 84°31.4'W.). A lighted midchannel buoy is on the range line in the turn.

(147) **Waiska Bay, MI,** 3 miles W of Birch Point, has depths of 4 to 12 feet and is used mainly by local fishermen. Submerged and partially submerged piles extend in a line across the mouth of the bay, and extreme caution is advised when entering the bay.

Small-craft facility

(148) A small-craft facility is at the N end of Waiska Bay; fuel and repairs are available. In 1987, a reported controlling depth of 2 feet was available in the approaches to the facility.

(149) **Point Iroquois Shoals,** with a depth of 15 feet at the outer edge, extend from the shoreline SE of **Point Iroquois, MI** (46°29.1'N., 84°37.8'W.) NE to the edge of the dredged channel through Birch Point Course. Buoys at the outer edge of the shoal mark the limit of the dredged channel.

(150) A buoy 2.9 miles NW of Point Iroquois marks the NE side of a boulder bank covered 24 feet.

(151) **Gros Cap, Ont.** (46°32'N., 84°35'W.), the NE entrance point to the St. Marys River, has radio masts with air obstruction lights nearby.

Public wharf

(152) A 236-foot breakwater-wharf is close SE of Gros Cap.

Customs

(153) Gros Cap is a vessel reporting station for pleasure craft.

(154) **Gros Cap Reefs**, a rocky bank with a least depth of 17 feet, is on the E side of the entrance to St. Marys River, 2 miles N of Point Iroquois and from 1 to 1.8 miles SW of Gros Cap.

(155) **Gros Cap Reefs Light, Ont.** (46°30'42"N., 84°36'54"W.), 59 feet above the water, is shown from a white square block on the S part of the reef.