

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.
SECTOR 13 — CHART INFORMATION

SECTOR 13

CHATHAM SOUND—HECATE STRAIT TO DIXON ENTRANCE

Plan.—This sector describes Chatham Sound and the NE part of Hecate Strait from the SW extremity of Porcher Island to the SE entrance of Revillagigedo Channel. It also includes the passages entering Chatham Sound from Hecate Strait. The NE part of Dixon Entrance is then described together with Portland Inlet, Observatory Inlet, and Pearse Canal. The Portland Canal is described as far as Stewart, British Columbia and Hyder, Alaska.

General Remarks

13.1 Chatham Sound lies between the islands lying off the Tsimpsean Peninsula, on the E side, and the islands lying N of Porcher Island including the Dendas Islands, on the W.

The sound communicates with Hecate Strait by three channels; namely Edye Passage, Bell Passage, and Brown Passage.

The N end of Chatham Sound joins the NE part of Dixon Entrance and affords a direct route via the inner passage to Alaska, Pearse Canal, and Portland Inlet.

The NE part of Hecate Strait forms the outside coastal route for vessels desiring to enter Dixon Entrance and Revillagigedo Channel. From this section of coast, Chatham Sound can be entered through the above-mentioned passages. It is used especially by those vessels desiring to enter Prince Rupert Port and the inner passage to the S.

The NE part of Dixon Entrance embraces the N end of Chatham Sound, to the S, and the inner channels, to the N, from which the ports of Hyder, Alaska and Stewart, British Columbia can be reached.

The islands, islets, and rocks lying in the S part of the sound are mostly wooded and of a conspicuous dark color, with the exception of Gull Rocks, a group of bare rocks, located close off the inner entrance to Edye Passage. The islands, islets, and rocks lying in the N part of the sound are bare and conspicuous, with the exception of Green Island.

The inner passage, after leaving Malacca Passage, follows the E side of Chatham Sound as far as Port Simpson. It then follows through the Main Passage to Portland Inlet or Alaska.

The least depth in the fairway of the inner passage through Chatham Sound is 55m. The depths lying in the inner channels to the N are deep.

Brown Passage provides the most direct route to Prince Rupert and the S part of Chatham Sound from Dixon Entrance. It also forms a convenient entry into Chatham Sound from Hecate Strait for large vessels.

Edye Passage is a convenient route leading between the N end of Hecate Strait and the S part of Chatham Sound. This passage has a least width of 0.6 mile and is easily navigated at all states of the tide. It also avoids the strong and irregular tidal currents experienced in Brown Passage.

Tides—Currents.—In the E part of Dixon Entrance between Cape Fox and Dundas Island, the channel is reduced

to a width of 6.5 miles. The flood current runs E at a rate of 2 knots and the ebb current runs W at a rate of 3 knots. The turn of the current apparently occurs near the time of HW and LW at Prince Rupert. These currents should be borne in mind when navigating through this portion of Dixon Entrance.

Occasionally in winter, N gales draw down Portland Inlet and across the NE end of Chatham Sound, and when heaviest, render the crossing between Dundas Island and Cape Fox hazardous for all except full-powered vessels. A heavy beam sea is encountered when crossing during SW gales.

The E current through Dixon Entrance, upon reaching the N end of Hecate Strait, divides at a point midway between Rose Spit (54°13'N., 131°35'W.) and Dundas Island. The weaker portion of the current sets N past Dundas Island, undoubtedly because of the in-draft toward Portland Canal and the neighboring inlets. The main current turns SE in Hecate Strait. In winter, the E and W currents are very regular, but in late summer, the E current may attain a rate of 2.5 to 3 knots, with little appreciable W current or only slack water. These changes in the current are similar to the annual variation in the time of the tide itself, which gives rise to the tidal differences shown in the tide table.

Farther S, where the strait widens in the latitude of Porcher Island, the tidal current rarely exceeds a rate of 1 knot in the central portion of the strait. However, along the shore from Cape George, on Porcher Island, to Butterworth Rocks, the N current is the stronger and the SE current is hardly appreciable. Within 5 miles of the shore, the NW current may exceed a rate of 3 knots.

The tidal currents in Chatham Sound do not exceed a rate of 1 knot. In the S part of the sound, the E tidal current from Brown Passage and the NE tidal current from Edye Passage join the tidal current from Malacca Passage; the united current sets N up the main channel of the sound.

In the N approach to the sound between Dundas Island and Cape Fox, the E tidal current flows at a rate of 2 knots and the W tidal current at a rate of 3 knots. The change of the tidal current takes place apparently at about HW and LW at Prince Rupert.

The general direction of the flood current in Hecate Strait is to the N and that along the N coast of Queen Charlotte Islands is to the E. This causes a great irregularity in the vicinity of their junction between Rose Spit, on the W side of the strait, and the W entrance of Brown Passage. At springs or during bad weather, the tide rips caused by the meeting of the currents are sometimes so great as to convey an appearance of broken water off Rose Spit. The flood current sets E and the ebb current W, both at a rate of 1.5 knots. The change of the currents takes place about the time of HW and LW by the shore. In Portland Inlet at the entrance of Nass Bay, the E current runs at a rate of 2 knots and the W current at a rate of 3 knots. Abreast Nass Bay, the S current runs at a considerable rate, the blue water being clearly defined when meeting the muddy waters from the Nass River.

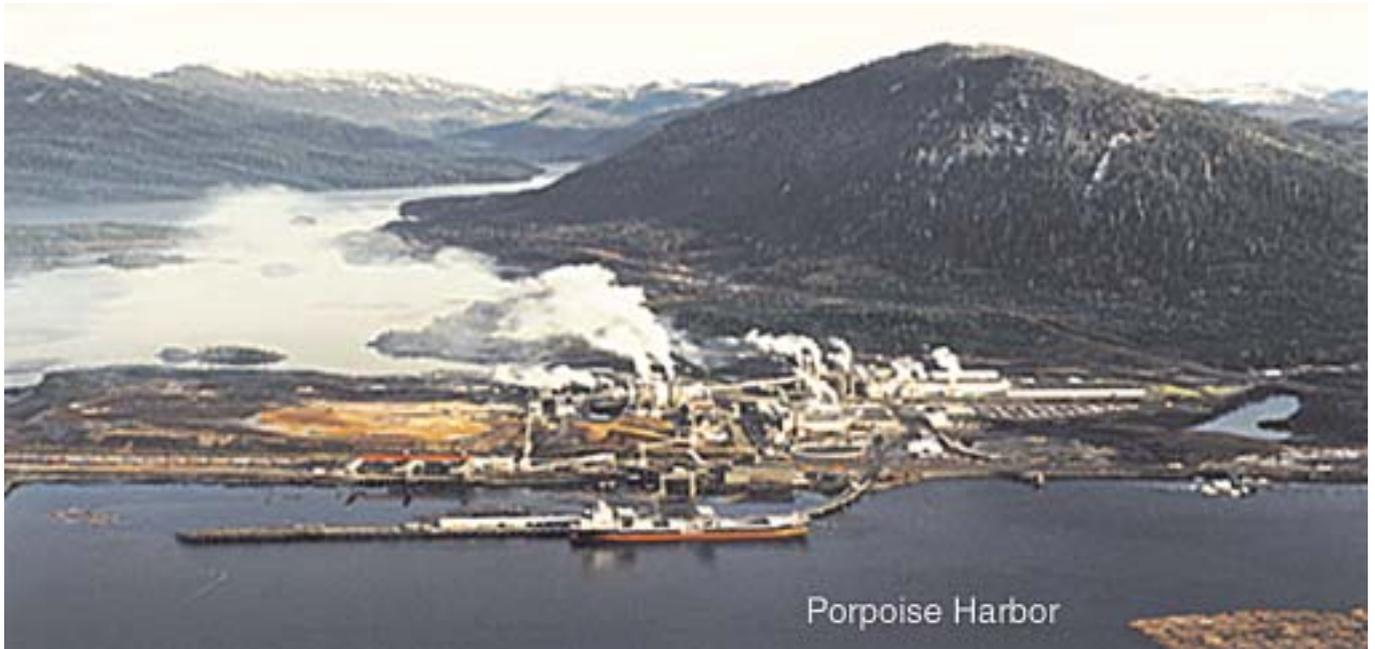


Photo courtesy of Prince Rupert Port

Watson Island Pulp Terminal

Regulations.—The waters described in this sector lie within the Prince Rupert Vessel Traffic Zone. For further information, see General Remarks in [paragraph 11.1](#).

Canadian modifications to 72 COLREGS are applied in waters under Canadian jurisdictions. See Pub. 120, Sailing Directions (Planning Guide) Pacific Ocean and Southeast Asia for further information.

Prince Rupert Port and Porpoise Harbor—South Approaches

13.2 The S approach to Prince Rupert Port lies between Kitson Island, Lelu Island, and Ridley Island, on the E side, and Holland Rock, East Kinahan Island, and Digby Island, on the W.

Mount McGrath (54°10'N., 130°15'W.), on Smith Island, and **Mount Hays** (54°17'N., 130°19'W.), on Kaien Island, are conspicuous landmarks.

The general depths in the S approach to Prince Rupert Port are 31 to 82m. Vessels of any size can be accommodated.

Holland Rock (54°10'N., 130°22'W.), 3m high, is marked by a light shown from its S end. Foul ground extends up to about 0.1 mile N of this rock and a detached shoal, with a depth of 7.3m, lies close ESE of it.

Grace Rock, which dries 1.5m, and Dor Rock, with a depth of 0.4m, lie about 0.4 mile and 0.7 mile, respectively, WNW of Holland Rock.

Greentop Islet, with its summit covered with grass, lies 1.8 miles W of Holland Rock. It is gray, rocky, 6.7m high, and marked by a light. The islet is fringed by shoals and foul ground, covered with kelp, and lies close off the SW edge of a shoal.



Photo copyright Mike Mitchell

Holland Rock Light

A bank, about 1 mile long, lies midway between Holland Rock and Kitson Island. Shoals, with depths of 7.3 to 9.1m, lie on this bank, parallel to the direction of the channel.

The **Kinahan Islands** (54°12'N., 130°24'W.), four in number, lie on the N side of the approach route to Prince Rupert. Elinor Rock, with a depth of less than 1.8m, lies about 0.4 mile E of the SE extremity of the easternmost island. A shoal, with a depth of 6.4m, lies about 0.3 mile NW of this rock.

Rocks and shoals extend up to about 0.2 mile W, SW, and S of the westernmost island. A shoal, with a depth of 6.4m, lies

about 0.3 mile NW of the N end of this same island. Marion Rock, which dries 0.3m, lies near the outer end of the foul ground which extends about 0.4 mile WNW from the NW side of westernmost island.

Anchorage can be taken in depths of 18 to 24m in the bay formed between the easternmost and westernmost of the Kinahan Islands. However, this anchorage is exposed to the SE and is not recommended during the winter.

13.3 Porpoise Harbor (54°13'N., 130°17'W.) ([World Port Index No. 18942](#)) is a nearly landlocked harbor formed by a narrow channel lying between Ridley Island and Tsimpsean Peninsula. The harbor is entered by way of Porpoise Channel, which passes between Ridley Island and Lelu Island, and has a least width of about 180m. The entrance to the fairway leading to Porpoise Channel lies between the N side of Agnew Bank and the S edge of the detached shoal, with a depth of 4.6m, lying about 0.8 mile WSW of the S extremity of Ridley Island.

The harbor may also be entered from the NW between the above-mentioned shoal and the shoals extending SW from Ridley Island. This channel, although deeper, passes close outside the shoal lying on the E side of the fairway and necessitates a sharp course change to the NE in order to enter Porpoise Channel.

The settlement of Port Edward stands on the E shore of the harbor.

Tides—Currents.—Porpoise Channel, the navigable fairway of which narrows considerably, is subject to tides of up to 7.3m and currents with rates of 6 to 7 knots. A drying channel lying between Lelu Island and the mainland causes another 6 knot current to flow during the outgoing tide in a position where Porpoise Channel bends to the NNW.

Heavy winds often blow in a low, flat area of land between two relatively high hills NE of Port Edward. The effects of these winds are directed to the position at the bend of Porpoise Channel.

The tidal currents in the entrance to Porpoise Harbor attain considerable strength, and in addition, there is a very strong set N from the channel between Lelu Island and the Tsimpsean Peninsula during the falling tide. The combination of the tidal currents and the above-mentioned winds creates a serious navigational hazard requiring extreme caution when entering the harbor.

Entry to the harbor is usually restricted to HW slack during daylight hours; however, some vessels may occasionally enter at LW slack.

Depths—Limitations.—The fairway leading to Porpoise Channel has a swept depth of 7m. The channel leading from the NW has a least depth of 11.9m.

Porpoise Channel has depths of 12 to 26m in the fairway.

Port Edward has facilities for fishing vessels and is the winter base for a fishing fleet of up to 350 craft.

A large pulp mill is situated on Watson Island. It is fronted by a berth, 457m long, with a depth of 9.4m alongside. It was reported that only the S part of this berth was usable.

Vessels up to 181m in length and 10.4m draft have been accommodated in the port.

Aspect.—A lighted range, situated on the W side of Lelu Island, indicate the swept passage leading to Porpoise Channel.

A light situated close off the N extremity of Lelu Island and a beacon close NE of it, in line, from a range leading through the SW part of Porpoise Channel. A conspicuous chimney stands close NW of the rear beacon of the Porpoise Channel range.

The SW extremity of Martini Island (54°15'N., 130°25'W.) in line, bearing 313°40' astern, with the S extremity of Digby Island leads through the NW approach to Porpoise Channel.

A beacon stands on the SE extremity of Gay Island and marks the turning point from Porpoise Channel into the harbor.

Caution.—Several submarine pipelines, which may best be seen on the chart, extend WSW from the N end of the berth at Watson Island to Ridley Island and also SW from a point located close off the berth.

A gas pipeline, which may best be seen on the chart, lies across the harbor, at the NW end of Watson Island.

Several areas in the harbor, which may best be seen on the chart, are used as booming grounds.

A submarine telephone cable, which may best be seen on the chart, crosses the harbor from the NE end of Ridley Island.

Prince Rupert Port (54°19'N., 130°19'W.)

[World Port Index No. 18950](#)

13.4 Prince Rupert Port lies between Digby Island, Kaien Island, and the Tsimpsean Peninsula. It is entered from the S, between Lima Point, the S extremity of Digby Island, and Kaien Island, 1.5 miles E. The City of Prince Rupert stands 5 miles within the entrance, on the NW side of Kaien Island. It is the terminus of the Canadian National Railways.

The approaches to the harbor are deep and available for the largest vessels at all times.

Winds—Weather.—At Prince Rupert, SE winds generally predominate. From October to April during the day, 40 to 50 percent of all winds blow from the SE. From May to August, NW winds increase at the expense of SE winds, the frequency of each being about 25 percent. At night, SE winds predominate except from May to July, when N winds become about equal in frequency.

Tides—Currents.—In the channel abreast Casey Point, the ebb current begins 1 hour after HW; the maximum rate is 2 to 3 knots. The tidal currents attain a rate of 2 to 3 knots in Venn Passage.

In Tuck Inlet, the tidal currents are weak. The tidal currents in Tuck Narrows change direction about the time of HW and LW, the current running out of Tuck Inlet shortly after HW and into it shortly after LW at Prince Rupert. There is very little slack water. The current attains a rate of 6 knots midway between this cycle.

The tidal currents run with considerable strength, creating eddies in the narrow part of Fern Passage.

At Prince Rupert, the tides rise about 6.4m at springs and 4.9m at neaps.

Depths—Limitations.—There are general depths of 37 to 79m within the harbor.

Ridley Coal Terminal Wharf extends from the W side of Ridley Island, 0.8 mile N of Coast Island. The wharf, 167m long, consists of four berthing dolphins with mooring dolphins at each end. It has a least depth of 22.8m alongside. Vessels of



Prince Rupert Port—Fairview Terminal

Photo courtesy of Prince Rupert Port



Prince Rupert Port—Ridley Island Terminal

Photo courtesy of Prince Rupert Port



Prince Rupert Port—Ridley Island Grain Terminal

Photo courtesy of Prince Rupert Port



Prince Rupert Port—Ridley Island Coal Terminal

Photo courtesy of Prince Rupert Port



Barrett Rock Light

Photo copyright Mike Mitchell



Prince Rupert Port—Westview Terminal

Photo courtesy of Prince Rupert Port

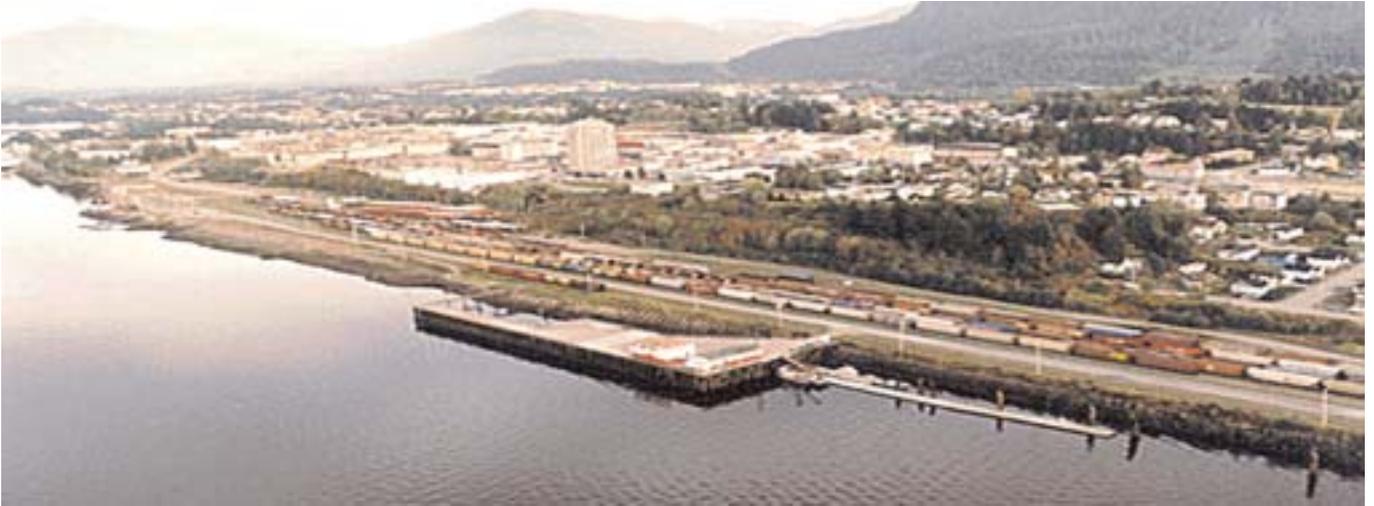


Photo courtesy of Prince Rupert Port

Prince Rupert Port—Ocean Dock

up to 250,000 dwt, 325m in length, 50m beam, and 22m draft can be accommodated.

Prince Rupert Grain Terminal Wharf is situated about 0.4 mile N of the coal terminal. This L-shaped berth is flanked at each end by a dolphin and a buoy. It can accommodate vessels of up to 65,000 dwt. There is a charted depth of 13.5m alongside, but it is reported to be dredged to a depth of 14.5m.

A bulk Sulphur Terminal is in developmental stages as of 2001. The terminal will be located S of the present coal terminal on Ridley Island.

Private mooring buoys are situated N and S of the grain terminal.

The inner harbor berths commence close N of Casey Point and extend about 4 miles NE to Ritchie Point.

Fairview Deepsea Terminal, which is situated 0.5 mile N of Casey Point, has a wharf 0.2 mile long, with a depth of 13.7m alongside. A ro-ro ramp extends N from the NW end of this terminal.

Atlin Cruise Terminal is a small ship facility. It is located in the Cow Bay area and was developed in 1998. It is 100m in length and a minimum of 5m depth alongside. Planning is underway to expand the facility to accommodate vessels up to 146m as of 2001.

A basin lies behind a floating breakwater, close N of the terminal, and is used by fishing vessels and small craft.

Westview Terminal is situated 1 mile NE of the basin. This wharf is 309m long and has a depth of 12.2m alongside.

Ocean Dock Wharf is situated 0.3 mile NE of the Elevator Wharf. It is 151m long and has depths of 9 to 12m alongside. This wharf is used by cruise ships and vessels loading logs. The latter use booms placed at the outboard side.

A ramp, 33m long, lies close NE of Ocean Dock and is used by passenger lighters from cruise ships, which are too large to berth alongside and must anchor in the harbor. There are also extensive facilities for small craft, pleasure craft, and yachts.

Aspect.—Ridley Island forms the W side of Porpoise Harbor and lies on the E side of the approach to Prince Rupert Port.

Coast Island (54°13'N., 130°20'W.), 36m high, lies on the outer edge of the coastal reef, about 0.3 mile W of Ridley Island. An islet, 31m high, lies close SE of this island. A drying reef, with an islet 1.8m high at the N end, extends up to about 0.2 mile NW from Coast Island. Bacon Rock, which dries 2m, lies about 0.3 mile NW of Coast Island.

Bishop Island, 14m high and wooded, lies 1.5 miles N of Coast Island. It is located at the S end of a reef which dries in parts and fronts the W side of a section of reclaimed land connecting the S end of Kaien Island to the N end of Ridley Island.

Barrett Rock, marked by a light, lies about 0.5 mile NW of Bishop Island, at the E side of the fairway.

Casey Point, located 2 miles NNW of Barrett Rock, is the W extremity of Kaien Island. A light is shown from a structure standing close SW of this point.

Ritchie Point is located 4.3 miles NE of Casey Point and is the N extremity of Kaien Island.

Sourdough Bay lies 0.5 mile SE of Ritchie Point. Shoal rocks and a drying reef lie in the entrance of this bay and local knowledge is essential for entering.

Georgia Rock, lying on the W side of the fairway, has a depth of 7.8m and is located about 1 mile W of Bacon Rock. A lighted buoy is moored close E of this rock.

Falcon Rock, with a depth of 6.4m, lies 0.2 mile NW of Georgia Rock. Channels, about 0.2 mile wide, lie on either side of this rock and have least depths of 9.8m.

Kestrel Rock, with a depth of less than 1.8m, is marked close SW by a buoy. It lies about 0.3 mile NW of Falcon Rock. A clear channel lies between Kestrel Rock and the foul ground extending up to about 0.2 mile S of Lima Point. An islet, 8.8m high, lies on this area of foul ground. The channel is 0.4 mile wide and has a least depth of 7.4m.

Petrel Rock, lying about 1.3 miles WSW of Lima Point, has a depth of 4.6m. This rock lies in the middle of a bank and is marked by a lighted buoy moored about 0.2 mile SSW of it.

Chassepot Rock, 1.8m high, lies on the N end of a reef, about 0.8 mile WSW of Lima Point. A small reef, which dries 5.2m, lies close N of this rock.

The entrance to Delusion Bay lies between Lima Point and Frederick Point, 1.3 miles NNE. It is fronted by numerous islets, rocks, and drying reefs. The fairway is indicated by a lighted buoy and a lighted beacon situated about 0.5 mile SE and about 0.3 mile NE, respectively, of Frederick Point.

Casey Cove, lying 1.5 miles N of Frederick Point, is entered between Charles Point and Parizeau Point.

McIntosh Rock, which dries 2.1m and is marked by a beacon, lies about 0.3 mile off the shore of Digby Island, 1 mile N of Parizeau Point.

Venn Passage (Metalakatla Passage) leads from the W side of Prince Rupert Port, about 0.5 mile NW of McIntosh Rock, to the village of Metalakatla. It is available to small vessels with local knowledge and marked by lights and buoys.

Fern Passage leads SE from Ritchie Point through Butze Rapids into Morse Basin. Butze Rapids, encumbered with islets and rocks, lies about 2 miles SSE of the passage entrance. Small craft with local knowledge can pass through Butze Passage at HWS. Only small boats can enter Morse Basin from Porpoise Harbor due to the bridges crossing the rapids on either side of Wainwright Basin.

From the entrance to Fern Passage, Prince Rupert Port extends NNE for about 4 miles to Tuck Narrows. This section of the harbor has a least width of 0.4 mile and depths of 40 to 61m in the fairway. The shore is high at the N end of the harbor on its N and NE sides. Tuck Inlet is joined to the head of Prince Rupert Port by Tuck Narrows and extends about 3.5 miles NW. Tuck Narrows is about 135m wide and has a least depth of 10m. Tuck Point, located on the SW and shoalest part of the narrows, is low. A rocky ledge, which dries, fronts the N side of this point. A rock, with a depth of 11m, lies about 0.3 mile NW of the point.

Both sides of the inlet are indented by a few bays in which exist drying mud and gravel flats. High hills stand on either side of the inlet and a thickly wooded valley lies at its NW end.

Prominent landmarks when approaching the harbor include Mount Stewart, over 640m high, standing on the Tsimpsean Peninsula; Mount Hays, 707m high, standing 1.5 miles ENE of Casey Point with a television tower surmounting its summit; and Mount Oldfield, 549m high, standing at the NE end of Kaien Island.

The grain terminal storage buildings, situated close E of the wharf at Ridley Island, and the strobe lights, shown from the tops of the loaders at the coal terminal, are all conspicuous.

A radiobeacon is situated on the SW side of Digby Island, about 2.3 miles NW of Lima Point.

An aeronautical lighted beacon is situated at the airport, about 0.5 mile inland and 4 miles NW of Lima Point. Radio masts, 89m high, stand about 0.5 mile SE of this lighted beacon and are prominent.

The fairway of Prince Rupert Port is marked by lighted buoys, buoys, and lighted beacons. A range indicates the entrance to Dodge Cove, lying on the W side of the harbor. A

prominent radio mast, 131m high, stands close SE of this cove, about 0.2 mile SW of Parizeau Point.

Pilotage.—Pilotage is compulsory. The boarding station is situated at Triple Island (54°18'N., 130°53'W.), the W entrance of Brown Passage.

Regulations.—Vessels must obtain clearance from the harbormaster prior to proceeding to or leaving any berth in the harbor.

Anchorage.—Anchorages for vessels have been designated and include Berth 2, Berth 3, and Berth 4 in Marcus Passage; Berth 5 through Berth 10, along the E shore of Prescott Island and Stephens Island; and Berth 11 and Berth 12 close S of Lucy Island.

Berth 2, Berth 3, and Berth 4 are not used from June 15 to September 15. Berth 2 is restricted to vessels of up to 50,000 dwt.

Three additional anchorage berths, numbered 1, 2, and 3, are also situated at Port Simpson. Vessels are cautioned that these anchorages may not provide ideal holding ground during periods of bad weather.

Vessels anchored in all these areas must keep a continuous radio watch on VHF channel 71, Prince Rupert Traffic Zone.

Directions.—Vessels approaching the harbor from Arthur Passage should pass W of Genn Islands. Vessels approaching from seaward through Ede Passage should pass at a prudent distance S of Gull Rocks. Vessels from the S should steer to pass 0.2 mile E of Holland Rock Light and then steer with Barrett Rock Light ahead, bearing 006°, until Georgia Rock is abeam. The course should be altered to pass about 0.1 mile W of the rock. A course can then be steered to pass 0.2 mile W of Casey Point Light. When the latter is abeam, vessels should steer a course to pass midway between the lighted beacon standing SE of Elizabeth Point and Fairview Point. Vessels should proceed until abreast Pillsbury Point, when a course into Prince Rupert Port can be taken.

Vessels approaching from the NW, between Lucy Islands and Digby Island, should steer for the SW extremity of Kinahan Islands, bearing about 135°. They should then pass between Kinahan Islands and Petrel Rock. Vessels should then pass S of Georgia Rock and alter course to the N to pass about 0.1 mile W of Barrett Rock. Thereafter, they should proceed as previously directed.

Caution.—A section of the harbor in the vicinity of Ritchie Point is a designated water aerodrome.

Several ferries may be encountered within the harbor.

Several submarine cables, which may best be seen on the chart, lie across the harbor.

A submarine pipeline, which may best be seen on the chart, extends seaward close N of the grain wharf at Ridley Island.

The harbor is subject to violent gusts of winds during SE gales, which are prevalent during autumn and winter.

Chatham Sound and Hatham Sound (Prince Rupert Port to Portland Inlet)

13.5 The W coast of Digby Island is fringed with ledges and islets which extend up to 0.8 mile offshore.

Snider Rock (54°16'N., 130°27'W.), which dries 4.5m, lies about 3 miles NNW of the S extremity of Digby Island. Snider

Islet, 53m high, lies 0.2 mile NE of this rock. A shoal, with a depth 10m, lies about 1.3 miles W of the rock.

Straith Point (54°18'N., 130°28'W.) is the NW extremity of Digby Island.

Cridge Island lies on a rocky ledge, about 1 mile S of Straith Point. Little Cridge Island, 28m high, lies about 0.2 mile W of this island. A shoal, with a least depth of 10m, lies about 1 mile SW of Little Cridge Island. Kerr Rocks, which dry 5.8m, lie 0.5 mile SE of Cridge Island, on foul ground extending S and SW from it. Quartermaster Rock, which dries 7m, lies 0.2 mile WNW of Kerr Rocks. It is located near the W extremity of the rocks and shoals extending W from Digby Island. Several rocks, which dry 1.2 to 2.7m, lie about 0.2 mile SW of Quartermaster Rock.

13.6 Metlakatla Bay (54°19'N., 130°29'W.) is entered between Straith Point, the NW extremity of Digby Island, and **Tugwell Island** (54°20'N., 130°30'W.). This bay is protected from the W by Tugwell Island and a sandy ridge, which dries 3m. This ridge connects Tugwell Island with **Observation Point** (54°20'N., 130°28'W.).

The bay gradually narrows towards its head, where it connects with Venn Passage. This passage leads SE into Prince Rupert Port. Metlakatla, an Indian settlement, is situated on Mission Point, the NW entrance point of Venn Passage. The houses forming the mission at the settlement stand on a bank, 9m high, and are prominent. There is small public wharf.

Tugwell Island, wooded and 62m high to the tops of the trees, is fringed by a drying shorebank. Shoal patches, marked by kelp, and drying rocks extend up to 0.5 mile offshore, especially off the S end of the island.

Dawes Rock, which dries 2.1m, lies about 0.5 mile SW of Dawes Point, the SW extremity of Tugwell Island.

Enfield Rock, with a depth of 4.1m, lies about 1 mile SW of Dawes Point and is marked by a lighted buoy.

Tugwell Reef, which dries 1.8m, lies 0.5 mile SE of Dawes Point, near the edge of the rocky ground extending SE from Tugwell Island. A lighted buoy is moored close SE of this reef.

Alford Reefs consist of a group of rocks, which dry 0.6 to 1.5m, and others that do not uncover. They lie on the SE side of the entrance to the bay and about 1.3 miles SE of Dawes Point. A buoy marks the NW extremity of these reefs.

Cutch Rock, a dangerous below-water rock, lies about 0.4 mile W of Straith Point. A rocky patch, with a depth of 2.3m, lies near the S side of the fairway, about 0.2 mile NW of Cutch Rock. Another rocky patch, with a depth of 10m, lies about 0.2 mile WSW of Cutch Rock.

Devastation Island, 69m high and wooded, lies on the E side of the fairway leading to the anchorage. It is marked by a light and located about 1 mile NNW of Straith Point. Two above-water rocks lie close off the S extremity of the island. A shoal area, with a drying reef, extends up to 0.4 mile E from the N end of the island.

Knight Island, 1.8m high with some stunted scrub, lies about 0.4 mile ESE of Devastation Island. Pike Island, 47m high and wooded, lies about 0.5 mile ENE of Knight Island.

Shrub Island, 25m high, lies close N of Pike Island. A light is shown from the N extremity of a drying bank of sand on which Pike Island and Shrub Island are located. This bank connects to the NW side of Digby Island at LW.

Carr Island, lying about 0.5 mile NE of Devastation Island, is 20m high and fringed by a reef.

Anchorage.—Anchorage can be obtained, in a depth of 20m, mud, about 0.3 mile NNW of Devastation Island. The berth lies with the SW extremity of the island in line with Little Cridge Island, bearing 174°, and the S extremity of Carr Island in line with the flagstaff on Mission Point, bearing about 070°.

Small craft can obtain anchorage, in a depth of 16.5m, about 0.4 mile E of Metlakatla Village. The channel leading to the latter anchorage is only about 50m wide at LW and at this time the dangers on either side can be seen. The channel should only be attempted by short vessels of light draft with local knowledge.

Directions.—To enter the bay, vessels should keep Knight Island midway between Pike and Shrub Islands, bearing 052°. This course leads through the fairway between Tugwell Island and Alford Reefs. When Doolan Point, the E extremity of Tugwell Island, bears 003°, they should steer for it on that bearing until abeam of Devastation Island. The course should then be altered to steer for the anchorage, NW of Devastation Island.

Only vessels with local knowledge should proceed farther up the channel toward Metlakatla.

Duncan Bay is entered between Chapman Point, the N extremity of Tugwell Island, and **Ryan Point** (54°22'N., 130°29'W.), 1.5 miles NNE.

A flat, with depths less than 5.5m, extends up to about 0.7 mile NE of Chapman Point. Drying ledges and below-water rocks extend up to about 0.6 mile W, SW, and S of Ryan Point and front the N and E shores of the bay.

A light is shown from a rock, which dries 3.7m, lying 0.5 mile WSW of Ryan Point. A buoy is moored close SW of the rock to mark the W edge of the ledges.

13.7 Observation Point (54°20'N., 130°28'W.) is the N entrance point of Venn passage. A drying ridge, on which Carr Island lies, joins the point to Tugwell Island.

Hecate Rock, with a depth of less than 1.8m, lies about 0.4 mile NW of Observation Point and about 0.3 mile offshore.

Anchorage can be taken in depths of 12 to 14m, mud, with Observation Point in line with Mount Hays (54°17'N., 130°19'W.), bearing 121°. Vessels should approach the anchorage on the above-mentioned range.

The coast between Ryan Point and Tree Bluff, 4 miles N, is low, wooded, and fronted by shallow flats.

Hodgson Reefs, which dry 3.4m near their S end and 4.9m near their N end, lie on a detached shoal with many below-water rocks. These reefs, as defined by the 5m curve, extend between 2 miles and 3.3 miles N of Tugwell Island. They lie between 1 mile and 1.8 miles offshore. A lighted buoy is moored about 0.2 mile W of the reefs.

The W extremity of Kinahan Islands, bearing 152°, just open of the S extremity of Tugwell Island leads SW of Hodgson Reefs. The E end of the Lucy Islands should not be brought to bear more than 196° until South Island, in Big Bay, is in line with Mount Griffin (54°32'N., 130°25'W.), bearing 032°.

Moore Shoal, a rocky patch with a depth of 12.8m, lies about 2 miles W of the S extremity of Hodgson Reefs.

Slippery Rock, 2.1m high, lies 2 miles S of Tree Bluff and is marked by a light.

A drying flat extends up to about 0.5 mile W from Tree Bluff. Rocks, which dry up to 5.8m, lie near the extremity of this flat. A lighted buoy is moored about 0.5 mile W of the drying rocks.

13.8 Big Bay (54°28'N., 130°26'W.), which provides good protection in all winds with little swell, is entered between Trenham Point and South Island, 2.5 miles N. The shores of the bay are low and densely wooded, except for Shattock Hill, which is 91m high and surmounts Shattock Point, near the head of the bay.

The bay can be entered either S or N of Ripple Bank and Escape Reefs, which lie in the middle of the entrance. Because of its greater width and its direct route to the large-vessel anchorage, the N passage is more generally used. The least depth through the fairway of the N passage is 10.9m. A least depth of 11.9m lies in the fairway of the S passage.

Trenham Point is located 1 mile NNE of Tree Bluff. Hogan Ledge, which dries 3m, lies about 0.6 mile W of this point.

Entry Rock, with a depth of 5.5m, lies about 1 mile N of Trenham Point.

Ripple Bank, with a least depth of 4.6m, lies about 1.3 miles SW of South Island and is usually marked by tide rips. A shoal patch, with depth of 10.4m, lies about 0.7 mile SSW of South Island.

Escape Reefs, formed by two rocky heads with depths of less than 1.8m, lie in the middle of the entrance to Big Bay. The westernmost reef lies about 1.3 miles N of Trenham Point. Both reefs are steep-to on their S sides and are marked by kelp in summer and autumn.

Anchor Shoal, with a least depth of 8.7m, lies about 0.5 mile N of Simpson Point.

13.9 South Island (54°29'N., 130°28'W.), 48m high, has a sharp summit. A bank, with a rock awash near its outer end, extends up to about 0.4 mile SW of this island.

Haycock Island, 14m high with a few trees, lies about 0.2 mile ESE of South Island.

Leading Shoal, with a least depth of 9.1m, lies about 0.5 mile S of Haycock Island.

Swallow Island is located about 0.7 mile SE of Shattock Point, close off the mainland. One Foot Rock, which dries 6.1m, lies about 0.1 mile SW of the island, near the end of a drying ledge.

Curlew Rock, 7.3m high, lies about 0.5 mile SW of Swallow Island. Foul ground, on which rocks dry up to 0.9m, extends up to about 0.2 mile NNE from this rock. The passage lying between the NE end of this foul ground and One Foot Rock is about 0.1 mile wide and has a least depth of 6.9m.

Anchorage.—Anchorage can be taken, in a depth of 22m, mud, with Haycock Island in line with the NE extremity of South Island, bearing 324°, and White Cliff Island in line with Mount Griffin, bearing 013°. Farther in, good anchorage can be taken in a depth of 16.5m, mud, with Shattock Point in line with Mount Griffin, bearing 006°, and One Foot Rock in line with a distant sharp peak, bearing 107°.

Confined anchorage can be taken, in a depth of 9m, S of Swallow Island with its SW extremity in line with Mount Griffin, bearing about 000°, and Simpson Point open N of Curlew Rock, bearing about 259°.

Directions.—Approaching Big Bay from the S and via the S passage, vessels should keep South Island in line with Mount Griffin, bearing 032°. This leads NW of Hodgson Reefs and the shoal extending W from Tree Point. They should continue on this range until the summit of Shattock Hill is in line with Basil Lump, bearing 068°. Vessels should then steer on the latter range, which passes between Escape Reefs and Entry Rock. The passage leading between the dangers is about 0.3 mile wide, but care must be taken not to open Basil Lump to the N of Shattock Hill. When Haycock Island is in line with the NE extremity of South Island, bearing 324°, vessels should alter course SE and steer with these marks in line astern. This course leads to the outer anchorage.

Approaching Big Bay from S and via the N passage, vessels should keep the N extremity of Burnt Cliff Island in line with Mount Griffin, bearing 042°, which will lead NW of Ripple Bank. When Swallow Island is open its own breadth N of a distant sharp peak bearing 106°, they should steer on this range between the dangers and directly to the desired anchorage.

Vessels proceeding from the outer anchorage to the anchorage S of One Foot Rock should keep the SW side of Whitecliff Island in line astern with the SW extremity of Burnt Cliff Island, bearing 318°. This course leads between the dangers on either side of the passage. One Foot Rock is a good guide when entering near HW.

Burnt Cliff Island, 64m high and wooded, lies 0.3 mile NNE of South Island. The N end of this island consists of high, reddish cliffs.

Mist Island, 42m high with a wooded summit, lies 0.5 mile N of Burnt Cliff Island.

Sparrowhawk Rock, a pinnacle with a depth of 1.5m, is steep-to and lies 0.5 mile N of Mist Island. It is marked by kelp in the summer and autumn. A buoy is moored close NW of this rock. Shoals, with depths of 11.9 to 12.8m, front the S side of the rock.

Flat Top Islands consist of two islands. The NE and largest island is 44m high at its SW end and has a green mound, 20m high, surmounting its NE end. The SW island, lying 0.1 mile SW of the larger island, is 30m high. Rocky ledges fringe this island and extend about 0.1 mile N.

A bank, with depths of less than 5.5m, extends about 0.2 mile S of these islands and no attempt should be made to pass between them. The channel leading between the islands and the mainland is very narrow and should also not be used.

13.10 Pearl Harbor (54°31'N., 130°27'W.), a secure anchorage, is protected from the W by drying reefs and Mist Island. It is also protected from the S by drying reefs that extend between the N end of Burnt Cliff Island and the mainland. The preferred entrance lies between the reef extending N from Mist Island and the Flat Top Islands.

Good anchorage may be taken, in a depth of 20m, mud, near the middle of Pearl Harbor and in a depth of 31m about 0.2 mile N of the green mound on the NE island of the Flat Top Islands.

Cunningham Passage (54°34'N., 130°28'W.) leads between Finlayson Island, on the W side, and the mainland, on the E. The passage is unsuitable for large vessels and, although the depths in the fairway are 26 to 73m, the navigable channel is only about 0.1 mile wide between Pender and Centre Rocks.

Finlayson Island (54°32'N., 130°28'W.) is flat-topped and its S and SE sides are cliffy. Gordon Point, its N extremity, is comparatively low and drying ledges extend up to about 0.2 mile N of it. The entrance to an inlet, which dries, lies on the NW side of the island.

Dodd Rock (54°31'N., 130°28'W.), which covers only during the highest tides, lies at the extremity of the reef extending 0.2 mile S of Fortune Point, the S extremity of the island.

Pender Rock, with a depth of 4.9m, lies on the E side of the fairway of the S entrance to Cunningham Passage, about 0.4 mile E of Fortune Point.

Centre Rock, with a depth of 6.7m, lies nearly in the middle of the fairway and about 0.1 mile E of Duncan Point, the SE extremity of Finlayson Island. A shoal, with a depth of 4.6m, lies close NW of Centre Rock.

Redcliff Point is located on the E side of the passage, about 0.4 mile E of Duncan Point. It is faced with reddish-brown cliffs that are conspicuous only under certain conditions of light.

The currents run at a rate of 1 knot throughout Cunningham Passage, but probably somewhat faster in the narrower parts.

13.11 Port Simpson (54°34'N., 130°26'W.) ([World Port Index No. 18960](#)), the most spacious harbor on the N part of the coast of British Columbia, is easy of access with no tidal currents. It is also sheltered from all but W winds which seldom blow. Generally, NW and SW winds prevail.

Depths—Limitations.—Harbor Reefs, lying on the W side of Port Simpson, form a natural breakwater and protect the anchorage from NW winds. Vessels, other than those of light draft with local knowledge, must enter by Inskip Passage.

Inskip Passage, the N and main entrance to the port, leads between Harbor Reefs and Knox Point, the S extremity of Birnie Island. A least depth of 29m lies in the fairway. A bank, with a depth of 16.5m, lies about 0.3 mile SE of Knox Point.

Dodd Passage, leading between Village Island and the SE side of Harbor Reefs, is 0.1 mile wide between the 5m curves. It has general depths of 11 to 16.5m throughout the passage, except at the SW end of the fairway which is encumbered by shoal patches with depths of 3.7 to 6.4m. The passage is suitable only for small vessels with local knowledge.

Rushbrook Passage, leading between Birnie Island and the mainland, is encumbered with reefs and should only be used by vessels with local knowledge.

The harbor has depths of 20.1 to 48m. There is a small wharf with a berth, 70m long, which has a depth of 9.1m alongside. There are also facilities for small craft and fishing vessels.

Aspect.—Village Island (54°34'N., 130°26'W.), 27m high near its N end, is connected at its SE end to the town of Port Simpson by a drying flat spanned by a trestle bridge.

One Tree Island, 12m high with a few stunted trees, lies close NW of the NW extremity of Village Island. A light is shown from the N side of this island.

Hankin Reefs, which partially dry, lie on the W side of Village Island and are marked by a buoy.

Harbor Reefs consist of two groups of drying rocks with a narrow and shallow passage lying between them. A conspicuous boulder stands on the W side of the outer reef and a rock lies near the S end of the inner reef, each dry 4.6m.

Many other rocks in this vicinity dry 0.6 to 3.3m. A below-water rock lies at the N end of Harbor Reefs and is marked by a buoy moored close NNW.

Birnie Island has a drying ledge fronting Knox Point, the S extremity. A light is shown from an above-water rock lying close S of this point. At Picnic Point, the NE extremity of the island, a ledge with rocks, which dries 5.8m at its outer end, extends up to 0.3 mile ENE. Another ledge, which dries 5.8m, lies on the E side of the fairway leading through Rushbrook Passage and about 0.4 mile NE of Picnic Point.

Stumaun Bay, lying at the head of the harbor, dries up to about 0.3 mile seaward.

Anchorage.—Good anchorage, over a mud bottom, may be taken practically anywhere within the bay.

Large vessels may obtain anchorage, in a depth of 26m, off Port Simpson with Gordon Point (Finlayson Island) bearing 270°, the N end of One Tree Island bearing 249°, and with the pier head in line, bearing 190°, with the spire of a church.

Pointer Rocks (54°36'N., 130°32'W.) are a group of bare rocks lying in the outer approach to Port Simpson and located about 2.8 miles WNW of Birnie Island. A light is shown from the southernmost rock.

Parkin Islets (54°37'N., 130°28'W.), two in number, are wooded and conspicuous. They lie close together on the same reef, about 2 miles N of Birnie Island. The S islet is 41m high and the N islet is 45m high. Drying rocks lie close N, E, and S of these islets.

A shoal, with a depth of 8.5m, lies about 0.1 mile E of the S extremity of the islets.

A jagged rock, 6.4m high, lies about 0.2 mile N of Parkin Islets and a rock, which dries 4.2m, lies close N of it.

Barrat Shoal, with a depth of 18m, lies about 0.8 mile NW of the Parkin Islets.

Maskelyne Island, lying 0.5 mile NE of Parkin Islets, is 173m high and cliffy. It is steep-to on the W side, except for a small bay indenting the coast.

13.12 Maskelyne Point (54°39'N., 130°27'W.), the N extremity of the island, is steep-to and a conspicuous white cliff stands 0.2 mile SW of it.

Dudevoir Passage, separating Maskelyne Island from the mainland, has a least depth of 0.9m and is suitable only for small boats with local knowledge.

Sager Rock, lying about 0.3 mile WNW of Maskelyne Point, covers a circular area about 0.1 mile in diameter and has a least depth of 5.8m.

Hogan Island (54°39'N., 130°25'W.) forms the NE shore of Work Channel. It is 326m high and the NW coast is steep-to.

Work Channel is entered between Maskelyne Point and **Father Point** (54°39'N., 130°26'W.), the NW extremity of Hogan Island. This channel extends for 27.5 miles in a SE direction, reaching to within about 4 miles of the Skeena River. The land on both sides is high for the most part and the shores are generally steep-to. Several off-lying islets and rocks front the shores in places, but do not lie more than 0.1 mile seaward. The channel is deep throughout. Depths of 50 to 92m extend about 4 miles within the entrance. The depths then increase to over 180m as far as the entrance to Quottoon Inlet, when they decrease gradually to about 90m at the head.

The entrance to Work Channel is about 0.4 mile wide, but the fairway is narrowed to a width of 0.3 mile by a rock, with a depth of 0.3m and a drying rock lying close S of it, located about 0.1 mile SW of Father Point.

The tidal currents in the entrance of Work Channel attain a rate of 3 to 4 knots. Tide rips exist in the vicinity of Sager Rock and in the entrance to Work Channel. They are dangerous to small boats during the full strength of the tidal current.

It is advisable to enter Work Channel by passing N and E of Sager Rock. Care should be taken to avoid setting onto the dangers lying off Father Point during periods of flood tide.

Paradise Passage, separating the SE part of Hogan Island from the mainland, leads from Work Channel to Emma Passage. It is suitable only for small boats with local knowledge. The tidal currents reach a rate of 3 knots in this passage.

John Point (54°40'N., 130°23'W.), the NE extremity of Hogan Island, is low. A shoal patch, with a depth of 14.6m, lies close NE of this point.

Emma Passage, deep and unobstructed, is entered E of John Point and provides access to Union Inlet.

Union Inlet has no off-lying dangers and terminates in a moderately steep-to mud flat at its head. Portland Inlet is entered NW of John Point.

Anchorage.—Indifferent anchorage can be taken, in depths of 33 to 48m, mud, about 0.2 mile off a mud flat extending from a small bight on the E shore where the inlet turns sharply NE.

Small vessels with local knowledge can obtain anchorage, in depths of 31 to 35m, mud, in mid-channel, about 0.2 mile off the mud flats at the head of the inlet.

Chatham Sound—South and West Sides (Hunt Point to Holiday Island)

13.13 Hunt Point (54°06'N., 130°25'W.), the W entrance point of Chatham Sound, is located at the N end of the Malacca Passage. It is bordered by a reef that extends about 0.3 mile NNW and terminates at Grace Island. The coast between Grace Island and Island Point, 0.8 mile SW, is fronted an area of foul ground that extends up to 0.9 mile offshore. Alice Island lies on the NW edge of this foul ground. Brooks Rock, steep-to with a depth of less than 1.8m, lies about 0.4 mile W of this island.

Havelock Rock, which is marked by a light, dries 3m. It lies about 1 mile SW of Brooks Rock. A shoal, with a depth of 4.5m, lies close N of the rock.

Ettrick Rock, which dries 2.4m and is steep-to, lies about 1.8 miles WNW of Alice Island. It is marked close NW by a buoy.

Shoal patches, with depths of 11.9m and 10.5m, lie about 0.6 mile W and 1 mile WNW, respectively, of Ettrick Rock.

The Creak Islands extend about 0.8 mile WNW from **Creak Point** (54°05'N., 130°28'W.). A shoal, with a depth of 7.3m, lies about 0.4 mile NE of the northeasternmost island and a shoal, with a depth of 7.3m, lies within 0.5 mile W of the westernmost and highest island.

Ede Passage, leading to Hecate Strait, is entered close WSW of the Creak Islands.

Gull Rocks (54°08'N., 130°31'W.) is a group of small rocks, the largest of which is 5.2m high. A light is shown from the

highest rock of the group. A reef, with a depth of 5m and marked by kelp, lies about 0.5 mile NNW of the light. A rock, with a depth of 5.2m, lies 0.5 mile NNW of the light.

Colquhoun Shoal, a rocky head with a depth of 9.8m, lies about 1.5 miles N of the highest and largest of the Gull Rocks group.

Prescott Island (54°06'N., 130°36'W.), lying on the W side of the sound, is densely wooded. A range of hills, with several peaks, occupies the S part of the island. The tallest of these peaks is 250m high. Some large expanses of flat marshy land, from which several low hills rise, lie at the N end of the island.

Stephens Island, lying close NW of Prescott Island, has several hills at its N end. They stand close together and are difficult to distinguish from each other. Qlawd Hill, 335m high, is the tallest of these hills. Mount Stephens, standing at the SE end of the island, is 422m high and conspicuous. Congreve Hill, with a sharp summit, is 159m high and rises 2.3 miles NW of Mount Stephens.

Anchorage.—Qlawdzeet Anchorage, lying at the N end of Stephens Island, affords shelter to vessels from the strong SE winds prevalent in this vicinity. It is open to winds from the NW, but these are usually light. The entrance lies between Hooper Point, the N extremity of Stephens Island, and Avery Island, 0.8 mile ESE. Harris Rock, which dries 5.6m, is marked by a light. This rock lies about 0.1 mile N of the NW extremity of Avery Island to which it is connected by several rocky ledges.

Anchorage can be obtained in a depth of 22m, mud and sand, with the NW extremity of Avery Island bearing 062° and Hooper Point bearing about 306°, just open NE of Trunk Island, 0.2 mile SE.

13.14 The Rachael Islands (54°12'N., 130°33'W.), two in number, lie between 4 miles and 5 miles NNW of Gull Rocks. A shoal, with a depth of 3m, lies about 0.4 mile ESE of the SE extremity of South Rachael Island. A shoal, on which a rock dries 0.9m, lies about 0.2 mile NE of the NE extremity of this same island.

Lights are shown from the N side of the northernmost island and from the S side of the southernmost island. Pitt Shoal, with a least depth of 14.6m, lies 1.5 miles E of South Rachael Island.

Alexandra Bank, with a least depth of 4.2m, is formed by mud and sand. It lies about 1.5 miles N of North Rachael Island and is marked by kelp, which is seldom visible because of the tidal current. This bank is marked by a lighted whistle buoy which is equipped with a racon.

The **Lucy Islands** (54°18'N., 130°37'W.) consist of a group of wooded islets and bare rocks lying on an area of foul ground about 5.5 miles NNW of the Rachael Islands.

The E extremity of the easternmost and highest of the group is fairly steep-to. The N edge of the foul ground is marked by a group of small islets lying close N of the main islands.

A bank, with depths of 5.5 to 11m, extends about 1.5 miles S from the main islands and another bank, with depths of 11 to 20m, extends about 1.3 miles farther SW.

A detached rock, with a depth of less than 1.8m, lies about 0.5 mile S of the westernmost islet and another rock, which dries 1.5m, lies on the W extremity of the foul ground.

Lights are shown from the NE extremity of the easternmost island and from the northernmost island.

The islands and banks lying in the vicinity of Bell Passage and Brown Passage are described with those features, in [paragraph 13.20](#) and [paragraph 13.21](#), respectively.

The **Dundas Islands** (54°30'N., 130°50'W.) consist of Melville Island, Dunira Island, Baron Island, and Dundas Island, together with numerous islets and rocks. This group forms the W side of the N part of Chatham Sound.

Vessels leaving Chatham Sound and bound N should keep the Lucy Islands bearing astern not more than 180° until they are past Moore Shoal. They should then steer for Pointer Rocks Light and pass between Connis Rocks and Pointer Rocks. The course should then be altered to NW in order to pass through the N entrance of Chatham Sound, S of Lord Rock. If bound for Alaskan ports, vessels should steer for the entrance of Revillagigedo Channel, which is described in U.S. Coast Pilot 8, Pacific Coast Alaska—Dixon Entrance to Cape Spencer.

At night, the light on Pointer Rocks bearing 121° astern leads NW through the N entrance of Chatham Sound and to within 1.3 miles SSW of Lord Rock.

The inner passage, after leaving Malacca Passage, follows the E side of Chatham Sound as far as Port Simpson. It then follows through the Main Passage to Portland Inlet or Alaska.

13.15 Melville Island (54°23'N., 130°44'W.) rises gradually near its center to a range of hills. The easternmost and highest of which is Knee Hill. Beaver Rock, marked by kelp and with a depth of 1.8m, lies about 1 mile SSE of Deans Point, the SE extremity of the island. A rocky head, with a depth of 9.1m, lies about 0.5 mile SSW of this rock. Cutter Rock, marked by kelp and with a depth of 2.7m, lies about 0.5 mile SE of Deans Point.

Dunira Island lies N of Melville Island and is separated from it by a narrow channel. It is densely wooded and has a range of hills rising in the center. **Coast Mound** (54°25'N., 130°47'W.), the oval summit of the island, is conspicuous from NE and SW.

Baron Island, lying close N of Dunira Island, is thickly wooded. A narrow channel, which separates the island from Dunira Island, may be used by small craft with local knowledge.

Moffat Islands are a chain of small, wooded islands fringing the NE side of Melville Island and the E side of Dunira Island, from which they are separated by a narrow channel. This channel may be used by small vessels, with local knowledge, but it is not recommended. An area of foul ground, on which three islets lie, terminates in a rock, 6.1m high. This area extends up to about 0.5 mile S from the southernmost and highest island of the chain. A rock, with a depth of less than 0.6m, lies about 0.3 mile ESE of the southernmost islet of the above-mentioned three islets.

Hammond Rocks, formed by two heads close together, is marked by kelp. The N head has a depth of less than 1.8m and lies about 0.5 mile E of the SE extremity of the southernmost island of the Moffat Island chain.

Anchorage.—Good sheltered anchorage can be obtained by vessels with local knowledge, in a depth of 28m, in the center of the channel lying between Melville Island and the southernmost island of the Moffat Islands chain, about 1 mile within the S entrance. Vessels approaching this anchorage

should keep within 0.3 mile of Melville Island. The tidal currents are weak at this anchorage.

Coghlan Rock, awash at LW and marked by kelp, lies 2 miles N of Hammond Rocks. A shoal, with a depth of 5.5m, lies about 0.2 mile SE of Coghlan Rock.

Randall Island, 55m high and wooded, lies 0.5 mile NE of the NE side of Baron Island.

Ducie Island, 40m high, lies 0.5 mile NNW of the N end of Randall Island. Foul ground and rocks extend SW and NE of this island and form the SE side of the entrance to Hudson By Passage.

Whitesand Island (54°31'N., 130°45'W.), 11m high, lies 0.5 mile NE of Randall Island and is marked by a light. Rocks and shoals extend up to about 1 mile N of this island.

Dundas Island (54°33'N., 130°53'W.) is surmounted by a number of conspicuous mountains of which Mount Henry is the highest. Mount Bonwick, rising 3 miles ENE of Mount Henry, is conspicuous from the SE side of the island. Table Hill stands about 1 mile S of Whitley Point, the NE extremity of the island. It has a prominent flat top and a knob at the N end.

Holliday Island (54°37'N., 130°45'W.), lying close NE of Dundas Island, is located on the E edge of the foul ground extending up to about 0.3 mile NE and 0.8 mile SE of Whitley Point. A light is shown from the N extremity of this island.

Hecate Strait—Northeast Side (Cape George to Dixon Entrance)

13.16 Cape George (53°51'N., 130°42'W.) is the SW extremity of Porcher Peninsula. Joachim Rock, which dries 3.4m, lies about 0.5 mile W of this cape and a rock, which dries 1.5m, lies close N of it.

A shoal, with a depth of 3.4m, lies about 2.8 miles NW of the cape and about 1.5 miles offshore.

Fan Point, located 3.8 miles N of Cape George, is rendered conspicuous by Fan Island, which lies about 0.3 mile seaward of it. This island is green-topped, with trees on its N side, and is conspicuous from the NW or SE.

Conspicuous white cliffs stand on the coast between 1 mile and 1.5 miles S of Fan Point.

Oval Point, located 2 miles N of Fan Point, is bordered E by Oval Hill, which is conspicuous. This hill rises at the N end of Porcher Peninsula and appears oval from all directions.

Oval Bank extends up to about 4 miles offshore between the conspicuous white cliffs and Oval Point. It has a depth of 7.3m about 0.5 mile from the shore and a depth of 17m near the W end.

Bass Rock, lying about 0.3 mile W of Oval Point, is bare and connected to the point by a narrow ridge of sand and boulders that dries. Oval Rock, which dries 5.2m, lies 0.6 mile NW of Bass Rock.

A group of above-water, drying, and below-water rocks extends up to about 1.3 miles N from Oval Point. The largest of these rocks is 0.9m high and lies on the N side of the group. Another rock, with a depth of less than 1.8m, lies about 0.3 mile WNW of this rock.

A heavy and continuous swell sets onto the coast between Cape George and Oval Point.

Oval Bay lies between Oval Point and Welcome Point, 4 miles NNE. The shore for about 1.3 miles S of Welcome Point

is fringed with drying rocks extending up to 0.2 mile seaward. Foul ground extends up to 0.4 mile W of these rocks in places.

Anchorage can be taken in depths of 29 to 33m, sand, with Oval Hill bearing about 190° and Seal Rocks bearing about 301°.

Seal Rocks (54°00'N., 130°47'W.) consist of an above-water rock, 2.1m high, lying near the SE end of a drying reef and two rocks, which dry up to 2.7m, lying close off the NE end and the SW side of the drying reef.

A light, equipped with a racon, is shown from the SE end of Seal Rocks.

Sainte Croix Rock, with a depth of 5.8m, lies about 2.5 miles SSW of Seal Rocks. Another rock, with a depth of 10.1m, lies about 0.4 mile SSE of this rock. Hall Rock, with a depth of 10.3m, lies about 1.3 miles NE of Sainte Croix Rock.

Wallace Rocks consist of three rocky heads, with depths of less than 1.8m, lying on a rocky bank about 1.5 miles NW of Seal Rocks. A detached rock, with a depth of 3.7m, lies about 0.4 mile S of Wallace Rocks. Foul ground, with many shallow and rocky heads, lies within 1 mile S of Wallace Rocks.

Warrior Rocks lie near the E edge of an extensive bank which has numerous rocky heads. They consist of two bare rocks, 4.6m and 1.5m high, lying about 0.8 mile apart. Foul ground densely covered with kelp extends between these rocks. The southeasternmost and lower rock lies about 3.5 miles NNW of Seal Rocks and foul ground, with numerous rocks and shallow heads, extends S from it to within 1 mile of Wallace Rocks.

Grenville Rock, with a depth of 6.1m, lies on the SW edge of an extensive rocky bank, about 2.5 miles SW of the higher of the Warrior Rocks. Shoal patches, with depths of 6.1m and 10.1m, lie about 0.5 mile ESE and about 0.8 mile SE, respectively, of Grenville Rock.

Gore-Langton Rock, with a depth of 2.7m, lies at the N extremity of the above-mentioned extensive bank, about 1.8 miles N of the higher of the Warrior Rocks.

Evelyn Rocks consist of several rocky heads lying close together and have a least depth of 3.2m. They lie in the NW approach to Edye Passage, about 2 miles E of Gore-Langton Rock. Foul ground and rocks, which dry 0.6 to 1.8m, extend up to 0.4 mile into Edye Passage. At times, heavy tide rips occur over the banks extending S from this foul ground. Shoal patches, with depths of 8.2m and 10.1m, lie about 0.5 mile E and ENE, respectively, of Evelyn Rocks. A shoal, with a depth of 5.6m, lies about 0.8 mile WNW of Evelyn Rocks.

13.17 Philip Island (54°09'N., 130°49'W.) lies close off the NW side of Stephens Island.

China Islet, 33m high, lies close SW of Philip Island. It is wooded with a white and conspicuous seaward face. A rock, which dries 5.2m, lies about 0.5 mile NW of this islet.

Roland Rocks consist of five large, bare rocks and several small rocks. They lie between 1 mile and 1.8 miles N of China Islet and extend up to about 1 mile from the W side of Stephens Island. A rocky shoal, with a depth of 4.6m, lies about 1 mile WSW of the highest of the rocks. It is the outermost danger lying in the approach to this part of the island. The bottom is uneven in this vicinity and vessels should pass W of this shoal.

An islet, 35m high, lies about 1.8 miles SE of China Islet and forms the W entrance point of Skiakl Bay. The outermost of

the rocks lying between China Islet and the W entrance point of the bay dries 1.8m. It lies about 1.3 miles SE of China Islet. Rocks, which dry 0.9m and 0.3m, lie about 0.2 mile SW and 0.3 mile S, respectively, of the W entrance point of Skiakl Bay.

Skiakl Bay is encumbered with numerous rocks and is available to small craft with local knowledge.

Skiakl Point (54°07'N., 130°45'W.) is conspicuous because of its white cliffs. A small, bare rock, 1.2m high, lies about 0.2 mile S of the point. Skiakl Rock, with a depth of 6.1m and marked by kelp, lies about 0.6 mile SSE of the point.

Joyce Island (54°06'N., 130°41'W.) is 97m high and wooded. This island is nearly connected by a chain of islets and rocks to Rod Island, 22m high, which lies close off its S extremity. A group of rocks, the highest of which dries 6.7m, lies about 0.2 mile NW of the SW extremity of Joyce Island. A rock, with a depth of less than 1.8m, lies about 0.1 mile NW of Rod Island and other dangers front its NW and NE sides.

Butler Cove, entered close N of Joyce Island, affords a convenient anchorage for small craft at its NE end in a depth of 22m, mud. There are four mooring buoys situated within this cove. The anchorage is well sheltered, except with winds from S and SW, when a heavy swell sets in. Local knowledge is advised.

Edye Passage

13.18 Edye Passage lies between Arthur Island and Prescott Island, on the N side, and the NW shore of Porcher Island, on the S. It affords a convenient route by which to enter the S portion of Chatham Sound from Hecate Strait. This passage has a least width of about 0.5 mile and is easily navigated at all states of the tide. The passage also avoids the strong and irregular regular currents experienced in Brown Passage.

William Island (54°02'N., 130°42'W.) has foul ground extending up to about 0.8 mile from its W side. A rocky ledge extends about 0.3 mile N from Ibbetson Point, the N extremity of the island. Several rocks and an islet, 3.3m high, stand on this ledge.

Chearnley Passage separates William Island from Henry Island. It is about 0.3 mile wide and the fairway is deep.

Henry Island, 52m high and wooded, lies NE of Oval Bay, on the S side of the passage. A rocky ledge extends about 0.5 mile NW from Hearndon Point, the N extremity of Henry Island. A shoal, with a depth of 10.9m, lies about 0.8 mile NW of the same point. Truscot Rock, with a depth of 3.7m, lies about 0.8 mile ENE of Hearndon Point and a shoal, with a depth of 8.5m, lies about 0.3 mile NNW of it.

Arthur Island, 46m high, is located on the N side of the passage and is separated from Prescott Island by a narrow channel.

A small islet, with a shallow rock lying close S of it, is located close off View Point, the SW extremity of Arthur, Island. Foul ground, with rocks which dry 0.6 to 1.8m, extends up to about 0.4 mile off the SE side of Arthur Island and off the small, wooded island lying close S of Arthur Island. Kelp grows thickly in the vicinity of this foul ground during the summer. At times, heavy tide rips occur over the bank that extends S from the foul ground.

Morrell Point, the SE extremity of Prescott Island, has foul ground extending about 0.2 mile S from it; some white bare rocks lie on this foul ground.

Useless Point, located on the S side of the passage, lies 1.5 miles S of Morrell Point and is marked by a light. There is a shallow bay lying close SW of the point. A rock, which dries 0.6m, lies about 0.3 mile NNW of the light.

13.19 Table Point (54°04'N., 130°32'W.) is located 1.8 miles NE of Useless Point.

Refuge Bay is entered between Table Point and Pearce Point, 0.8 mile WSW. A sandy flat extends 0.5 mile seaward from the head of the bay and foul ground fronts both entrance points and the sides of the bay. A shoal, with a depth of 5.8m, lies about 0.2 mile off the SW shore of the bay and about 0.5 mile E of Pearce Point. Knox Island, 12m high, lies 0.5 mile SE of Pearce Point and close off the SW shore of the bay.

Vessels proceeding W of William Island should, after rounding Seal Rocks, steer a course with the summit of Mount Stephens ahead, bearing about 026°, until View Point bears about 105°. The course should then be altered to 112° to pass about 0.4 mile S of View Point and about the same distance N of Edwin Point. When Morrell Point is abeam, bearing 022°, the course should be altered to pass midway between Pearce Point and the bare, white rocks lying S of Morrell Point.

Vessels approaching from the SW should do so with Seal Rocks Light bearing 041°, which leads W of Oval Bank. When Oval Hill bears 090°, the course should be altered to pass about 0.5 mile SE of Seal Rocks. They should then pass either through Chearnley Passage or W of William Island.

Tides—Currents.—The tidal current sets through both entrances of Edye Passage at a rate of 1 to 2 knots, running E and W. The current is probably stronger in the narrow part, abreast Pearce Point.

If using Chearnley Passage, vessels should keep within 0.2 mile of the W shore of the passage until the 36m high islet lying N of William Island is abeam. They should then steer for the NW extremity of Arthur Island, bearing about 057°, and when in mid-channel, alter course SE and steer to pass 0.4 mile off View Point. Vessels may then proceed to pass W of William Island.

Anchorage.—Anchorage can be taken by vessels of moderate size in the middle of Refuge Bay. A berth lies in depths of 26 to 29m, sand, about 0.3 mile NNE of Knox Island. Heavy squalls are experienced at this anchorage during SE gales and a heavy swell sets in with N winds.

Barrett Island lies 0.4 mile NE of Table Point and close offshore. It is located on a drying ledge which fronts the N side of the island. Another ledge, which dries 4.6m, lies about 0.1 mile W of the island. Clode Patch, with a depth of 2.7m, lies about 0.3 mile WNW of Barrett Island. A rocky patch, with a depth of 5m and marked by kelp, lies about 0.2 mile farther WNW with irregular depths extending beyond it.

Bell Passage

13.20 Bell Passage is entered between the N end of Stephens Island and the Archibald Islands, on the S side, and the Tree Nob Group on the N. It is about 0.5 mile wide, deep in the fairway, and available for vessels of moderate size.

However, due to the dangers in the vicinity, it is advisable for vessels to navigate this passage only when all landmarks are clearly visible.

The tidal currents in Bell Passage set E and W at a rate of about 2 knots.

Butterworth Rocks are located on the N side of the passage, about 6.8 miles WNW of Hooper Point, the N extremity of Stephens Island. The tallest rock is 2.1m high and lies at the S end of the group.

A light, equipped with a racon, is shown from this tallest rock. Another rock, which dries, lies at the N end of the group, about 1 mile N of the light.

Archibald Islands, twelve in number, lie with the largest of the group located 1.5 miles WSW of Hooper Point. Most of the islands are wooded and fronted by numerous islets and rocks. Rocks, with depths of 2.4m and 4m, lie about 0.5 mile SE and 1 mile S, respectively, of the southernmost island. The latter rock has shoals, with depths of 4.9m and 10.4m, lying about 0.2 mile SE and 0.2 mile SSE, respectively, of it.

Except for the above dangers, the passage lying between the Archibald Islands and the NW side of Stephens Island is deep and clear in the fairway. A light is shown from the northwesternmost island of the group.

Vessels from the S should approach Bell Passage with Butterworth Rocks Light bearing 000°. When Archibald Islands Light bears 050°, they should alter course to 046°. This course should be maintained until the Harris Rock Light is open N of Hooper Point, bearing 095°. The course should then be altered to 087° in order to pass about 0.3 mile off Hooper Point and about the same distance to the N of Harris Rock.

Tree Nob Group lies between Bell Passage and Brown Passage and consists of several small islands, numerous islets, and many rocks both above and below-water. At the SE extremity of the group, an islet, 36m high, lies with a rock, 6.4m high, located 0.2 mile E of it. Another rock, which dries 6.1m, lies about 0.2 mile SW of this islet. Two rocks, up to 3.4m high, lie within 0.2 mile of the SW side of the islet.

Vessels should not attempt to navigate between the islands and islets of this group without local knowledge as the whole area is foul and the tidal currents are strong.

A shoal, with a depth of 2.7m, lies close off the S end of the group and about 1 mile WNW of Archibald Islands Light.

Kipcke Rock (54°15'N., 130°55'W.), which dries 1.8m, lies about 2 miles E of the rock, which dries, lying N of Butterworth Rocks. A rock, with a depth of 10.4m, lies about 0.5 mile ENE of Kipcke Rock. Vessels should not pass between Kipcke Rock and the W edge of Tree Nob Group.

Brown Passage

13.21 Brown Passage, lying between Tree Nob Group and the Dundas Islands, is the most direct route to Prince Rupert and the S part of Chatham Sound from Dixon Entrance. It is also a convenient entrance into Chatham Sound from Hecate Strait for large vessels. The depths throughout the passage are deep.

Vessels approaching Brown Passage from the W should steer for Lucy Islands Light, bearing 096°. This leads about 1 mile N of Triple Islands Light and about 0.8 mile S of Hammer Rocks.



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Triple Islands Light

Vessels bound for Prince Rupert or S through the inside passage should, from a position located about 1 mile SSE of Hammer Rocks, steer to pass about 1 mile N of Lucy Islands Light. They should then steer SE as desired.

Vessels bound N through Chatham Sound should, from a position located about 1 mile SSE of Hammer Rocks, steer a course of 080° until Lucy Islands Light bears 129°. The course should then be altered to 015° until clear of Moore Shoals.

In thick weather it is advisable to keep well to seaward before entering Brown Passage, unless the position of the vessel is known with certainty.

Tides—Currents.—In the approach to Brown Passage, the flood current sets at a rate of about 2 knots in the direction of the fairway and toward the Triple Islands. However, the currents set diagonally across the passage at a rate of 2 to 4 knots between the Triple Islands and Hammer Rocks, the flood running SE and the ebb running NW. Farther E, the current again takes the direction of the channel.

The tidal currents are strong and irregular in the vicinity of the Triple Islands.

Pilotage.—The pilot boarding station for Prince Rupert and other N ports is situated about 1.3 miles N of Triple Islands Light.

13.22 The Triple Islands (54°18'N., 130°53'W.), lying at the N extremity of the Tree Nob Group, consist of three bare, white rocky islands. They form a good landmark and are 6 to 12m high. Drying reefs and shoal patches surround these islands. A light is shown from the northwesternmost island. A

lighted buoy, marking the passage, is moored about 1.3 miles NW of the light.

Osborne Islands are wooded and lie about 1 mile SE of the Triple Islands. Numerous drying reefs extend from these islands. A light is shown from the easternmost island of this group.

Rushton Island, 62m high and the largest of the Tree Nob Group, lies 2.8 miles SE of the Triple Islands. Lighted buoys moored about 0.5 mile NE and 1.3 miles NE of the N end of the island mark the passage.

Stenhouse Shoal, lying about 3.3 miles NW of the Triple Islands, consists of a rocky head, awash at LW, and is marked by kelp. This shoal lies near the S end of a bank, with depths of 7.3 to 9.1m, which is located on the NW side of the approach to the passage. The shoal breaks continuously during strong winds from seaward.

A lighted buoy, equipped with a racon, is moored close S of the shoal and indicates the passage. Another lighted buoy is moored 1.5 miles WNW of the Triple Islands and 0.2 mile NNW of a rocky shoal with a depth of 11m.

Hammer Rocks, two in number, dry 4m and 5.5m and lie 0.4 mile apart. They are located about 2.8 miles NE of the Triple Islands. A ledge, with a depth of 9.1m, extends about 0.2 mile S and SE from the SE side of Hammer Rocks. A shoal, with a depth of 3.7m, lies about 0.3 mile NW of the northwesternmost rock. Foul ground extends up to about 0.3 mile ENE of the same rock.

A light, equipped with a racon, is shown from the northwesternmost drying rock. Lighted buoys are moored about 0.5

mile SSE and 1.3 miles SSE of the light and indicate the channel leading S of the rocks.

13.23 Jackal Point (54°23'N., 130°50'W.), the S extremity of the southwesternmost islet of the group of wooded islets extending W from Melville Island, is 48m high to the tops of the trees. Foul ground and drying ledges extend up to 0.5 mile SW from this point. A shoal, with a depth of 2.7m, lies about 1.5 miles W of the same point.

Egeria Rock, lying about 1.5 miles SW of Jackal Point, breaks heavily with a W swell. It has a depth of 0.6m and is not marked by kelp. Shoals, with depths of 9.6m and 11.9m, lie about 0.8 mile SE and 1 mile S, respectively, of Egeria Rock.

Simpson Rock, 6m high, has an islet, 8m high, lying about 0.2 mile N of it. This rock is located about 2 miles NE of Hammer Rocks at the outer end of foul ground extending S from Melville Island. Rocks, with depths of 5.9m and 10.7m, lie about 0.5 mile W and 1.5 miles WSW, respectively, of Simpson Rock.

Directions.—Two deep-draft routes lead through Brown Passage and Chatham Sound to Ridley Island and Prince Rupert.

The N route leads S of Stenhouse Shoal and Hammer Rocks; around the N and E sides of the Lucy Islands; and then SE to join the S route W of the Kinahan Islands.

The S route leads S of Stenhouse Shoal and passes along the NE sides of the Triple Islands, the Osborne Islands, and Rushton Island. It then leads ESE between North Rachael Island and Greentop Islet, to the S, and Alexandra Bank and the Kinahan Islands, to the N.

Hudson Passage

13.24 Hudson Bay Passage lies between Dundas Island, on the NW side, and Baron Island and the islands located SW of it, on the SE. This passage is encumbered by Nares Islets in its NE part. A channel, 0.2 mile wide, leads NW of these islets, but is only suitable for small vessels. The passage lying SE of Nares Islets is not recommended.

The NE current attains a rate of about 0.5 knot and the SW current a rate of 1 to 1.5 knots. In the NE entrance, both currents attain a rate of 1 knot. This rate is increased abreast the N group of the Nares Islets, where the channel narrows.

Connel Islands (54°25'N., 130°55'W.) is a group of islands, 42 to 55m high. An island, 36m high and from which a drying reef extends up to 0.3 mile WNW, lies at the extremity of a large reef extending about 0.8 mile NW from this group. A rock, with a depth of 6.4m, lies about 0.8 mile NE of the island. Taylor Rock, lying 1 mile SW of the southernmost island of the group, consists of three rocky heads located close together and dries 3m.

Chearnley Island (54°26'N., 130°59'W.), 14m high, lies 0.4 mile S of Prince Leboo Island, which is wooded. A rock, awash and marked by kelp, and another rock, which dries 4.9m, lie about 0.8 mile WSW and about 1 mile WNW, respectively, of Chearnley Island. A rock, which dries 4m, and a conspicuous white rock, 26m high, lie about 0.3 mile S and 0.8 mile ENE, respectively, of the same island.

Gore-Langton Point (54°30'N., 130°53'W.) is fronted to the W by a bight in which several above and below-water rocks lie.

The outermost of these rocks is 4m high. A rock, which dries 0.3m, lies about 3.5 miles NE of the point and about 0.2 mile offshore. Elsewhere, the NW shore of Hudson Bay Passage is free of off-lying dangers.

Nares Islets, consisting of three groups of islets, are wooded. They lie in the fairway of Hudson Bay Passage. Each group is located on a separate area of foul ground with deep channels lying between them.

Caamano Passage

13.25 Caamano Passage lies between the W side of Dundas Island and Zayas Island, 3.5 miles W.

The W side of Dundas Island is rugged and indented with several off-lying islets and rocks, above and below-water, extending up to 0.8 mile seaward in places. Landing on this coast is difficult due to the continuous heavy swell.

A rock, awash at HW, lies in this vicinity about 0.6 mile offshore and two shoals, with depths of 5.5m, are located within 0.4 mile N of it.

Several wooded islets lie about 0.5 mile off the NW side of Dundas Island. The tallest of these is 56m high and lies 1.5 miles W of Arniston Point, the N extremity of the island. A rock, awash, lies 0.8 mile N of this point.

Gnarled Islands (54°38'N., 130°50'W.) lie off the middle of the N coast of Dundas Island. A shoal patch, with a depth of 2.7m, lies about 0.3 mile NE of the northeasternmost island. These islands are free of off-lying dangers and may be approached to a distance of 0.3 mile.

Brundige Inlet, the middle of three indentations located on the N side of Dundas Island, is entered close E of Prospector Point and S of the Gnarled Islands. This inlet extends about 3 miles SW and has a least width of 135m. Fitch Island lies close to the SE shore, about 1.3 miles SW of Prospector Point. A detached rock, which dries 2.4m, lies close offshore, 0.2 mile W of this island. A rock, with a depth of 2.1m, lies in mid-channel, about 0.7 mile SW of Fitch Island.

Anchorage can be obtained by small craft, in a depth of 28m, in mid-channel, NW of Fitch Island. Anchorage can also be taken in a depth of 16.5m at the head of the inlet.

13.26 Zayas Island (54°36'N., 131°04'W.) is wooded and flat-topped. A rock, which dries 3.7m, lies about 0.8 mile SE of the S extremity of the island. A rocky islet, 6m high, and a rock, with a depth less than 1.8m, lie near the outer edge of the foul ground extending up to 0.8 mile SW from Jacinto Point. Jacinto is the SW extremity of the island and is marked by a light.

Aranzazu Point, the NW extremity of the island, is a low point from which several rocks extend up to about 0.4 mile NW. The northernmost of these rocks is 0.9m high. A rock, with a depth of less than 1.8m, lies about 0.4 mile farther NNW and the sea usually breaks at LW over it.

McCulloch Rock, lying about 4 miles W of Jacinto Point, is a pinnacle rock. It usually breaks and has a depth of 1.8m. Shoals, with depths of 5.5m, lie about 0.3 mile SSW and 0.3 mile ESE of McCulloch Rock. Another rock, with a depth of 9.1m, lies about 1.3 miles NNE of McCulloch Rock.

East Devil Rock (54°41'N., 131°04'W.), a pinnacle rock which dries 0.6m, is usually marked by breakers and lies about



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Green Island Light

3.3 miles N of Zayas Island. The channel lying between this rock and Zayas Island is free from dangers in the fairway, but the N coast of the island should not be approached within 1 mile.

Directions.—Vessels approaching Caamano Passage from the SW should steer for the islet, 55m high, lying W of Arniston Point on a course of 037°. When Jacinto Point is abeam, they should alter course to 020° to pass about 1.5 miles WNW of the above mentioned islet. When it is abeam, a course of 061° should be steered to pass about 2 miles N of Arniston Point.

Vessels bound N by way of Revillagigedo Channel should, after passing 1.5 miles off the above-mentioned islet, steer a course of 357° in order to pass about 2 miles W of Tree Point.

Chatham Sound—North Entrance

13.27 The N entrance of Chatham Sound lies between the NE side of Dundas Island and Finlayson Island, 9.3 miles E. It is divided into three passages by Connis Rocks and Green Island.

Connis Rocks, consisting of two bare rocks lying close together on a steep-to drying reef, are located about 5 miles W of the N end of Finlayson Island.

Green Island, 11m high and grassy, lies 2.8 miles W of Connis Rocks and is surmounted by two hummocks connected by a low, shingle beach. It is steep-to on the N side and fronted by foul ground extending up to 0.3 mile N. A light is shown from the SW side of the island.

Grey Islet, 9m high and bare, lies about 0.8 mile NE of Green Island, on the E edge of foul ground extending up to about 0.5 mile W of it.

Bristol Rock, with a depth of 3m, lies about 0.8 mile NW of Grey Islet.

Holiday Passage lies between the NE side of Dundas Island and Green Island. It is deep and used by coastal vessels.

Oriflamme Passage lies between Green Island and Connis Rocks and is deep.

Main Passage lies between Connis Rocks and Pointer Rocks, 3.5 miles ENE. It is the widest and deepest passage. This passage is steep-to, free of dangers, and is preferred to the others.

Dixon Entrance—North Part

13.28 The approach from the Pacific Ocean to Chatham Sound is via Dixon Entrance, which extends in a general E direction for about 60 miles to Dundas Island. The international boundary between British Columbia and Alaska is situated on the N side of Dixon Entrance. The off-lying dangers fronting the coast between the N entrance point of Dixon Entrance and the boundary to the NE of Dundas Island are mainly described in U.S. Coast Pilot 8, Pacific Coast Alaska—Dixon Entrance to Cape Spencer.

Cape Fox (54°46'N., 130°50'W.), located on the N side of Dixon Entrance, forms the W side of Nakat Bay and terminates in conspicuous high and white cliffs. Harry Saddle, a conspicuous saddle-shaped mountain, stands 2 miles N of the

cape. Fox Island and several islets lie within 0.4 mile of the cape.

Lord Rock, 3m high and steep-to, lies about 2.5 miles S of Cape Fox and is marked by a light. A rocky shoal, with a depth of 8.7m, lies about 0.4 mile SE of this rock.

Lord Islands, with their N extremity lying about 2 miles SE of Cape Fox, consist of two groups located 0.8 mile apart. The larger islands are wooded and 30 to 61m high. A clear channel lies between the groups, but several rocks, awash and below-water, fringe the islands. Fleece Rock, 3.4m high, lies about 1 mile E of Lord Rock. Thistle Rock, 2.1m high, lies about 0.5 mile W of the northernmost of the Lord Islands and a shoal patch, with a depth of 1.5m, lies about 0.3 mile SW of it.

Haystack Island (54°43'N., 130°37'W.), located 7.3 miles E of Lord Rock, is 137m high, wooded, steep-to, and conspicuous.

Proctor Islands, lying 0.5 mile E of Haystack Island, are similar in character to the Boston Islands, 1.5 miles SE. The larger islands of the Boston Island group are wooded and about 45m high.

Wales Island (54°45'N., 130°30'W.) has a sharp conspicuous summit, named Entry Peak, standing about 0.8 mile N of Wales Point, its SE extremity. Another mountain, with a flat summit of the same height, rises 1.5 miles WNW of Entry Peak.

Tracy Island, wooded and 49m high, lies in the entrance of the deep bay located close W of Wales Point. A rock, 0.9m high, and a rocky ledge, which dries, lie in the middle of the passage leading between Wales Point and Tracy Island. The passages lying on each side of these rocks are deep and free of dangers. Anchorage for small vessels, sheltered from all but S winds, may be taken in this bay.

Tongass Passage and Pearse Canal

13.29 Tongass Passage is entered between Haystack Island and Island Point, the SE extremity of **Sitklan Island** (54°45'N., 130°40'W.). It is deep with steep shores and has a least width of 0.6 mile. Sitklan Passage lies at the N end of Tongass Passage and N of Sitklan Island. It is deep and narrow with steep, wooded shores. This passage forms the W approach to Port Tongass. Tongass Passage connects with Pearse Canal at Bartlett Point, the W extremity of Wales Island.

Pearse Canal, 25 miles long, is deep throughout, but its SW end is encumbered with many islets and rocks which reduce the navigable width to only a little more than 0.2 mile. There are no dangers in Pearse Canal between Wales Passage and its junction with Portland Canal, except for a rock, which dries 3m. This rock lies close SE of mid-channel and close off a bight which is located S of the entrance to Winter Inlet.

A rock, which covers at about half-tide, lies about 0.1 mile off **Phipp Point** (54°47'N., 130°37'W.).

Pearse Canal Light is shown from the S end of an islet, 45m high, which lies in mid-channel, about 0.7 mile NE of Phipp Point. The best channel leading into Pearse Canal passes between this islet and another islet, 48m high, which lies 0.2 mile SE of Male Point, the SW extremity of Fillmore Island. Shoal patches, with depths of 3m and 9.6m, lie about 0.1 mile N and about 0.5 mile NNE, respectively, of the light. A rocky

shoal, with a depth of 6.4m, also lies about 0.1 mile SE of the light.

Two bare rocks, 3m high, lie about 1.4 miles E of Pearse Canal Light and within 0.5 mile of the NW side of Wales Island.

Anchorage.—Wales Harbor, lying S of the Safa Islands (54°47'N., 130°36'W.), affords good anchorage in depths of 28 to 33m, soft bottom. However, its entrance is encumbered by islets and reefs, and only vessels with local knowledge should attempt to enter. The entrance channel, which is 0.2 mile wide, leads along the W shore.

Regina Cove, lying 2 miles NE of Male Point, provides anchorage, in a depth of 26m, mud, in its center. A shoal, with a depth of 3.2m, lies almost in mid-channel of Pearse Canal, about 0.3 mile SE of the SW entrance point of Regina Cove.

Winter Inlet, entered 1 mile NE of the entrance to Wales Passage, is landlocked and affords secure, though limited, anchorage for small craft with local knowledge. The holding ground is good and ample swinging room is available in the wider part of the inlet. Within 1.3 miles of the entrance, the inlet is only 0.1 to 0.2 mile wide. A rock, with a depth of 4.3m, lies in the middle of the entrance. A wooded islet lies in a bight about 1.4 mile within the inlet and a rock, awash at HW, lies close E of it. The inlet widens and affords anchorage in a depth of 11m, mud, about 0.3 mile above the islet.

Edward Passage, lying opposite the N entrance to Wales Passage, is narrow, foul, and navigable only by small craft with local knowledge.

13.30 The **Yelnu Islets** (54°56'N., 130°20'W.), two in number, are prominent and lie 0.8 mile S of the entrance to Hidden Inlet.

Hidden Inlet can only be entered from the SW and is of no value as an anchorage. The tidal currents set through its entrance at a rate of 8 to 10 knots and form swirls that extend well into Pearse Canal.

Tree Point (55°02'N., 130°11'W.) is low, wooded, and conspicuous. High land rises about 1 mile S of this point. A rocky ledge, which dries 2.4m, extends up to about 0.2 mile N from the point. The continuation to the NNE of Tree Point is via Portland Canal.

Directions.—Tongass Passage should be navigated on a mid-channel course until Point Mansfield, the NE extremity of Sitklan Island, bears about 270°. The course should be altered to pass not less than 0.2 mile N of Phipp Point. A course should then be steered to pass about midway between Pearse Canal Light and the islets lying on the S side of Male Point. Vessels should then steer to pass about 0.2 mile N of the rocks, up to 3m high, lying off the NW side of Wales Island.

Care should be used to avoid the shoal, with a depth of 9.6m, lying about 0.5 mile ENE of Pearse Canal Light. The shore of Wales Island should then be closed and followed at a distance of 0.2 mile until abreast the N end of Wales Passage. A mid-channel course should then be maintained.

Portland Inlet

13.31 Portland Inlet extends from the NE extremity of Chatham Sound in a general NE direction for about 20 miles from its entrance between Wales and Somerville Islands. This

inlet then divides into two arms. The W arm is known as Portland Canal and the E arm as Observatory Inlet.

Wales Passage, lying 3.5 miles NNE of **Wales Point** (54°42'N., 130°29'W.), leads NNW from Portland Inlet into Pearse Canal. York Island, lying in the middle of the S entrance, has clear passages leading on either side of it. Wales Passage is free of dangers in the fairway, but contracts to a width of only 0.1 mile at its N end.

Manzanita Cove, lying 0.5 mile SW of York Island, is free of dangers and provides anchorage for small vessels.

Pearse Island is located on the NW side of Portland Inlet. Mountains rise along its SE side and attain a height of 793m close N of Portland Point, the E extremity and the SW entrance point of Portland Canal.

Crag Point, located 3 miles NE of the S extremity of Pearse Island, terminates in white cliffs.

Lizard Point, located 3.3 miles NE of Crag Point, is prominent and marked by a light.

Somerville Island, 971m high, is heavily wooded with generally bold coasts. Truro Island, 218m high and wooded, is separated from Somerville Island by Truro Passage. This passage is about 0.1 mile wide in its narrowest part and deep in the fairway.

Nob Islet, 22m high, lies 1 mile NE of Truro Island. A conspicuous white cliff stands close S of Nob Islet.

Somerville Bay lies close E of Start Point. Start Point is bold, steep-to, and forms the N extremity of Somerville Island. Small vessels with local knowledge may obtain anchorage in a depth of 22m, sand, near the head of this bay.

Steamer Passage, lying between Somerville Island and the mainland, is over 0.3 mile wide at its narrowest part. This narrow part is located between Spakels Point, the SE extremity of Somerville Island and Keemein Point, the S entrance point of Khutzeymateen Inlet. The passage has depths of over 37m in mid-channel and is free of offshore dangers, except for a gravel bank. This bank extends seaward from the S shore close W of Kumeon Bay, which lies W of Keemein Point.

Anchorage for small vessels can be taken in a depth of 22m, sand and mud, within Kumeon Bay. However, care should be used in order to avoid the above-mentioned gravel bank.

Khutzeymateen Inlet is entered between Keemein Point and Welgeegenk Point, 0.8 mile NE. It extends for 14 miles in a SE direction and terminates in an extensive drying flat over which flows the Khutzeymateen River. The inlet has an average width of 0.5 mile and, except for Walskakul Shoal, is deep throughout. The latter shoal, with a depth of 14.6m, lies near mid-channel, about 4 miles within the inlet. The shores for the most part are steep-to and rise to high, wooded mountains.

Crow Lagoon, entered about 0.5 mile E of Keemein Point, is obstructed by a drying flat that extends up to about 0.5 mile E and about 0.2 mile offshore.

Tsamspanaknok Bay lies on the S shore of Khutzeymateen Inlet and about 5 miles within the entrance. It provides anchorage for small craft about 0.1 mile off the drying flat at the head. The E shore of the bay should be favored when approaching the anchorage in order to avoid a drying flat extending from the W shore.

McGregor Point is the NE extremity of a prominent headland which forms the E shore of Tsamspanaknok Bay. Kwinamass Bay, extending E abreast the N entrance to

Steamer Passage, is almost completely filled by a drying flat, which renders it useless as an anchorage.

Trefusis Point (54°50'N., 130°10'W.), the S extremity of the Mylor Peninsula, terminates in white cliffs. Ranger Islet, 12m high, lies on the foul ground extending up to about 0.5 mile S from the point. Nasoga Gulf, lying between the S end of Mylor Peninsula and the mainland, is deep throughout with fairly steep-to shores and comparatively high land at its head.

Anchorage can be taken by vessels with local knowledge near the head of the gulf. A berth lies in depths of 18 to 33m, gravel, in mid-channel and about 0.2 mile from the N shore.

Portland Canal

13.32 Portland Canal is entered W of **Ramsden Point** (54°59'N., 130°06'W.), the S extremity of the peninsula which divides Portland Canal from Observatory Inlet. A rocky ledge, which dries 4m, lies 0.1 mile E of Ramsden Point.

Portland Canal extends from its junction with Pearse Canal at Tree Point for 58 miles in a general N direction to the ports of Hyder, Alaska and Stewart, British Columbia. The canal is deep and clear. There are no dangers within it, except for a rock, bare at LW, lying about 0.2 mile off the Alaskan shore, about 2.3 miles above River Point (55°34'N., 130°08'W.).

The sides of the canal are precipitous and rise almost perpendicularly to snow-clad summits. They attain heights of 910 to 1,820m within 2 miles of the canal. The snow line, with the exception of a few wooded valleys at the mouths of streams, is low even in midsummer.

The tidal currents have an estimated maximum rate of 2 knots on the flood and 3 knots on the ebb, diminishing toward the head of the canal. The current turns shortly after HW and LW.

Reef Island (55°05'N., 130°12'W.) is marked by a light. A reef, with rocks awash at HW, and several below-water rocks, extend up to about 0.2 mile S of the island.

Dickens Point is located on the E shore, about 5 miles NNE of Reef Island. It is bordered close S by a black rock, 2.4m high. A drying ledge extends up to about 0.2 mile S from the point.

Stopfard Point, located about 3 miles NNE of Dickens Point, is bold and conspicuous from the S.

Halibut Bay (54°14'N., 130°06'W.) has generally bold shores. However, on each side of the entrance, sandy beaches and shoals front the shore and are backed by low, grassy land. Drying flats extend from the W shore of the bay all the way across, about 1 mile within the entrance.

Camp Point, located 4.5 miles NE of the entrance, is wooded and precipitous.

Anchorage can be obtained by vessels with local knowledge, in depths of 11 to 18m, mud, in mid-channel, about 0.3 mile within the entrance. The holding ground is good.

13.33 **Hattie Island** (55°17'N., 129°58'W.), covered with some stunted bushes, lies nearly in mid-channel. All sides of this island, except the N side, are steep-to but the channel passing to the W is recommended. A light is shown from the W side of the island, but it is obscured to the E. The island is not conspicuous from the S due to the lack of contrast from the

high background. Belle Bay, lying E of Hattie Island, is too deep to afford anchorage.

Three conspicuous landslides are located 2 miles N of Hattie Island.

Breezy Point, located 5 miles NNW of Hattie Island, is conspicuous and Bluff Point, 1.8 miles farther NE, terminates in a high, bold cliff.

Bay Islet (55°36'N., 130°07'W.) is wooded and joined to the E with a point located on the shore separating two sandy bights. A drying rock lies 1 mile W of this islet.

Green Islets (54°38'N., 130°06'W.), two in number, are small, wooded and lie close off the E side of the canal. A rocky ledge, which partly dries, fronts the N side of the islets.

Fords Cove, lying within Green Islets, affords shelter from S winds, but no protection from N winds. The S part of this cove is bordered by shallow depths. Fair anchorage may be obtained by vessels with local knowledge in a depth of 29m about 0.2 mile from Green Islets and the same distance from the E shore. Four conspicuous oil tanks are situated on the shore of this cove.

Glacier Point (54°49'N., 130°07'W.) is the termination of a small peninsula on which stands a conspicuous wooded hill, 107m high. Seal Rocks, the largest of which is 1m high, lie close offshore, about 0.8 mile NE of Glacier Point.

Lion Point, located 5 miles NE of Glacier Point, is low and fronted by a grassy flat. This point is fronted by a prominent old jetty with some ore-loading equipment on it. A government landing float is situated in Marmot Bay, about 0.5 mile NE of Lion Point. It has depths of 5.5m and 2.7m lying at the S and N ends, respectively.

13.34 Hyder and Stewart (55°56'N., 130°00'W.) ([World Port Index No. 18980](#)) are two closely connected settlements that lie at the mouths of the Salmon River and the Bear River, respectively. Hyder, where there is a U.S. Customs Station, stands on the Alaskan side and Stewart stands on the British Columbia side.

The Bear River and Salmon River, at the head of Portland Canal, are separated by the Reverdy Mountains. These mountains consist of a high ridge of bare peaks with Mount Dolly, the southernmost, being conspicuous from seaward.

The Salmon River is fronted by an alluvial fan-like delta that is formed by a drying mud flat, the N portion of which extends about halfway across the canal. This mud flat is steep-to and the depths lying off it increase to over 90m within a distance of about 200m.

The Bear River flows through an extensive wooded flat and divides near its mouth into a delta. Several streams flow through this delta. During the summer when the snow is melting, a considerable body of water flows into the canal. The drying mud flat fronting the edge of the delta is fairly steep-to and on the E shore the depths increase to over 37m within a distance of about 100m.

Throughout the year, discolored water from the Bear River and the Salmon River extends as far S as Glacier Point.

Tides—Currents.—At the settlements, the tides rise about 6.7m at springs and 5.3m at neaps.

Depth—Limitations.—A wharf for small craft fronts Hyder, but is reported to be in poor condition. The approach to this wharf lies over the mud flats fronting the river mouth.

The Esso Minerals Wharf is situated on the W shore, about 1 mile S of Stewart. It is 244m long and has a depth of 12.2m alongside. Mooring buoys are situated NW and SE of the wharf. Vessels of up to 40,000 dwt can be handled.

A public wharf is situated close N of the Esso Minerals Wharf. It is 90m long and has depths of 5.2m alongside the S end and 9.1m alongside the N end. There are also facilities for small craft, yachts, and seaplanes.

Anchorage.—Anchorage may be taken in depths of 46 to 55m near the head of the canal, about 0.3 mile from the E shore and about 0.2 mile S of the mud flat fronting the mouth of the Bear River. Caution is required approaching the anchorage as the flat is uncovered only at LW and is very steep-to. The bottom consists of soft mud with good holding ground, but the anchorage is exposed to N and S winds that blow through the canal.

Caution.—Extensive silting is reported to have taken place at the mouths of the Bear River and the Salmon River.

Ice forms at the head of Portland Canal in the vicinity of Stewart from November to February. It does not stop shipping, but can be a problem for small craft.

The waters lying in the vicinity of Stewart are a designated aerodrome.

Observatory Inlet

13.35 Observatory Inlet is entered between Ramsden Point and Nass Point, 4 miles ENE. It extends from the head of Portland Inlet for 27 miles in a general NNE direction. This inlet, which is deep, then divides into two arms, Hastings Arm continuing N and Alice Arm continuing E. The shores are low and wooded in some parts, the land rising to mountains of considerable height a few miles inland. The trees and underbrush, particularly on the W side of the inner end of the inlet, are bare of foliage due to the effects of fumes emanated from the former smelter at Anyox.

The tidal currents in Observatory Inlet seldom exceed a rate of 2 knots, the greatest velocity being during the early summer when land drainage run-off is at its maximum. A rate of 1 to 2 knots may be encountered in the passages leading into Alice Arm, but in Sylvester and Granby Bays, they are negligible. The tidal currents in Hastings Arm are very weak and during the freshet period, nearly always set S with a marked overlay of fresh water.

In the vicinity of Nass Point, the currents are affected by the discharge from the Nass River and tide rips and eddies are nearly always present. The muddy stream from the river contrasts greatly with the blue water of the inlet.

Tide rips and eddies are noticeable throughout the S part of Observatory Inlet, particularly in the vicinity of the 25m depth lying 2.5 miles N of Nass Point.

Between Frank Point and Hans Point, the tidal currents attain a maximum rate of 2 to 3 knots, the ebb being the stronger. No appreciable eddies are encountered. When strong winds are in opposition to the tidal currents, extensive tide rips, dangerous to small craft, are formed.

Anchorage.—Anchorage can be taken with local knowledge, in a depth of 55m, in a bight about 2.5 miles NNE of Nass Point and about 0.3 mile offshore. The N entrance

point of this bight should be given a berth of 0.3 mile as a narrow spit, with a least depth of 1.5m, fronts its SSW side.

Salmon Cove lies on the W side of the inlet, about 7.5 miles NNE of an islet. A sandy flat extends 0.2 mile seaward from the S shore at the entrance to the cove. The head of the cove is 0.3 mile wide. Dawkins Point is located on the E shore opposite Salmon Cove.

Richards Point, located 1.5 miles N of Dawkins Point, lies on the W side of the inlet and is marked by a light.

Anchorage may be taken in depths of 57 to 64m, mud and stones, within the entrance of Salmon Cove.

Brooke Island, wooded and 148m high near its S end, lies with Brooke Point, its SW extremity located 4 miles NNE of Richards Point. Paddy Passage, separating the island from the mainland, is deep and free of off-lying dangers.

A rock, which dries 6.4m, lies at the extremity of a spit extending about 0.1 mile N from Williams Point, the NE extremity of the island. Brooke Shoal, which dries 5.8m, lies about 0.2 mile farther N and is marked by a light.

Frank Point, located 1.5 miles NW of Brooke Point, is the NE entrance point of Juggins Bay. This bay, in which lie three drying rocks, is shallow and affords shelter for small vessels with local knowledge.

Larcom Island, 155m high, lies close off **Thomas Point** (55°23'N., 129°45'W.), the S extremity of the island. Larcom Lagoon, which indents the W side of the island, almost dries at the entrance.

Aiskew Point, located 1.3 miles NNE of Frank Point, is the NE extremity of Aiskew Island. Vadso Rocks, which dry 0.6 to 0.9m, lie between this point and the SW extremity of Larcom Island. Vadso Island, 15m high, lies close off the latter extremity.

Strombeck Bay is entered between Aiskew Point and Fortier Point, 0.5 mile W. It is foul and obstructed by drying rocks.

Anchorage can be taken in a depth of 37m about 0.2 mile W of Aiskew Point.

Sylvester Bay is entered between Fortier Point and Granby Peninsula. A rocky patch, with a depth of 6.9m, lies about 0.1 mile NNW of Fortier Point. A shoal, on which lies Cane Rock, extends up to about 0.3 mile S from the W entrance of the bay. Cane Rock dries 3.7m. Several drying rocks lie within 0.8 mile of the head of the bay. A shoal, with a depth of 9.1m, lies about 0.8 mile SW of Fortier Point.

Forward Shoals, lying about 1.5 miles N of Aiskew Point, have a least depth of 6.4m.

Granby Bay is entered between **Granby Point** (55°25'N., 129°48'W.), the N extremity of Granby Peninsula, and Johnson Point, 0.8 mile NNE. Anyox Rock, which dries 6.7m, lies about 0.4 mile SE of Granby Point and about 0.2 mile offshore. Foul ground extends up to about 0.2 mile N from this rock. Granby Bay is deep and clear of dangers, except for the banks fronting the streams.

Two prominent chimneys are situated on Graves Point, 0.8 mile SW of Johnson Point. Two other chimneys, also prominent, stand 0.8 mile farther WSW. Smith Bluff, located 0.5 mile WSW of Graves Point, is fronted by a drying flat that extends up to about 0.2 mile SE. A slag dump from an abandoned mine stands near the inshore end of this flat.

Anyox, situated W of Graves Point, was once the port serving a thriving copper mine. It is now abandoned and the wharves are in ruins.

Anchorage.—Depths within Granby Bay are too deep for satisfactory anchorage. Temporary anchorage for vessels up to 76m in length lies in a depth of 66m, about 0.2 mile SW of Graves Point. Temporary anchorage for larger vessels lies in a depth of 77m in mid-channel, about 0.4 mile SE of Smith Bluff.

Caution.—The channel lying between the N end of Larcom Island and the mainland to the W is encumbered by numerous islets, above and below-water rocks, and is navigable only by boats.

An abandoned submarine telegraph cable extends ESE between a point located close WSW of Johnson Point and Larcom Island.

A magnetic disturbance is reported to exist in Paddy Passage.

Observatory Inlet—Head

13.36 Perry Peninsula (55°23'N., 129°41'W.) is 97m high. Perry Spit, which dries, extends about 0.2 mile W from the SW end of this peninsula. It is composed of gravel and stones and should be given a berth of at least 0.2 mile. A shoal, with a least depth of 1.8m, lies close W of the peninsula, 0.4 mile N of the spit.

Liddle Island (55°24'N., 129°42'W.) has an area of foul ground fronting its S extremity. A shoal, with a depth of 6.7m, and a rock, which dries 2.1m, lie about 0.4 mile SW and 0.2 mile W, respectively, of the S extremity. A shoal, with a depth of 3.7m, lies between the rock and the island.

Liddle Channel, lying between the N end of Perry Peninsula and Liddle Island, has a least depth of 9.8m on the W side of the fairway at its inner end.

Perry Bay, lying close E of Perry Peninsula, is 0.4 mile wide at its entrance. However, the navigable channel is narrowed to a width of only 135m by the shoals lying on either side. A least depth of 4.9m lies in the fairway channel. Sophy Island, lying close NE of Perry Peninsula, is 39m high. It is surrounded by a shoal that extends up to about 0.1 mile seaward from the E side. Rocks, which dry 2.5m and 0.3m, lie on the E edge of this shoal. A shoal patch, with a depth of 2.7m, lies about 0.2 mile NE of Sophy Island. Hyde Rock, lying about 0.1 mile N of Sophy Island, dries 1.5m and is marked by a light.

Approaching Perry Bay from the SW, vessels should keep in the fairway of Liddle Channel and alter course around Hyde Rock Light at a distance of at least 0.2 mile. They should then pass midway between the shoal patch lying NE of Sophy Island and the E shore. Vessels may then steer for the anchorage.

Anchorage can be taken in Perry Bay. The berth lies in a depth of 24m, mud, in mid-channel, about 0.2 mile SE of Sophy Island.

Hastings Arm extends about 14 miles N from its entrance located between the E side of Larcom Island and Liddle Island. This arm has a least width of 0.5 mile, is deep, and terminates in a wooded swamp fronted by a mud flat.

Foul ground, on which lie some wooded islets and drying rocks, extends up to 0.2 mile offshore, 0.5 mile NW of Davies

Point. A rock, which dries 0.9m, lies about 0.2 mile N of Larcom Island. There are other drying rocks located in places, but these are widely separated and lie no more than 0.1 mile offshore. A bank consisting of sand and gravel extends about 0.2 mile seaward from the E shore, about 0.5 mile from the head of the arm.

Alice Arm, from its junction with Hastings Arm, extends N and E for 10 miles to the steep-to mud flat that fronts the mouth of the Kitsault River, at the head.

13.37 Alice Rock (55°25'N., 129°40'W.), with a depth of 1.5m, lies nearly in mid-channel. A ledge extends up to about 0.1 mile W from this rock.

Hans Point, located 0.8 mile NNE of Alice Rock, has an extensive drying flat lying close E of it.

Pearson Point, marked by a light, is shown from the W shore, about 1.8 miles from the head of the arm.

Entering Alice Arm, vessels should pass Thomas Point in mid-channel and then steer for the hill, 73m high, standing at the N end of Liddle Island, bearing 043°. When Brooke Shoal is abeam, a course of 071° should be steered until the extremity of Perry Spit is abeam. The course should then be altered to bring Hyde Rock Light ahead, bearing 052°. When the S end of Liddle Island is abeam, the course should be altered to bring Alice Arm Light ahead, bearing 023°. This course should be maintained until Alice Rock is abeam to port, after which, vessels should steer to pass 0.1 mile off Alice Arm Light. A mid-channel course may then be steered toward the head of the arm.

The settlement of Alice Arm is situated on the W side of the mouth of the Kitsault River. A government wharf and float are situated 1 mile N of Pearson Point. The head of the wharf is 30m long and has a depth of 7.3m alongside.

Kitsault, a newly established mining settlement, is situated at the mouth of Lime Creek.

Anchorage.—Temporary anchorage may be taken by small vessels, in a depth of 28m, about 0.3 mile NNE of Pearson Point Light or in a depth of 18m, about 0.2 mile ENE of the same light. Neither anchorage berth is recommended as they are close to rocks which dry 1.5m and 0.6m. In addition, the holding ground is bad. The bottom shoals rapidly and a depth of 100m lies only about 0.2 mile offshore.

Caution.—A wide berth should be given the mouths of Roundy Creek and Lime Creeks, lying 0.8 mile S and 0.8 mile E, respectively, of Pearson Point. Extensive drying flats front these creeks and the depths lying off them shoal abruptly.

The flats at the head of the arm should be approached with care as the water is very muddy and it shoals abruptly.

An abandoned submarine cable lies across Hastings Arm in the vicinity of Larcom Island.

Nass Bay

13.38 Nass Bay (54°59'N., 129°59'W.) is entered between Low Point and Nass Point, 2 miles N, and forms the estuary of the Nass River. Extensive drying flats of mud and sand front the NE and E shores of Nass Bay on each side of the mouth of the Nass River. Governors Bar, fronting Kincolith, extends about 0.7 mile from the N shore and is steep-to on its W side.

Ripple Tongue is the W extremity of the flats projecting from the E shore of Nass Bay. These flats extend to within 0.4 mile of Double Islet Point. Mud Islands, 36m and 49m high, lie on the S part of the flats.

A government wharf is situated about midway between Nass Point and Kincolith. It has a berth, 40m long, with a depth of 5.5m alongside.

Fort Point (54°59'N., 129°55'W.), the N entrance point of the Nass River, terminates in white cliffs. Leading Point, the S entrance point of the river, is located 2.8 miles E of Fort Point.

Anchorage, in good weather, can be taken in depths of 18 to 28m, mud, about 0.8 mile SW of Kincolith with Leading Point just open S of Fort Point, bearing 090°. Care must be taken to anchor with Landslip Mountain bearing not more than 198° as Governors Bar is steep-to.

Iceberg Bay (54°56'N., 129°58'W.) is entered between Double Islet Point and Jaques Point, 1.8 miles S. It terminates in a steep-to sand flat that front the swampy ground at the head. There are depths within the bay of up to 77m. Depths of 9.1 to 40m over a mud bottom lie in an area located between a line joining the entrance points and the drying bank extending about 0.5 mile W to within 1.5 miles NW of the Mud Islands.

Double Islets, 25m and 22m high, lie close off Double Islet Point. They are lightly wooded and connected to the shore at LW by a gravel and boulder bank.

Anchorage can be taken, in depths of 8 to 10m, mud, with Double Islet Point in line with Nass Point, bearing about 326°, and the S side of the southernmost of the Mud Islands bearing about 087°.

Directions.—Vessels proceeding to Iceberg Bay should keep about 0.2 mile off the S shore of Nass Bay between Low Point and Stevens Point, 0.8 mile E. They should then follow the fairly steep-to shore at a distance of about 0.1 mile. On approaching Double Islet Point, vessels should close the shore until Double Islets are cleared. A course can then be steered for the anchorage.

Caution.—A sewer outlet pipeline crosses the bar close SE of Kincolith.

Recent surveys indicate Governors Bar and Ripple Tongue are subject to change and care should be taken when entering Iceberg Bay.

A strong set towards the S shore of Iceberg Bay, on the ebb tide and in the opposite direction on the flood tide, has been observed and requires a course allowance of up to 10° in order to counteract the effects of the currents.