

PAC 205

Canadian Sailing Directions

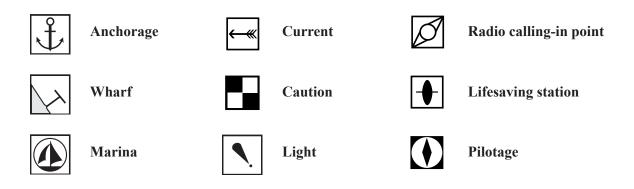
Inner Passage – Queen Charlotte Sound to Chatham Sound







Pictograph legend



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Record of Changes

As the CHS acquires new information, relevant changes are applied to Sailing Directions volumes in order to maintain safety of navigation. It is the responsibility of the mariner to maintain their digital Sailing Directions file by ensuring that the latest version is always downloaded. Visit <u>charts.gc.ca</u> to download the most recent version of this volume, with all current changes already incorporated.

The table below lists the changes that have been applied to this volume of Sailing Directions. This record of changes will be maintained for the current calendar year only

| Date | Chapter / Paragraph | Description of Change |
|---------|--------------------------|---|
| 06/2022 | Chapter 2 | An in depth review of Chapter 2 was completed by the Sailing Directions Officer. Multiple changes were applied. |
| 06/2022 | Chapter 3 | An in depth review of Chapter 3 was completed by the Sailing Directions Officer. Multiple changes were applied. |
| 06/2022 | Chapter 3 Para. 206 | "Marjor Port Facilities - Prince Rupert - Ridley Island" table has been updated. |
| 06/2022 | Chapter 3 Para. 285 | "Major Port Facilities - Prince Rupert" table has been updated. |
| 06/2022 | Appendices | "Marina Facilities" table has been updated. |
| 06/2022 | Chapter 3 Para. 204 | Delete paragraph 204. Replace by: <i>Ridley Terminals, Ridley Island Propane Export Terminal, Prince Rupert</i> <i>Grain,</i> and the <i>Ridley Island Cargo Ramp</i> are on the NW part of Ridley Island. |
| 06/2022 | Chapter 3 Para. 245.1 | Delete paragraph 204. Replace by: Caution There is debris, from the decommissioned pulp mill, in the wa- ter NNW of the Pembina LPG Terminal on Watson Island. Adjacent to paragraph 245.1, add the caution pictograph. |
| 06/2022 | Chapter 3 Para. 266 | After "and Fairview Terminal." Insert: A submarine cable (fiber optic) crosses from Dodge Cove to the Prince Rupert BC Ferry Terminal. |
| 06/2022 | Chapter 3 Para. 272 | After paragraph 272, insert: 272.1 Construction for the Fairview Terminals expansion is in progress along the coastline approximately between Casey Point and 700 m to the south. |
| 06/2022 | Chapter 3 Para. 259.1 | Delete: "This sector light is owned by the Port of Prince Rupert and is activated for 30 minutes by keying VHF 17 five times at one second intervals." |
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This First Edition of Sailing Directions, PAC 205 — Inner Passage — Queen Charlotte Sound to Chatham Sound, 2002, has been compiled from Canadian Government and other information sources. In general, all hydrographic terms used in this booklet are in accordance with the meanings given in the Hydrographic Dictionary (Special Publication No. 32), published by the International Hydrographic Bureau.

This edition introduces a new presentation and layout of the geographical areas.

General information for the British Columbia coast is given in one booklet, Sailing Directions, PAC 200—General Information, Pacific Coast. It contains navigational information and a brief description of the main port facilities as well as geographic, oceanographic and atmospheric characteristics. A geographical index at the end of the booklet should also be consulted.

The detailed descriptions of the geographical areas is given in a series of volumes and booklets. Their limits are printed on the back cover of the booklets. The appropriate descriptive booket(s) and volumes of Sailing Directions should be consulted in conjunction with the PAC 200 — General Information, Pacific Coast booklet.

Tide and current information has been revised by the Canadian Hydrographic Service.

Meteorological information has been supplied by the Atmospheric Environment Service, Environment Canada.

The photographs are by the Canadian Hydrographic Service, Fisheries and Oceans Canada unless otherwise indicated.

Users' comments concerning the format, content or any other matter relating to *Sailing Directions* would be appreciated and should be forwarded to the Director General, Canadian Hydrographic Service, Fisheries and Oceans Canada, Ottawa, Ontario, Canada K1A 0E6.

anadian *Sailing Directions* amplify charted details and provide important information of interest to navigation which may not be found on charts or in other marine publications. *Sailing Directions* are intended to be read in conjunction with the charts quoted in the text.

Remarks

Buoys are generally described in detail only where they have special navigational significance, or where the scale of the chart is too small to clearly show all the details.

Chart references, in italics in the text, normally refer to the largest scale Canadian chart but occasionally a smaller scale chart may be quoted where its use is more appropriate.

Distance tables contain approximate distances only that are based on tracks usable by most vessels consistent with safe navigation.

Facilities available to the general public are described. The floats and wharves which are not described can be assumed to be privately owned. **Marina** facilities are listed in the Appendix of the appropriate geographic booklet of Sailing Directions.

Magnetic Compass Roses must be corrected for annual change in variation.

Names have been taken from the Canadian Permanent Committee on Geographical Names. Where an obsolete name still appears on the chart, it is given in brackets following the official name.

Tidal information relating to the vertical movements of the water is not given and the *Canadian Tide and Current Tables, Volume 7* should be consulted. However, abnormal changes in water level are mentioned.

Wreck information is included where drying or submerged wrecks are relatively permanent features having significance for navigation or anchoring.

Units and terminology used in this booklet

A-frames are derricks generally constructed of logs formed in the shape of the letter "A". They are used for lifting bundles of logs from logging trucks to the water and are usually conspicuous.

Bearings and **Courses** refer to True North (geographic) and are given in degrees from 000° clockwise to 359°. The bearings of conspicuous

objects, lights, ranges and light sectors are given from seaward. Courses always refer to the course to be "made good".

Booming grounds can be either areas where logs are yarded and formed into sections, or areas where booms and sections are stored. They are generally private areas, holding water leases, which restrict public usage.

Clearances under bridges, overhead cables, etc., are those at HHWLT.

Conspicuous objects, natural or artificial, are those which stand out clearly from the background and are easily identifiable from a few miles offshore in normal visibility.

Deadheads/Sinkers are logs that have become so waterlogged that they are almost entirely submerged. They usually assume a vertical position; if the water is shallow enough for their bottom end to be aground they can cause massive damage to a hull. They are invisible even in daylight unless a slight swell causes them to break the surface.

Dead-weight tonnage and mass are expressed in metric tonnes of 1,000 kilograms. The kilogram is used for expressing relatively small masses.

Depths, unless otherwise stated, are referred to chart datum. As depths are liable to change, particularly those in dredged channels and alongside wharves and floats, it is strongly recommended that these, when critical, be confirmed by enquiry to the appropriate authority.

Distances, unless otherwise stated, are expressed in nautical miles. For practical purposes, a nautical mile is considered to be the length of one minute of arc, measured along the meridian, in the latitude of the position. The international nautical mile, which has now been adopted by most maritime nations, is equal to 1,852 m.

Elevations on land are given above HHWLT. The elevations of wooded islands, points, etc., are to the tops of trees. **Heights** of objects, as distinct from the elevations, refer to the heights of structures above the ground.

Figures in brackets given after those denoting fathoms, feet or yards, are their equivalent in metres. Those following lights and light buoys are their Canadian Light List number and those after post office are the postal code for General Delivery. **HHWLT** (Higher High Water, Large Tides) is the highest predictable tide during an average year in the nineteen year lunar cycle.

HW (High Water) refers to the highest water level achieved during one tidal cycle.

LLWLT (Lower Low Water, Large Tides) is the lowest predictable tide during an average year in the nineteen year lunar cycle.

LW (Low Water) is the lowest water level achieved during one tidal cycle.

Latitudes and longitudes given in brackets are approximate and are intended to facilitate reference to the general area on the chart quoted.

Logbooms are a collection of logs formed into units suitable for towing. They are generally oblong and can range up to 76 m wide and 360 m long. Logbooms are encircled and contained by **boomsticks** formed by logs chained together end to end.

Log dumps are areas where logs are dumped either from A-frames or log ramps. Usually the area is blocked off by boomsticks and pilings.

Public wharf is a wharf that is generally available for public use, though certain fees may be charged by local authorities. Some wharves may give berthing priority to the local fishing fleets or other agencies. It may be shown on older charts as "Government wharf" or "Gov't whf". **Radar beacons (Racon)** are beacons which respond to radars; a full description is given in *Radio Aids to Marine Navigation (Pacific and Western Arctic)*.

Small craft is the term used to designate pleasure craft and in general, small vessels with shallow draught.

Tidal streams and **currents** are described by the direction toward which they flow. The **ebb** stream is caused by a falling tide and the **flood** stream is caused by a rising tide.

Time, unless otherwise stated, is expressed in Pacific standard or daylight time.

Winds are described by the direction from which they blow.

Pictographs are symbols shown at the beginning of the paragraphs to allow quick reference to information or to emphasize details. The Pictograph Legend is shown on the inside front and back covers of this booklet.



References to other publications:

Canadian Coast Guard

- List of Lights, Buoys and Fog Signals (Pacific)
- Radio Aids to Marine Navigation (Pacific and Western Arctic)
- Annual Edition of Notices to Mariners
- The Canadian Aids to Navigation System

Environment Canada

• Canadian Climate Normals British Columbia

Canadian Hydrographic Service

- Canadian Tidal Manual
- Chart 1 Symbols, Abbreviations and Terms
- Notes on the Use of Loran-C Charts
- Canadian Tide and Current Tables, Volume 7
- Catalogue of Canadian Nautical Charts and Related Publications (Pacific)

Units

| °C | degree Celsius |
|-----|----------------------|
| cm | centimetre |
| fm | fathom |
| ft | foot |
| h | hour |
| ha | hectare |
| kHz | kilohertz |
| km | kilometre |
| kn | knot |
| kPa | kilopascal |
| m | metre |
| min | minute |
| MHz | megahertz |
| mm | millimetre |
| t | metric tonne |
| 0 | degree (plane angle) |
| ' | minute (plane angle) |

Directions

| Ν | north |
|---------|-------------------------------|
| NNE | north northeast |
| NE | northeast |
| ENE | east northeast |
| E | east |
| ESE | east southeast |
| SE | southeast |
| SSE | south southeast |
| S | south |
| SSW | south southwest |
| SW | southwest |
| WSW | west southwest |
| W | west |
| WNW | west northwest |
| NW | northwest |
| NNW | north northwest |
| Various | |
| CCG | Canadian Coast Guard |
| CHS | Canadian Hydrographic Service |
| HF | high frequency |
| HW | high water |

| CHIS | Cunadian Hydrographic Service |
|-------|---|
| HF | high frequency |
| HW | high water |
| LW | low water |
| Μ | million, mega |
| MCTSC | Marine Communications and Traffic Services Centre |
| NAD | North American Datum |
| ODAS | Ocean Data Acquisition System Buoy |
| SAR | Search and Rescue |
| VHF | very high frequency |
| | |

VTS Vessel Traffic Services

Inner Passage Cape Caution to Milbanke Sound

General

Chart 3744

1 This chapter covers the Inner Passage from Cape Caution (51°10'N, 127°47'W) to the west end of Seaforth Channel (52°15'N, 128°25'W) where it enters Milbanke Sound. The mainland inlets and connecting passages in this area are also described.

Commencing at Cape Caution, the section of the 2 Inner Passage described in this chapter leads through South Passage, which lies between Sea Otter Group, on the west, and the rocks off the entrance to Smith Sound. It then follows Fitz Hugh Sound, Fisher Channel, Lama Passage and Seaforth Channel to Milbanke Sound.

Vessel Traffic Services (VTS). — The 3 Ø area covered in this chapter is in Sector 1 of the Prince Rupert Traffic Zone and the assigned frequency is 156.55 mHz, Channel 11.

A brief description of the Vessel Traffic Services (VTS) 4 System is given in Sailing Directions booklet PAC 200 -General Information, Pacific Coast; full details are given in Radio Aids to Marine Navigation (Pacific and Western Arctic). 5

The Calling-in Points are

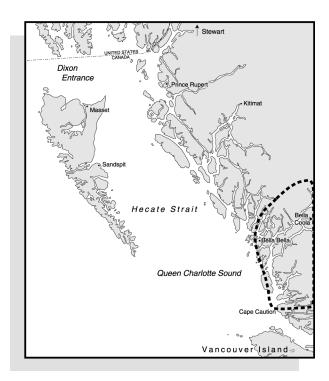
6 Calling-in Point No. 35, called Triangle Island, is a line extending 220° from Triangle Island to the limit of the Territorial Sea; it is for changing from Prince Rupert Traffic Zone South to Prince Rupert Traffic Zone North.

Calling-in Point No. 1A, called Cape Caution/Cape Sutil, is a line joining Cape Caution light (578) to Mexicana Point thence to Cape Sutil, and is the change line between the Vancouver Traffic Zone, administered by Comox Traffic, and the Prince Rupert Traffic Zone.

Calling-in Point No. 1B, called Dugout Rocks, is a 8 line from Dugout Rocks light (581) to Cape Calvert. Mariners bound for Fitz Hugh Sound shall report their ETA for Dugout Rocks.

Calling-in Point No. 1C, called Pearl Rocks, is a 9 line from Pearl Rocks to the southernmost Sorrow Island and thence to Cape Calvert. Mariners bound for Queen Charlotte Sound via North Passage shall report their ETA for Pearl Rocks.

Calling-in Point No. 2, called Fog Rocks, is at Fog 10 Rocks light (591).



11 *Calling-in Point No. 3*, called *Walker Island*, is at Walker Island light *(606)* in Lama Passage.

12 *Calling-in Point No. 4*, called *Barba Point*, is a line joining Barba and Boscowitz Points.

13 *Calling-in Point No. 5*, called *Idol Point*, is a line joining Idol Point light *(613)* to Graven Point.

14 *Calling-in Point No. 29*, called *Cape Mark/McInnes Island*, is a line joining Cape Mark light (616) to McInnes Island light (619).

Fishing vessels can be encountered within the Inner Passage. Mariners using the Inner Passage are advised to monitor VHF Channel 78A (156,925 mHz) in addition to the Vessel Traffic Services channel for the VTS Sector they are in. For full details *see* Fishing Vessels in Sailing Directions booklet *PAC 200 — General Information, Pacific Coast* and in the *Annual Edition of Notices to Mariners*.

Approaches to Smith and Fitz Hugh Sounds

Charts 3727, 3598

16 The approaches to Smith and Fitz Hugh Sounds lie between Cape Caution (*51°10'N*, *127°47'W*) and Cape Calvert, about 16 miles NNW. From south the approach is made east of Sea Otter Group through South Passage. From west the approach is made by North Passage, which lies between Sea Otter Group and Calvert Island.

17 West gales send in a heavy swell and dense fog is a frequent occurrence in this vicinity.

18 **Sea Otter Group** (51°15′N, 128°10′W), in the west approach to Smith and Fitz Hugh Sounds, consists of numerous widely scattered dangerous rocks and shoals.

19 **Caution**. — It is hazardous to attempt navigating between the rocks and shoals in the Sea Otter Group due to difficulty in identifying landmarks and obtaining a good position.

The above-water rocks in Sea Otter Group are Virgin Rocks ($51^{\circ}17'N$, $128^{\circ}12'W$), which are light coloured, and Watch Rock ($51^{\circ}23'N$, $128^{\circ}06'W$), which is steep-to. Pearl Rocks ($51^{\circ}22'N$, $128^{\circ}00'W$) consist of drying, above- and below-water rocks.

21 **New Rocks** (51°17′N, 128°01′W) consist of two drying rocks.

Isolated rocks in the Sea Otter Group with less than 6 feet (2 m) over them and generally marked by breakers are **Hannah Rocks** ($51^{\circ}14'N$, $127^{\circ}58'W$), **England Rock** ($51^{\circ}16'N$, $127^{\circ}57'W$) and **Tynemouth Rock** ($51^{\circ}18'N$, $128^{\circ}03'W$). 23 Other named shoals and banks within the Sea Otter Group are Silistria Shoal, Barugh Shoal, Rankin Shoals, Kent Bank and Wigen Shoal.

Charts 3550, 3934

South Passage

South Passage $(51^{\circ}10'N, 127^{\circ}55'W)$ lies between the dangerous Sea Otter Group on the west and the rocks and islands off the entrance to Smith Sound on the east. This is the main route from south leading to Smith and Fitz Hugh Sounds. Vessels using this passage should pass not less than 0.8 mile and not more than 3 miles west of Egg Island.

Caution. — Fishing vessels. — During the fishing season, between May and September, numerous fishing vessels can be encountered between Egg Island and Cape Calvert, the heaviest concentration being from about the last week in June to the first week in August.

²⁶ **Tides**. — Tidal differences in the approach to Smith Sound, referenced on Wadhams, are given for Egg Island (Index No. 8805) in the Tide Tables, Volume 7.

27 **Cape Caution** (51°10′N, 127°47′W) is moderately high and level; the coast in the vicinity is of granite formation and appears white.

28 Cape Caution **light** (578), on the west extremity of the cape, is shown at an elevation of 21.3 m from a square skeleton tower.

29 Wright Bank, 3.5 miles WNW of Cape Caution, has a least depth of 23.4 m.

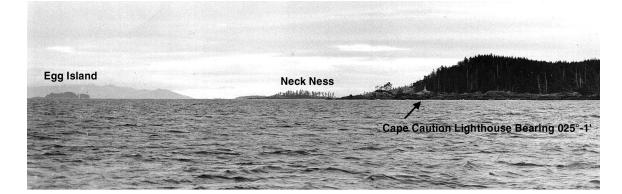
30 Between Cape Caution and **Macnicol Point**, 5 miles north, the coast is rugged and fringed with numerous rocks; some extend a considerable distance offshore.

Blunden Bay and Indian Cove lie between Cape Caution and Neck Ness. Oar Island has foul ground between it and shore. A detached rock, with 2 m over it, lies 0.5 mile north of the island and depths less than 5.7 m lie within 0.2 mile NW. A rock awash is 0.1 mile SW of Oar Island.

Hoop Reef (51°13'N, 127°47'W), 1.3 miles north of Neck Ness, consists of a group of drying, above- and below-water rocks extending NW from an island 5 m high. A rock that dries 1.7 m lies at the NW end of the reef with a rock with 8.1 m over it 0.2 mile farther NW. Hoop Bay, entered between Hoop Reef and Milthorp Point, is encumbered with drying and below-water rocks and suitable only for small craft. Protection Cove, close east of Milthorp Point, dries at LW.

South Iron Rock, 1 mile west of Hoop Reef, dries 0.2 m and is steep-to on its west side; the sea occasionally breaks on it. Two rocks with 4.6 and 2.4 m over them lie 0.15 mile SE and NE, respectively, of South Iron Rock.

34 **North Iron Rock** has two pinnacles that dry 3.4 and 1.1 m. The rocks, when not uncovered, are usually marked by breakers or heavy swells.



Egg Island (51°15'N, 127°50'W) is high, wooded, and makes a conspicuous landmark.

Egg Island **light** (579) is shown at an elevation of 88.4 m from a lattice tower, 25.9 m high. It is fitted with an emergency light.

37 **Egg Rocks**, 0.2 mile south of Egg Island, are bare. **Denny Rock**, 0.3 mile west of Egg Rocks, has a depth of 1 m over it.

38 **Meteorological information** for Egg Island is given in the Appendices.

Chart 3934

39 **Alexandra Passage** $(51^{\circ}15'N, 127^{\circ}48'W)$, the south entrance to Smith Sound, is deep but extreme care is necessary during thick weather as soundings will give little warning of the approach to dangers.

40 **Ann Island**, **Armstrong Rock** and a group of rocks, several of which dry, lie off the NW side of **Table Island**.

Loran Passage, except for a 5.8-m shoal 0.1 mile off the SW point of Table Island, is deep and free of dangers.
Speedwell Shoal, 1 mile WNW of Ann Island, has a least depth of 11 m.

43 **Cluster Reefs** (*51°17'N*, *127°47'W*) extend 1.7 miles NE from Ann Island. **Staunton Shoal** forms the NW side of these reefs; other named reefs are Edward Rock, Wood Rocks and Bertie Rock.

44 **Ruby Rocks**, on the north side of **Radar Passage**, are bare and quite prominent when seen from north. Shoals with 5.5 and 7 m over them lie 0.2 mile SW and NW, respectively, from Ruby Rocks. **Thorndike Shoal**, with a depth of 9.1 m over it, lies 0.8 mile west of Ruby Rocks.

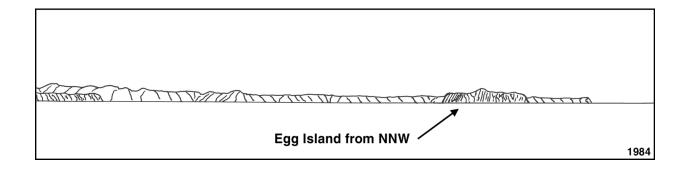
45 **Leading mark**. — The north side of Brown Island bearing 064° leads through Radar Passage midway between Staunton Shoal and Ruby Rocks.

46 **John Rock**, which dries 0.6 m, and a rock with less than 2 m over it lie 0.3 mile north of Ruby Rocks.

False Egg Island, on the north side of Irving Passage, is similar in shape to Egg Island but smaller. James Rock with less than 2 m over it and several drying rocks lie 0.2 mile north, and a rock with less than 2 m over it together with three below-rocks lie 0.3 mile west of False Egg Island. The sea often breaks over these rocks and the foul ground extending NNE from the island.

48 **Leading mark**. — The north end of Brown Island bearing 102° leads through Irving Passage midway between John Rock and the shoals extending west from False Egg Island.

49 **Extended Point** is separated from **Tie Island** by a narrow, shallow, boat passage. **Ada Rock** that dries 2.1 m lies



0.2 mile south of Tie Island. Lucy Bay is between Extended Point and Bay Point, about 1 mile north.

50 The coast between Extended Point and **Kelp Head**, 2 miles north, has numerous islets and rocks lying off it. **Spur Rocks** extend 0.6 mile west of Kelp Head and consist of drying, above- and below-water rocks.

51 **Brown Bank**, 2.5 miles west of Kelp Head, has 27.4 m over it. A **wreck**, in deep water, lies 0.3 mile SW of the bank.

52 **Dugout Rocks** (51°22'N, 127°48'W), about 1 mile offshore between Kelp Head and **Cranstown Point**, consist of a chain of drying, above- and below-water rocks. The largest of these rocks, which is 15 m high and bare, stands out boldly against the coast. **Paddle Rock**, at the north end of the group, is 6 m high.

53 The **boat passage** between Dugout Rocks and the mainland coast has a shoal with a rock awash on it in mid-passage and should be navigated with caution.

54 Dugout Rocks **light** (581) is shown at an elevation of 20.7 m from a skeleton tower.

Chart 3727

North Passage

North Passage $(51^{\circ}24'N, 128^{\circ}00'W)$ lies between the north end of the Sea Otter Group and **Calvert Island**. The fairway is about 3 miles wide and deep, with the exception of **Hedley Patch** $(51^{\circ}25'N, 128^{\circ}04'W)$, which has a least depth of 39 feet (12 m) over it.

56 **Cape Calvert** (51°25'N, 127°54'W) is about 300 feet (91 m) high and densely wooded; it presents a broad face of rocky coast. The **Cape Range** of mountains extend north from Cape Calvert and attain an elevation of 1,975 feet (602 m) about 4.5 miles north of the cape. **Entry Cone**, 2.3 miles north of Cape Calvert, is conspicuous and makes a good landmark by which to identify Fitz Hugh Sound from west or south.

57 The north shore, between the south extremity of Cape Calvert and **Herbert Point**, about 7.5 miles NW, is fronted by above- and below-water rocks, islands and shoals. **Mark Nipple**, 1.3 miles east of Herbert Point, is an isolated hill and makes a useful landmark.

58 **Stafford Point**, 2.5 miles SE of Herbert Point, forms the west entrance of **Chic Chic Bay**. **Jennie Islet** lies between Herbert and Stafford Points with **Harold Rock** and **Boyle Rocks** about 0.3 mile offshore.

59 **Upward Rock** and **Wing Rock** are 0.8 mile south of Stafford Point.

Chart 3934

60 **Charley Islands** (51°27′N, 127°58′W) and **O'Neil Islet** lie close offshore about 2 miles SE of Chic Chic Bay.

61 **Sorrow Islands**, south of Cape Calvert, are covered with gnarled and stunted trees; they make an excellent landmark when approaching from NW.

62 **Henderson Shoal**, 0.5 mile WSW of Sorrow Islands, has a least depth of 4.6 m over it.

63 **Grief Bay**, north of Sorrow Islands, offers fair shelter for small craft; however, during onshore gales the swell entering the bay makes landing both difficult and dangerous.

Smith Sound

64 **Smith Sound** is entered between Macnicol Point (51°15'N, 127°46'W) and Extended Point, 4.5 miles north. It is partially protected by Egg, Table and Ann Islands, and by Cluster Reefs, which extend NE from Ann Island, all previously described. A moderate swell is almost always present in the west part.

Access to the sound can be obtained by Alexandra Passage or Loran Passage, on the south side, and Radar Passage or Irving Passage, on the north side. The passage between False Egg and Tie Islands is available to small vessels approaching from north. These passages are described earlier in this chapter.

66 **Tides**. — Tidal differences in Smith Sound, referenced on Wadhams, are given for Leroy Bay (Index No. 8810) in the Tide Tables, Volume 7.

← G7 **Tidal streams**. — The east-going stream sets into Smith Sound at nearly 2 kn at springs.

68 Anchorage in Smith Sound can be found in Takush Harbour and McBride Bay.

69 The Barrier Group (51°18'N, 127°40'W) together with Halliday Island, Haystack Island, Central Island, Mamie Rock, Sound Island, Napier Island, Wooded Islet and Denison Island, with their off-lying islets and rocks, form a chain dividing Smith Sound into Browning Channel and Blackney Channel.

70 **Surprise Patch**, in the middle of the fairway leading to Blackney Channel, has 2.7 m over it. Kelp is usually present on this shoal during summer and autumn.

A deep channel about 0.3 mile wide passes through the Barrier Group between **Judd Rock** and **Moss Islands**, on the north, and **Jagged Islands**, **Cathcart Island** and **Round Rock**, on the south. The only danger in this passage is a 5.5-m shoal 0.1 mile south of Moss Islands.

Smith Sound — South Shore

Jones Cove, close NE of Macnicol Point $(51^{\circ}15'N, 127^{\circ}46'W)$, affords shelter to small craft. A 2.1-m shoal and a rock awash lie in the approach to the cove. Turner Islands and Chest Island, together with some drying, above- and

below-water rocks, fringe the shore for 1.5 miles NE of Macnicol Point. The passage between Turner Islands and the shore is suitable for small craft.

73 **Watcher Islands**, 0.7 mile NE of Chest Island, consist of four small islands close together; they are sparsely wooded and connected by a rocky reef.

74 Watcher Island **light** (580), on a bare point on the west island, is shown at an elevation of 11.5 m from a skeleton tower.

75 **Surf Islets**, 0.6 mile NE of Watcher Islands, are sparsely wooded and a shoal with a depth of 2.7 m is about 0.2 mile SW from them.

76 The passage between **Search Islands** and Watcher Islands is deep and clear with the exception of a 10.4-m shoal 0.3 mile south of Watcher Islands.

77 **Indian Island** lies close offshore on the south side of Browning Channel. Foul ground, with an islet on it, extends west from the island to **Leroy Rock**.

78 **Leroy Bay**, entered south of Leroy Rock, is protected on its north side by **Leroy Island**. A rock that dries 0.3 m lies on the south side of the approach to the bay.

79 **Tides**. — Tidal differences for Leroy Bay (Index No. 8810), referenced on Wadhams, are given in the Tide Tables, Volume 7.

80 **Bright Islets** and **Curry Islet** lie close-off **Wakas Point**, the NE extremity of Indian Island.

81 **Nab Patch**, with a depth of 6.7 m over it, lies 0.4 mile NW of **Gikumi Point**, the east entrance point of Takush Harbour. **Angle Bay** is close south of the point.

Takush Harbour (51°17'N, 127°37'W) is entered by way of Ship Passage. Gnarled Islets, on the west side and close within the entrance, extend 0.4 mile east of Bloxam Point. Fish Rocks, a group of drying rocks on the east side, extend 0.2 mile west of Crabpot Point.

83 **Petrel Shoal**, which is awash, extends SE from the easternmost Gnarled Islet; a private **daybeacon**, east of this islet, consists of a post with white horizontal slats. Narrow passages lie east of Fish Rocks, west of and between Gnarled Islets, but these are shallow and foul. Local knowledge is advised. A rock, with less than 2 m over it, and a **wreck** lie 0.3 mile SSE of the daybeacon. **Drumrock Island** and **Cypress Point** are close south of this rock and wreck.

Anchor Bight, the west arm of Takush Harbour, is entered between Gnarled Islets and Anchor Islets. The fairway leading into this bight is reduced in width by a shoal extending north from the east Anchor Islet.

Anchorage can be obtained in Anchor Bight in 15 m, mud bottom, midway between **Ship Rock** and **Abrupt Point** on the south shore of Indian Island.

Fly Basin, the south arm of Takush Harbour, has a narrow entrance encumbered by drying and below-water rocks. It is well-sheltered but only suitable for small craft. Fly Point lies centred on the south shore of the basin. Bull Cove, close south of Bull Point, is on the east side of the entrance to the basin.

87 **Broad Bay**, the east arm of Takush Harbour, has a narrow passage that dries 2.1 m at its east end leading into Ahclakerho Channel, described later in this chapter.

Birkby Point lies 1 mile ENE of Gikumi Point. The small bay and narrow inlet, about 1 mile east of Birkby Point, are partially filled by drying flats and only suitable as anchorages for small craft. Both are used for **anchorage** by fish boats.

Smith Sound — North Shore

Brown Island $(51^{\circ}19'N, 127^{\circ}46'W)$ is 0.5 mile south of Extended Point. Foul ground extends 0.3 mile NE of Brown Island with a rock that dries 0.3 m at its NE extremity. A narrow boat channel passes between this drying rock and the unnamed islet, 40 m high, to the NE. **Brodie Island** and **Shield Island** lie to the east.

90 **Eliza Bay** can be entered by small craft through the narrow passage between Shield Island and the mainland; local knowledge is advised.

91 **Millbrook Cove** is encumbered with several islets and drying and below-water rocks; **Millbrook Rocks**, off the entrance to the cove, are marked by starboard hand **buoy** "E6". The cove is used extensively by fish boats. The best **anchorage**, in 7.3 m, is at the head of the cove.

92 **Dsulish Island**, 2 miles ENE of Millbrook Cove, is in the centre of **Dsulish Bay**.

93 **Hook Bay**, on the NW side of **Barb Point**, is too deep and exposed for satisfactory anchorage.

Directions. — A vessel from south entering Smith Sound should do so by way of Alexandra Passage, passing north of North Iron Rock and between Watcher Islands and Surf Islets into Browning Channel. A vessel bound for Boswell Inlet should pass midway between Round Rock and Halliday Island, taking care to avoid the foul ground on the north side of the latter, and then steer a mid-channel course through the east part of Blackney Channel.

⁹⁵ Loran Passage is the best entrance to Smith Sound under conditions of poor visibility as it is wide and deep. A vessel making for it from north should take care to avoid Thorndike and Speedwell Shoals.

Vessels using Radar Passage should keep well clear of the shoal areas between Cluster Reefs and Brown Island.
Irving Passage can be used in clear weather by vessels from north.

98 When using Blackney Channel give a good clearance to Surprise Patch. If navigating Browning Channel take care to give a good clearance to Nab Patch.

Chart 3931

Smith Inlet

99 **Smith Inlet**, an east continuation of Smith Sound, has **Ripon Point** (51°19'N, 127°32'W) as its north entrance point.

100 **Tides**. — Tidal differences for Smith Inlet (Index No. 8814), referenced on Wadhams, are given in the Tide Tables, Volume 7.

101 **McBride Bay**, south of Ripon Point, affords **anchorage** in 18 to 37 m. The fairway leading to the anchorage is between **Oblong Island** and **Middle Patch**. A rock that dries 1.2 m and **Bat Island** lie close-off the south shore of the inlet east of Oblong Island.

Quascilla Bay, on the south side of Smith Inlet, is entered about 6 miles east of Ripon Point. A rock that dries 1.2 m and is steep-to lies close east of **Cape Anne**, the west entrance point to the bay. Islets, drying rocks and shoals lie along the shore in the east approach.

Unit Confined **anchorage** can be obtained by small vessels in 10 to 15 m in **Anchor Cove** on the south side of Quascilla Bay.

Ahclakerho Channel is a narrow, winding chan-104 nel separating Greaves Island from the mainland. From Cape Anne to Ahclakerho Islands the channel is narrow and encumbered with islets and below-water rocks. With local knowledge it is navigable at all stages of tide. The channel then opens into Broad Reach. At the west end, it turns north into a shallow lagoon that has a narrow passage leading to Broad Bay in Takush Harbour. At the east end of the narrow passage, the charted 0.9 m sounding in the narrows immediately W of Broad Reach is approximately in mid channel, and likely marks the end of a reef extending from the south shore. Deeper water has been reported (2004) to the north of this reef. At the west end, just before it opens into Broad Bay, this passage dries 2.1 m and is navigable only at HW.

105 **Burnt Island** is 8 miles ENE of Quascilla Bay. Drying rocks lie close-off the mainland shore SE of Burnt Island.

Burnt Island Harbour, entered 0.5 mile south of Burnt Island, is deep with only poor anchorage close to shore.

107 **Nalos Landing**, 1.7 miles NNE of Burnt Island, has the ruins of an old logging operation.

108 **Walkum Bay**, 2.5 miles NE of Burnt Island, is deep with only poor anchorage close to shore. A rock that dries 0.4 m lies offshore in the SE corner and **Walkum** **Creek** is at the head of the bay. **Booming grounds** line the north shore.

Jap Island is 1 mile north of the entrance to Walkum Bay and on the seaward end of the **Nekite River** delta. Small vessels can find **anchorage** in the cove on the east side of Jap Island.

110 **Booming grounds** are along the west shore at the head of the inlet.

Adelaide Point $(51^{\circ}18'N, 127^{\circ}22'W)$ is at the entrance to Naysash Inlet. Hickey Cove and Naysash Bay are on the east coast about 2 miles within the inlet. Four miles within the entrance the inlet is narrowed by the delta of Naysash Creek. The inlet, 4 miles east of this delta, is shallow but navigable by small craft to its head. The water in the inlet is discoloured and opaque.

112 **Wyclees Lagoon** is entered 0.5 mile east of Quascilla Bay through a narrow channel encumbered with drying rocks. Slack water in this channel occurs when tide at Bella Bella is approximately 3.9 m. HW slacks will typically occur shortly before HW at Bella Bella and 2.0 to 2.5 hours after HW at Bella Bella. If high water at Bella Bella is less than 3.9 m, tide in the channel will continue to ebb. A **tidal rapids** 0.5 mile within the entrance is narrow with a least depth of 0.8 m but is clear of rocks and can be navigated at HW slack by craft drawing up to 0.8 m.

From the rapids the lagoon leads 2 miles south, then joins a basin from which arms extend 3.5 miles east and west. The daily variation in water level rarely exceeds 0.2 m; however, during the course of a month the water level in Wyclees Lagoon fluctuates approximately 0.6 m.

A shoal with a depth of 0.5 m lies off the east shore 0.4 mile south of the rapids. The river draining **Long Lake** flows into the east arm 1 mile east of the basin. About 1.2 miles farther east a shoal with a least depth of 3.4 m lies near mid-channel.

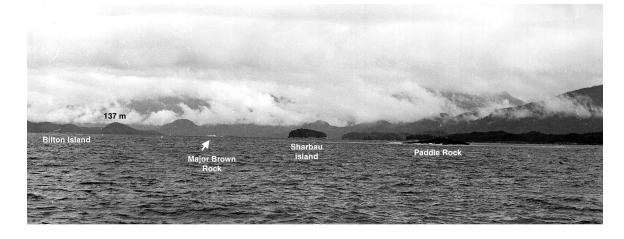
The west arm narrows around an island 0.4 mile west of the central basin then opens before shoaling at its head. A logging company float is at the head of the arm (1998).

Margaret Bay (51°20'N, 127°30'W) lies between Smith and Boswell Inlets. **Oval Island** is 0.2 mile NW of Ripon Point. **Frank Rock**, 0.3 mile WNW of Oval Island, is 1 m high and has rocks with less than 2 m over them extending west from it.

117 **Dudley Islet** $(51^{\circ}20'N, 127^{\circ}32'W)$ and **Ethel Cove** are NW of **Mills Point**, the north entrance point of Margaret Bay. **Camosun Rock**, with 3.7 m over it, lies on the south side of the entrance.

118 **Chambers Island** is in the middle of the bay. The passage on the south side of the island is the deeper. A drying rock lies close west of an islet near the head of the bay.

RIVERS INLET ENTRANCE (1972)



119 The site of an abandoned cannery is at the head of Margaret Bay. Few traces of the buildings remain and there are no facilities.

120 **Directions**. — Approaching Margaret Bay vessels can pass on either side of Frank Rock; in the entrance to the bay pass north of Camosun Rock, favouring the north shore. When in the bay steer to pass in mid-channel, south of Chambers Island.

Boswell Inlet

121 **Boswell Inlet** ($51^{\circ}21'N$, $127^{\circ}31'W$) is entered between Napier Island and Barb Point, on the north shore of Smith Sound. The passage between Denison Island and **Olive Point** ($51^{\circ}20'N$, $127^{\circ}32'W$) leads from Margaret Bay into Boswell Inlet.

122 **Tides**. — Tidal differences for Boswell Inlet (Index No. 8812), referenced on Wadhams, are given in the Tide Tables, Volume 7.

Finis Nook, on the south shore of the inlet, about 1.3 miles ENE of Olive Point is entered by a narrow passage with a least depth of 3.7 m. The inner basin affords protected **anchorage** suitable for small craft only. A private float house and floats are in Finis Nook (1982).

124 **Hazel Island** and a shoal are on the north side of Boswell Inlet abreast Finis Nook. **Twain Islands** are 1 mile ENE of Hazel Island.

125 **Boswell**, midway between Hazel Island and Twain Islands, is the site of an abandoned cannery.

Security Bay, 0.8 mile ENE of Twain Islands, is clear of dangers but too deep and confined for satisfactory anchorage. Small vessels may be able to anchor close to shore. A large logging camp with an A-frame, oil tanks, floats and booming grounds are in the bay (1998). 127 An islet joined to the west shore by a drying ledge narrows the inlet to 152 m wide about 1.3 miles east of Security Bay. Tanks, associated with logging activity, are in the small coves west and SE of the narrows (1984).

128 Secure **anchorage** for small craft is obtainable in 6.2 m, mud and shell, in a small cove 0.4 mile NW of the narrows. The entrance is narrow with a least depth of 5.7 m in mid-channel.

Rivers Inlet

Charts 3932, 3934

129 **Rivers Inlet**, on the east side of the entrance to Fitz Hugh Sound, is entered between Cranstown Point ($51^{\circ}23'N$, $127^{\circ}47'W$) and Addenbroke Point, 8.7 miles north. The two entrance channels to Rivers Inlet are separated by a group of islands. The main entrance channel lies south of this group; Darby Channel, which is narrow, lies north of it.

130 **Caution.** — Fishing vessels. — When approaching Rivers Inlet during the fishing season attention is drawn to the caution regarding fishing vessels given in Sailing Directions booklet *PAC 200* — *General Information, Pacific Coast.*

131 **Fishing establishments.**—All the canneries charted in Rivers Inlet have ceased to operate and some have fallen into ruins. Rivers Inlet is now an active sport fishing resort area during summer months.

132 **Tides**. — Tidal predictions for Wadhams (Index No. 8840) and tidal differences for Draney Inlet (Index No. 8830), reference on Wadhams, are given in the Tide Tables, Volume 7.

Chart 3934

Off-lying Islands

133 The three largest of the group of islands in the entrance to Rivers Inlet $(51^{\circ}29'N, 127^{\circ}45'W)$ are **Penrose Island**, **Ripon Island** and **Walbran Island**. **Quoin Hill**, near the centre of Penrose Island, rises to 253 m.

134 **Penrose Island Marine Park** encompasses Schooner Retreat and all but the north side of Penrose Island; it is undeveloped.

135 **Schooner Retreat** (*51°28'N*, *127°45'W*) is the group name given to several anchorages among the islands off the SW side of Penrose Island. Named anchorages of this group are Frigate Bay, Secure Anchorage and Exposed Anchorage; they afford secure anchorage for small vessels. During SE and SW gales the gusts are furious in these anchorages, but with good ground tackle and care there is no danger in Schooner Retreat.

136 Frigate Bay, the south anchorage, has Joachim Island on its south side, Penrose Island on its east and north sides and is protected on the west side by Ironside Island. Fire Islets, Hawser Rock, Crooked Island and Sulky Point are in the eastern part of Frigate Bay. Frigate Islet is on the NW side of the bay. The best anchorage in Frigate Bay is in the SW part, off a clean sandy beach on Ironside Island.

137 Safe Entrance, between Ironside and Joachim Islands, is the principal entrance to Frigate Bay. It is entered between Karslake Point, which consists of a number of islets on a drying reef extending west from Joachim Island, and Comber Rock, off the SW point of Ironside Island. Bleak Bay lies between Surf Point and Stormy Point on the south side of Ironside Island. The narrowest part of this entrance is between Grey Islets and Sea Bluff. Kelp Bay is on the west side of Joachim Island.

138 Secure Anchorage is the central Ļ anchorage of Schooner Retreat; Maze Islets and Ironside Island form its south side, Bird Island lies on its west side and Highway Islands form its north side. It can be entered from Frigate Bay by keeping south and west of Frigate Islet then close to the Penrose Island shore with Maze Islets to the SW. Edmund Passage lies on the north side of Ironside Island and south of Bird Island; local knowledge is advised before entering Secure Anchorage by this passage. Stunted Islets, in the approach to Edmund Passage, lie off Curlew Point, the NW point of Ironside Island. Folly Islet is about 0.1 mile NNE of Stunted Islets; drying rocks lie between these islets therefore pass north of Folly Islet if approaching Edmund Passage.

139 **Exposed Anchorage** is the north anchorage of Schooner Retreat; **Heathcote Island**, north of Folly Islet, and Highway Islands to the east form its south side and it is protected from the west by **Fury Island** and **Cleve Island**. Along the east side of Exposed Anchorage **Bar Islands** partially obstruct the entrance to **Rocky Bay**. **Dyer Islets**, **Dyer Rock** and several unnamed rocks encumber the centre arm of Exposed Anchorage. The bay to the NE of Fury Island, locally known as **Fury Cove**, offers good **anchorage** and shelter for small craft. A cabin is on the NW shore of Fury Island.

140 The entrance channel between Heathcote Island and Highway Islands is obstructed by **Walrus Rock** and several unnamed rocks. The main entrance to Exposed Anchorage is between Heathcote Island and **Fury Point**, the SW extremity of Cleve Island. **Breaker Passage**, between Cleve and Fury Islands, has a least depth of about 4.6 m. **Rouse Point** is the SW extremity of a group of islets connected by a drying ledge to the SW point of Fury Island.

141 **Klaquaek Channel** (51°28'N, 127°42'W) is entered from south between **Dimsey Point** and **Bilton Island**. **Barry Rock**, 1.3 miles ESE of Dimsey Point, has less than 2 m over it and lies in the south approach. The channel between Bilton Island and Ripon Island, to the NE, is narrow and tortuous. The north end of Klaquaek Channel leads into Darby Channel through two narrow boat passages.

Big Frypan Bay, an almost landlocked bay, penetrates the east shore of Penrose Island and lies close east of Quoin Hill. **Frypan Bay**, a similar bay about 0.7 mile north, affords **anchorage** for small craft. The NE corner is obstructed by boomsticks (1988).

143 **Sunshine Bay** penetrates Ripon Island south of Magee Channel and provides excellent **anchorage** for small craft. Several private float houses are in the bay (1997).

144 **Magee Channel** separates Ripon Island from Walbran Island; it is only suitable for small craft because of the rocks and shoals in its eastern part.

145 **Geetla Inlet**, entered between the NE side of Ripon Island and the south end of Walbran Island, leads north into Walbran Island; about 0.5 mile north of its intersection with Magee Channel the inlet is obstructed by a drying bank. Rocks and shoals within Geetla Inlet make it suitable only for small craft.

Rivers Inlet — South Entrance

146 Anchorage of a temporary nature can be obtained in **Open Bight** $(51^{\circ}22'N, 127^{\circ}46'W)$, on the east side of Cranstown Point, previously described. As it is exposed to north and there is usually a swell, it is only suitable for anchorage during moderate weather. The best position in which to anchor is about 0.3 mile ESE of Cranstown Point in depths of 7 to 10 m.

1-9

147 **Sharbau Island** $(51^{\circ}25'N, 127^{\circ}42'W)$ is the west island of a group of islands lying on the south side of River Inlet. **Major Brown Rock**, 0.6 mile NE, is composed of white limestone with a little green vegetation. An isolated **rock**, with 4.6 m over it, lies 0.8 mile WSW of Major Brown Rock.

148 Major Brown Rock **light** (583) is shown at an elevation of 13.3 m from a skeleton tower.

149 **Home Bay**, south of Sharbau Island, has a large floating fish camp at its head. The rocks in the entrance are marked by a private **buoy**.

Goose Bay, on the south side of Rivers Inlet, is best approached east of **Bull Island**. A deep passage on the SW side of Bull Island is also available, but a rock with less than 2 m over it is on its south side. **Cow Island**, **Calf Islet**, and some drying rocks between them, encumber the entrance. Deep passages lie on the east and west sides of these islands, both of which narrow to about 0.1 mile on either side of Cow Island. If entering east of Cow Island, the east shore should be favoured to avoid the 8.7-m shoal about 0.1 mile south of the island. A 9.2-m shoal is reported (2000) to be approximately 0.3 mile SW of Duncanby Landing.

Duncanby Landing is on the east side of the entrance of Goose Bay. Commercial fishing vessels congregate in Duncanby Landing but pleasure craft are welcome. Berthing, gasoline, diesel fuel, propane, fresh water, accommodation and a well-stocked store are available.

152 **Marina** facilities are listed in the Appendices.

153 Snug **anchorage** for small craft is on the west side of the 44-m high island 0.8 mile west of Duncanby Landing. A drying rock is on the west side of this anchorage and a fishing camp outpost is on the east shore. Larger vessels can anchor in the cove south of the 105-m high island avoiding the 2.7-m shoal.

154 **Goose Bay** landing, on the east shore about 0.8 mile from the head of the bay, has the buildings and wharf of an abandoned cannery.

155 **Wilson Bay**, 4 miles north of Goose Bay, penetrates the south shore of Ripon Island and is too deep and exposed to have value as an anchorage. **Canniff Point** and **Maud Rock**, with drying and below-water rocks between them, lie at the east entrance to Wilson Bay.

Chart 3931

Draney Inlet

156 **Draney Narrows** $(51^{\circ}28'N, 127^{\circ}34'W)$, the entrance to **Draney Inlet**, is 4 miles NE of Goose Bay. A rock, with 4.6 m over it, lies in the west entrance with deeper water around it and through the narrows.

Tidal streams through Draney Narrows have an estimated rate of 8 to 10 kn. With strong ebb streams dangerous eddies and turbulence develop around the rock mentioned above. Secondary current station Draney Narrows (Index No. 8508), referenced on Prince Rupert, is given in the Tide Tables, Volume 7.

158 **Tides**. — Tidal differences for Draney Inlet (Index No. 8830), referenced on Wadhams, are given in the Tide Tables, Volume 7.

159 The arm NE of Draney Narrows is deep with no anchorages. A float camp, floats and log dump are in the cove near the head of the arm (1998). **Fishhook Bay** affords **anchorage** for small vessels in the cove on the south side of its entrance and anchorage with excellent shelter inside the bay. A private float camp, protected by a **breakwater**, is in the SE corner of Fishhook Bay (1997).

160 The main body of Draney Inlet is clear of mid-channel dangers for 10 miles but some rocks and shoals lie close to shore.

161 **Robert Arm**, entered 4 miles SE of Draney Narrows, is clear of mid-channel obstructions except for a rock, with 3.9 m over it, about 0.5 mile within the entrance. It is reported that Robert Arm affords good **anchorage**.

162 **Allard Bay**, 9 miles within the inlet, is narrow, shallow and dries 0.4 mile within the entrance.

163 Draney Inlet turns sharply south at Allard Bay with a mid-channel islet, 1 m high, and a rock that dries 3 m just before the inlet narrows and turns again to the east. Lockhart Gordon Creek and Draney Creek drain across a large estuary at the head of the inlet. Anchorage is obtainable off the mud flats.

Chart 3934

Darby Channel

164 **Darby Channel**, locally known as **Schooner Pass**, is entered between the north side of Penrose Island and Addenbroke Point $(51^{\circ}31'N, 127^{\circ}47'W)$.

165 **Rouse Reef** and a rock with less than 2 m over it lie 0.5 mile SW and 0.2 mile west of the west extremity of Penrose Island.

166 Addenbroke Point is fringed by islets and rocks extending about 0.35 mile west and SW from it. Bald Islet, close west of the point, is the largest islet and Swan Rock, with less than 2 m over it, is the outermost danger.

Bosquet Point light (584), on the north extremity of Penrose Island, is shown at an elevation of 7.4 m from a skeleton tower. The light is obscured from 073° to 087° by **Lone Island**.

168 **Pierce Bay**, on the north side of Darby Channel, is encumbered with islands and drying rocks. The bay is exposed and offers little shelter.

Finn Bay, on the north side of Penrose Island, provides shelter for small craft. Float houses and **floats** are moored in the bay and a **marina** is on

DARBY CHANNEL AT PENDLETON ISLAND (1988)



the north shore, a short distance within the entrance. A rock, with less than 2 m over it, lies off the north side of the bay, about 0.2 mile inside the entrance.

Welch Island, on the north side of Darby Channel, is separated from the coast to the north by Weeolk Passage. A 7.3-m shoal lies 0.2 mile SW of the east entrance point of Morgan Bay. Shoals, with less than 2 m over them, lie in the approach and the entrance to the small cove 0.6 mile SE. Fleming Point is at the SE end of Weeolk Passage. A rock, with 8.7 m over it, lies in mid-channel off the point.

171 **Stevens Rocks** lie ESE of Fleming Point. South of Stevens Rocks **Sleepy Bay** penetrates the north shore of Walbran Island. A private floating sports fishing lodge is moored here (1997).

172 **Pendleton Island** obstructs the south end of Darby Channel; the main channel lies to the north of it. A drying rock, marked by a **daybeacon** with a starboard hand daymark, lies in mid-channel off the west end of Pendleton Island. Between Pendleton Island and **McLeod Point**, about 4 miles NE, the channel is deep and clear of dangers in the fairway.

173 At the head of a small bay entered 1.3 miles SSW of McLeod Point, are the ruins of a former cannery. Take care to avoid a rock with less than 2 m over it lying in mid-channel about 0.1 mile from the head.

Dawsons Landing (51°35'N, 127°35'W) is a supply centre for sports and commercial fishermen. It has a **public wharf** 12 m long with a least depth of 4.6 m alongside, also a Fisheries & Oceans **float** 18 m long with depths of 1.5 to 6.7 m alongside. A general store, with 183 m of **floats** for visiting craft, has a good stock of food, hardware, fishing gear, dry goods, post office (VON 1M0) and liquor store. Gasoline, diesel fuel, stove oil, naphtha, lubrication products, fresh water and ice are available. A coastal supply vessel calls regularly and air service is available. Float houses line the shore north of the floats; accommodation, showers and laundry facilities are available.

Marina facilities are listed in the Appendices.

Chart 3932

Rivers Inlet — Central and North Parts

Taylor Bay $(51^{\circ}30'N, 127^{\circ}36'W)$ and **Hemasila Inlet** are north of **Geetla Point** on the east side of Walbran Island. A shoal with 2.5 m over it is in the middle of the entrance to Hemasila Inlet. **Anchorage**, with limited swing space, is available for small craft.

Johnston Bay, on the east side of the inlet and opposite the entrance to Hemasila Inlet, has a reef awash in the middle of its entrance and a rock awash off the east shore. A private **buoy** is moored off **Johnston Creek**. It is reported (1998) that a floating fish camp is moored here during summer months. Sheltered **anchorage** for small craft is obtainable at the head of the bay.

178 **Wadhams**, 0.5 mile NNE of Johnston Bay, is the site of an abandoned cannery in ruins.

179 **Florence Island** is about 1 mile NNW of Wadhams; **Ethel Island** is 1 mile farther north. Drying and below-water rocks extend about 0.2 mile north and 0.4 mile south from Ethel Island. **The Haystack** is the island 1.1 miles NW of Florence Island, close-off the Walbran Island shore.

180 Ida Island lies close-off the bay in which are the ruins of the former cannery Good Hope. Good Hope is now a private resort and during the fishing season a floating log breakwater is placed south of the wharf and floats. The Sandell River flows into the east side of the bay. A narrow passage, on the NE side of Ida Island, has a least depth of 7.8 m and is usable by small craft. **Charcoal Bay** is 1.2 miles north of Good Hope.

181 **Bickle Passage** (51°35'N, 127°34'W) leads between the north end of Walbran Island and some islets lying off the south end of **Edna Mathews Island**. A rock, with less than 2 m over it, lies about 0.3 mile NE of McLeod Point. A prominent Imperial Oil sign is on the NE point of the island, 0.2 mile east of McLeod Point (1982).

182 The passage on the west side of Edna Mathews Island is deep but encumbered near its south end by a shoal with 4.1 m over it and near its north end by some islets. A small bay on the west side of this passage has a few piles in it.

183 An overhead cable, with zero clearance at HW, crosses the small cove 0.4 mile south of **Rutherford Creek** $(50^{\circ}38'N, 127^{\circ}33'W)$. Ruins of **Brunswick**, an abandoned cannery, are at the mouth of the creek.

Sandell Bay has numerous piles at its head. It is reported that **anchorage**, open to the south, is obtainable by small craft near the head of the bay.

185 Some ruins are on the east shore of Wannock Cove,1.5 miles east of Sandell Bay.

186 Rivers Inlet turns sharply east at **Stone Point**. **McPhee Bay**, on the south shore, lies between **Scandinavia Bay** and **Rutherford Point**. **McAllister Point** is directly across the inlet from McPhee Bay.

187 **Kilbella Bay** is on the north side of Rivers Inlet about 3 miles from the head. The mud bank in the bay is steep-to and forms the delta to both **Kilbella River** and **Chuckwalla River**. A logging camp and **booming ground** are in Kilbella Bay.

188 **Shotbolt Bay** has a wharf, seasonal float and **mooring buoy** belonging to a private sport fishing camp.

Another private fish camp is 1.5 miles ENE at the mouth of **McTavish Creek**.

189 **Wannock River** and **Nicknaqueet River** flow into the head of Rivers Inlet. Steep-to sand banks have formed on both sides of the rivers and are **booming grounds**. An Indian village, with wharf and float, is on the north side of the Wannock River.

190 A logging operation is at **Rivers Inlet** landing at the head of the inlet.

191 A **public wharf** has **floats** 25.9 m long on its west side and a 4-tonne crane. The outer float is reserved for seaplanes.

192 **Marine farm** facilities are on the north shore (1991) about 1 mile west of the public wharf.

Moses and Hardy Inlets

193 **Moses Inlet** entered to the west of McAllister Point leads about 14 miles north. **Hardy Inlet**, 2 miles within the entrance, is entered between **Ralph Point** and **Owikeno Point**. Hardy Inlet is very deep and the shores are steep-to to the head. A floating logging camp is on the north shore (1988) 1.2 miles west of Owikeno Point. **Matilda Creek**, **MacNair Creek** and **Doris Creek** are on the north shore 2.5 to 5 miles within the entrance.

194 A **booming ground** is 2.8 miles north of Owikeno Point on the east side of Moses Inlet.

195 Inrig Bay, 5 miles north of Owikeno Point, is the site of a logging camp and **booming ground** (1991). Inrig Creek and Milton River enter the bay from the north.

196 **Nelson Narrows**, east of **Hoy Point**, has an islet 61 m off the south shore with a shoal extending west of it. A drying rock on a shoal ridge, marked by a **daybeacon** with a

NELSON NARROWS LOOKING EAST (1988)



port hand daymark, is 0.1 mile WSW of the prominent point on the north shore.

197 A booming ground is 0.5 mile WSW of Penelope Point. Eberts Cove has a logging camp with a float and ramp used by freight boats. A submarine pipeline (sewer outfall) is laid on the west side of the float. The Clyak River flows over a steep-to mud flat at the head of the inlet. Private mooring buoys and a booming ground are on the east shore near the head of the inlet.

Fitz Hugh Sound

Charts 3934, 3935, 3936, 3727

198 The entrance to **Fitz Hugh Sound** lies between Cranstown Point (*51°22'N*, *127°47'W*) and Cape Calvert, about 5.5 miles NW. These entrance points, together with Entry Cone and Cape Range, all previously described, are prominent from the approach. The shores of Calvert Island are generally bold and rocky, backed by steep, wooded slopes. **Safety Mountain** and **Mount Buxton** are the highest mountains on Calvert Island. The south part of the east shore of the sound is rugged and indented.

199 **Tides**. — Tidal differences in Fitz Hugh Sound, referenced on Wadhams, are given for Addenbroke Island (Index No. 8860) and Namu (Index No. 8870) in the Tide Tables, Volume 7.

200 **Tidal streams** in Fitz Hugh Sound ebb south at up to 2 kn; the flood sets north but is considerably weaker and during neap tides is often irregular. The surface streams are influenced a great deal by the prevailing wind, particularly from south, when the ebb stream can be expected to be retarded and the flood stream accelerated. During periods when land drainage runoff is at its maximum, the flood stream almost entirely disappears.

Anchorages for large vessels can be found near the NE end of the sound and in Namu Harbour. Small vessels can find anchorage on the west side of the sound in Safety Cove and Goldstream Harbour and on the east side of the sound in Fifer Bay and Namu Harbour.

202 The islands and passages on the west side of Fitz Hugh Sound are within the boundaries of the **Hakai Recreation Area**.

Chart 3934

Clark Point to Addenbroke Island

203 **Clark Point** (*51°26'N*, *127°53'W*) is the SE extremity of Cape Calvert.

204 Clark Point **light** (582) is shown at an elevation of 11 m from a white tower.

Safety Cove $(51^{\circ}32'N, 127^{\circ}55'W)$ is entered between South Point and Safety Point. Two islets on a drying ledge, close-off North Point, are useful in identifying the entrance, especially when coming from north. A conical peak is at the head of the cove. A sand and mud drying flat extends 0.25 mile from the head of the cove, outside of which it is steep-to.

Anchorage is good in a depth of 27 m, mud, in the middle of Safety Cove. If entering at night, keep in the middle of the cove and anchor as soon as a depth of 30 m is obtained. During SE or NE gales, strong gusts blow across the valley at the head of the bay. Because of the limited swinging space, this anchorage is suitable only for moderate sized vessels.

207 Other named features on the east side of Calvert Island are **Harold Point**, **Canoe Cove** and **Call Point**.

A large waterfall, conspicuous from the north, cascades into Fitz Hugh Sound 1.5 miles north of **Truman Point** ($51^{\circ}34'N$, $127^{\circ}54'W$).

Addenbroke Point $(51^{\circ}31'N, 127^{\circ}47'W)$ and the islets and rocks close SW of it are described under Darby Channel. The bay between Bald Islet and **Arthur Point**, about 0.8 mile NW, is too exposed for satisfactory anchorage. Two shoal areas lie in the outer part of the bay, and rocks, with less than 2 m over them, lie about 0.1 mile south and west of Arthur Point. **Clip Rock**, 2 m high on a shoal with below-water rocks, lies 0.5 mile north of Arthur Point.

Philip Inlet is entered 1.5 miles north of Arthur Point. Just within the entrance is a narrow part encumbered with rock ledges. An islet and below-water rocks obstruct the inlet 0.5 mile from the entrance, but small vessels could find shelter in 16 to 26 m east of the island in mid-channel.

211 Addenbroke Island light (585), on the west extremity of Addenbroke Island (51°36'N, 127°51'W), is shown at an elevation of 29 m from a white tower. It operates during hours of darkness only. Conspicuous red and white buildings surround the light.

212 A **wind frequency table** for Addenbroke Island is given in the Appendices.

213 An A-frame on pilings is in a small bay north of the light.

Fish Egg Inlet and Approaches

Chart 3921

Convoy Passage (51°35'N, 127°48'W) leads north into Fish Egg Inlet east of **Blair Island**. **Nucleus Reef**, with less than 2 m over it, and drying rocks extending 0.2 mile north of it lies 0.7 mile SE of **Hanbury Point**. **Barge Rock**, with 1.5 m over it, lies in mid-channel east of Handbury Point. A rock that dries 3.6 m lies close-off the east shore 0.8 mile NE.



215 **Henderson Bay**, on the east side of the passage, has a rock with 6.7 m over it in the entrance and above-water and drying rocks at the head.

Fifer Bay, on the west side of Blair Island, has an islet and below-water and drying rocks extending north from its south entrance point. A narrow inlet, in the NE corner of the bay, has its entrance obstructed by above- and below-water rocks.

Anchorage for small vessels can be obtained in the south part of Fifer Bay in 20 m; the bottom is uneven.

218 **Sweeper Island** and an unnamed island close east of it lie between Addenbroke and Blair Islands. A narrow passage, suitable only for small craft, leads between the west side of Blair Island and the unnamed island.

Addenbroke and Blair Islands, north of Sweeper Island; the bottom is uneven.

220 **Patrol Passage** $(51^{\circ}37'N, 127^{\circ}51'W)$, south of **Corvette Islands**, is clear of mid-channel dangers. Several shoals lie within 0.2 mile off the north and west sides of the Corvette Islands.

221 **Fairmile Passage**, north of Corvette Islands, has an islet with a drying ledge and below-water rock extending south if it.

222 **Souvenir Passage**, north of **Salvage Island**, has a navigable width of about 50 m with a depth of 8.8 m at its east end.

223 **Illahie Inlet** (51°38'N, 127°50'W) is best entered between the islands in its SE corner. A rock with 1.7 m over it is in mid-channel, 0.4 mile within the entrance. **Green Island**, so named because of a bramble patch at the SW end, lies close-off the west shore about 0.8 mile within the entrance. Good **anchorage** for small vessels can be obtained in **Green Island Anchorage** in 6 to 10 m. Illahie Inlet has several drying and below-water rocks in mid-channel, **Storm Rock**, 0.3 mile NNE of Green Island, the only named one. It is reported that the head of the inlet affords well-protected **anchorage**, mud bottom.

Fish Egg Inlet is deep except for a shoal area about 0.8 mile east of Salvage Island. McClusky Bay, the NW bay in the inlet, has numerous islets, drying rocks and shoals on its east side. A rock with 9.5 m over it lies in the middle of the bay.

225 The bay east of McClusky Bay can be entered on either side of a large island in the approach. Joe's **Bay**, the basin at the head of this bay, affords good although tight **anchorage** for small vessels in 19 m. **The Rapids** is a waterfall at LW but can be navigated at HW slack, by shallow draught boats, through a narrow slot between the rocks. Local knowledge is advised. The Rapids leads to **Elizabeth Lagoon** through a passage encumbered with rocks. Elizabeth Lagoon is deep in its central basin but numerous shoals and drying and below-water rocks lie along the shores. **Sulphur Arm**, the east end of the lagoon, is entered through a narrow passage with a least depth of 1.3 m. Numerous shoals and rocks lie in the centre of the arm. The water in Elizabeth Lagoon and Sulphur Arm is discoloured and opaque making it impossible to see the dangers.

227 **Waterfall Inlet**, extending north from the islets that separate the central and east parts of Fish Egg Inlet, has three shallow, winding, entrance channels. The inlet is clear of mid-channel dangers but reefs and rocks extend from the islands. A rock that dries 2.6 m lies close-off the east shore 0.1 mile from the head of the inlet. Protected **anchorage** is reported to be obtainable at the head of the inlet.

A bay on the south side of Fish Egg Inlet has a group of islands and shoals in the centre with **Gildersleeve Bay** west of the group. **Barracuda Rock**, with 1.6 m over it, lies in the middle of the approach to **Mantrap Inlet**. Good **anchorage** is reported inside the inlet. Local knowledge is advised to navigate the narrow entrance channel.

229 The eastern part of Fish Egg Inlet is entered either north of the large island 91 m high or by **The Narrows** south of this island. **Fish Trap Bay** and **Oyster Bay** are in a narrow inlet leading north. Drying and below-water rocks extend south and north from the island in the south part of Oyster Bay. Oyster Bay and the eastern extremity of the inlet are reported to provide well-sheltered **anchorage**.

Chart 3935

Wedgborough Point to Walker Point

230 Wedgborough Point $(51^{\circ}39'N, 127^{\circ}57'W)$ is the SE entrance point to Kwakshua Channel described in Chapter 4. Experiment Point and Guise Point, 0.6 and 1.5 miles north of Wedgborough Point, are at the SE extremity of Hecate Island.

Goldstream Harbour, at the north extremity of Hecate Island, is entered between **Umme Point** and the NE point of Hecate Island. Foul ground marked by kelp extends 0.1 mile NE of Umme Point. **Hat Island**, 39 m high, lies 0.2 mile within the entrance close to the Hecate Island shore. **Evening Rock**, on the north side of the fairway NW of Hat Island, dries 1.2 m. The fairway between Hat Island and Evening Rock is 91 m wide and intricate, with depths of 7.3 to 11 m; favour the Hat Island side unless Evening Rock is clearly visible. The north entrance is encumbered with rocks. 232 **Anchorage** for small vessels can be obtained

232 Anchorage for small vessels can be obtained in Goldstream Harbour, sand and mud bottom. 233 Kelpie Point is the SE entrance point to Hakai

233 Kelpie Point is the SE entrance point to Hakai Passage, described in Chapter 4. A fishing boundary marker is on Kelpie Point.

1-13



234 Kelpie Point **light** (587) is shown at an elevation of 6.3 m from a skeleton tower.

Bayly Point, 1.4 miles NNW of Kelpie Point, **Middleton Point** and **Daedalus Point** are the SE, east and NE points of Nalau Island. Nalau Passage is described in Chapter 4.

236 **Kwakume Point** (*51°42'N*, *127°53'W*) is on the east side of Fitz Hugh Sound.



237 Kwakume Point **light** *(586)* is shown at an elevation of 7 m from a skeleton tower.

Kwakume Inlet is entered about midway between Kwakume Point and **Whidbey Point**. A rock awash lies about 0.1 mile west of the entrance and islets and rocks on the north and south sides of the entrance reduce the fairway to a width of 76 m. A rock that dries 1.8 m is in the middle of the inlet. This inlet should be used only by small craft. A **fishing boundary marker** is on Whidbey Point.

Koeye River, nearly 5 miles north of Kwakume Point, is entered on the north side of a rock awash lying about 0.1 mile north of **Koeye Point**. The shallow bay east of Koeye Point is used by local fishermen. A narrow boat channel extends about 1 mile upstream to the site of a former lime plant, now in ruins. A rock that dries 3.7 m lies in the entrance to the boat channel. A cabin is on Koeye Point and a **fishing boundary marker** is on **Uganda Point**, about 2.5 miles north.

Chart 3936

Sea Otter Inlet $(51^{\circ}50'N, 128^{\circ}02'W)$, in Hunter Island, offers confined shelter for small craft in its south arm. Crab Cove is the north arm near the entrance of the inlet. Hanna Islet lies on the north side of the entrance.

241 **Kiltik Cove**, 3.5 miles north of Hanna Islet, has a drying flat extending 0.5 mile from its head.

242 **Warrior Cove** (51°50'N, 127°53'W), on the east side of the sound, is separated from **Kiwash Cove**, by the peninsula with **Ontario Point** at its SW extremity; both coves are deep. An islet with drying rocks close north and south of it partially obstructs the entrance to Warrior Cove, and a rock, with less than 2 m over it, lies in the middle of the entrance to Kiwash Cove. The fairway into each of the above coves lies close to their SE sides, which are steep-to.

Namu Harbour and Approaches

243 **Kiwash Island** $(51^{\circ}52'N, 127^{\circ}54'W)$ lies in the middle of the entrance to Namu Harbour.

• 244 Kiwash Island **light** (590) is shown at an elevation of 5 m from a skeleton tower.

245 **Namu Harbour** can be entered by either Morehouse Passage or Cloverleaf Passage.

Landmarks. — The most conspicuous landmarks when approaching the harbour are the buildings of Namu, on the south side of Whirlwind Bay. **Namu Range**, a short distance inland from the harbour, rises to more than 914 m.

Tides. — Tidal differences for Namu (Index No. 8870), referenced on Wadhams, are given in the Tide Tables, Volume 7.

248 **Morehouse Passage** leads between Kiwash Island and **Lapwing Island**. A rock that dries 0.3 m and an 8.2-m shoal lie 0.1 mile SW and SSE, respectively, from Kiwash Island light.

The passage between Lapwing Island and the mainland to the SE has a least depth of 6.4 m in mid-channel. A rock that dries 1.2 m lies close to shore near the NE end of this passage.

250 **Cloverleaf Passage**, between Kiwash Island and **Cliff Island**, has an 11-m shoal in the centre of the fairway. Drying and below-water rocks and shoal water lie up to 0.1 mile off Cliff Island and drying ledges extend a short distance from the NE side of Kiwash Island.

251 Several shoals lie between Cliff Island and the north shore of Namu Harbour. **Que Que Rocks** lie 0.4 mile NE of Cliff Island. The north shore of the harbour is fringed with drying and below-water rocks.



NAMU (1988)

1-15

The preferred approach to **Harlequin Basin** is on the east side of Que Que Rocks. A rock with less than 2 m over it lies about 91 m off the east shore of the entrance to the basin.

253 Whirlwind Bay, on the east side of Namu Harbour, is entered between Sunday Island and Clam Island, which is connected to the south shore of Whirlwind Bay by a drying bank on which there are several drying rocks. Verdant Island is 0.2 mile east of Sunday Island. Loo Rock, 0.1 mile south of Verdant Island, dries 0.9 m.

Rock Inlet, entered east of Verdant Island, is fringed with islets and drying and below-water rocks and only suitable for small craft. The narrowest part of the inlet, with islets on both sides, has a least depth of 3.7 m.

255 Anchorage for ships can be obtained in about 40 m in the middle of Namu Harbour. Smaller vessels can anchor in Whirlwind Bay, midway between Sunday and Clam Islands, in about 20 m. During autumn and winter months anchorage in Whirlwind Bay is not recommended, as furious gusts blow down the mountains in this vicinity.

Namu, on the south side of Whirlwind Bay, was once a large cannery with a summer population peaking at 2000. Many of the facilities such as the generator room and bowling alley are falling to ruin. There is space for about 10 small boats to dock overnight. Gasoline, showers, laundry, garbage disposal and recycling, and power during evening hours are available. For latest information call (250) 949-4090. The caretakers also monitor VHF Channel 10.

257 Wharves. — On the south side of Whirlwind Bay, east of Clam Island, there are berthing facilities for moderate sized vessels. There are **floats** for the use of small craft; additional floats are placed in position as required during the fishing season. Fresh water is available.

Burke Channel

Charts 3936, 3974

Burke Channel (51°55'N, 127°53'W) entered between **Walker Point**, the south extremity of **Humchitt Island**, and Edmund Point 1.7 miles SE leads 38 miles along the SE side of **King Island**. High precipitous snow-capped mountains, with sides covered with stunted trees, lie on each side of the channel. The channel is deep throughout its entire length and the shores are generally steep-to; the only off-lying dangers are Odegaard Rocks.

259 **Winds**. — On warm summer days the sea breeze blowing across Fitz Hugh Sound is led up the inlet, as through a funnel, following the directions of the different bends. The breeze generally sets in at about 10:00 and blows fresh until sunset, when it usually becomes calm. During winter months, the so-called *Squamish winds* occur periodically; they funnel down the inlet from the interior plateau and attain gale force.

260 Anchorages in Burke Channel can be found in Windsor Cove, Restoration Bay, Kwatna Bay, at the head of Kwatna Inlet, and in South Bentinck Arm in Larso Bay or near its head south of Taleomey Narrows. Small craft can also find anchorage in Fougner Bay, Croyden Bay or in North Bentinck Arm in Green Bay, Whiskey Bay or Bella Coola.

261 **Tides**. — Tidal predictions for Bella Coola (Index No. 8937), at the head of North Bentinck Arm, are given in the Tide Tables, Volume 7.

Constitution 262 **Tidal streams** from Edmund Point to Restoration Bay are strong and heavy tide-rips are encountered, particularly off Hvidsten Point. Northward toward Bella Coola the tidal streams are weak. In summer

Haaksvold Point

BURKE CHANNEL (1972)

MAPALAKLENK POINT LOOKING SW (1988)



KWATNA BAY (1988)



when strong freshets from the various rivers and creeks are in evidence, tidal streams from Gibraltar Point to Bella Coola are masked, there is a definite overlay of fresh water, and the current is mostly all ebb. Tidal streams in South Bentinck Arm are weak.

Chart 3936

Walker Point to Menzies Point

263 Windsor Cove (51°56'N, 127°53'W), NE of Walker Point, affords temporary anchorage in 24 m but little shelter. Sagen Islet and numerous drying rocks lie on the west side of the approach.

Edmund Point $(51^{\circ}54'N, 127^{\circ}52'W)$, the south entrance point of Burke Channel, is low and wooded and has several islets lying close offshore within 1 mile SW of it.

Fougher Bay, entered 0.5 mile NE of Edmund Point, is encumbered with islets, rocks and shoals. Drying rocks are the outermost danger in the approach. Small craft can obtain **anchorage** in Fougher Bay. **Hvidsten Point** ($51^{\circ}57'N$, $127^{\circ}45'W$) is 5.5 miles ENE of Edmund Point. A bank, on which there are uneven depths of 16 to 30 m, extends about 1 mile west from the point. On the north side of the channel, opposite Hvidsten Point, a gravel and boulder drying bank extends about 0.1 mile offshore with some rocks, with less than 2 m over them, close offshore.

267 **Haaksvold Point**, on the north side of the channel, is bold and steep-to.

• Haaksvold Point **light** (603) is shown at an elevation of 7.4 m from a skeleton tower.

269 **Nootum River** and **Doc Creek** flow into a bight on the east shore, opposite Haaksvold Point. The bight has an extensive steep-to mud flat on its south side. **Booming grounds**, a logging camp and small float front the outlet from Doc Creek (1999).

270 **Restoration Bay** is on the east side of Burke Channel, about 4 miles NE of Haaksvold Point. **Sharp Cone**, close north of the bay, rises steeply. Several streams flow into the head of the bay through a sandy beach.

Anchorage can be obtained in Restoration 271 Ļ Bay in 30 m about 0.15 mile from the LW mark; the shore should be approached slowly when coming to anchor as the coastal bank is steep-to.

Chart 3974

Kelkpa Point (52°07'N, 127°36'W) is a low, wooded 272 point at the foot of a high mountain on the east side of the channel, about 7 miles NNE of Restoration Bay.

Kelkpa Point light (602) is shown at an 273 elevation of 27 feet (8.1 m) from a skeleton tower.

Mapalaklenk Point is a conspicuous, low, bare rock, 274 3.5 miles NE of Kelkpa Point. Odegaard Rocks, which dry 12 feet (3.7 m), lie close-off Mapalaklenk Point.

Nyggard Point and Holti Point, on the NW side of 275 the channel, are bold and steep-to.

276 Kwatna Inlet is free of dangers and deep except toward the head where depths gradually shoal; the bottom is irregular for the last mile. The head of the inlet is filled with a drying flat through which the Quatlena River flows. A log dump and gin pole are 3 miles SSE of Cathedral Point (1988).

Good anchorage can be obtained in 277 Ť 15 fathoms (27 m), mud and sand, 0.3 mile from the edge of the drying flat at the head of Kwatna Inlet.

Kwatna Bay is on the east shore of Kwatna 278 Inlet 4 miles within the entrance. Kwatna Rocks and some below-water and drying rocks lie on the south side of the bay, close within the entrance. At the head of the bay is an extensive mud flat through which the Kwatna River flows, the deepest channel being on the north side of the flat. The river channel, navigable by small craft for a short distance, is marked by piles. A logging camp, with a small float, and a booming ground are in the SE corner of the bay. Fresh water is available.

Kwatna Bay is deep but indifferent anchorage 279 Ĵ can be obtained about 0.2 mile from the edge of the drying flat, in about 33 fathoms (60 m), mud bottom. Approach this anchorage with caution because the mud flat is steep-to. 280 Cathedral Point, on the north side of the entrance to Kwatna Inlet, is indented by a small bay that has a drying rock on the west side of its narrow entrance and drying flats around its shore. A conspicuous white building and weather station tower are in the trees above the point. Gibraltar Point is 3 miles NE of Cathedral Point. A conspicuous logging slash, log dump and **booming ground** lie between two creeks about 5 miles ENE of Gibraltar Point. Gaarden Point is 2 miles NNE of Gibraltar Point. The SE shore of Burke Channel, NE of Cathedral Point, skirts the base of a remarkable, bare, stony mountain.

Chart 3974

281 Crovden Bay and Jacobsen Bay lie close NE of Kwaspala Point (52°19'N, 127°10'W). Both bays are too deep for anchorage except for small craft close inshore. A cliff rises almost vertically from shore on the east side of Kwaspala Point.

282 Labouchere Point and Mesachie Nose mark the south end of Labouchere Channel, described later under Dean Channel. Lalakata Point lies 2 miles and Menzies Point 5 miles east of Mesachie Nose.

North Bentinck Arm

283 North Bentinck Arm is entered between Tallheo Point and Loiventsi Point (52°20'N, 126°59'W). It is deep throughout with no off-lying dangers, and its shores are moderately steep-to. The wreck of the Strady II, a 10.2 m tug sunk in 2004, is reported to lie in 35 feet (10.7 m) of water close west of Tallheo Point. At the head of the arm a steep-to mud and sand flat extends from low, swampy ground which is submerged at HW. The Bella Coola River, a stream of considerable size and velocity, flows through the flat, which, from recent surveys, shows indications of extending west. The Necleetsconnay River flows into the NE side of the head of the inlet.

284 Green Bay lies close NE of Loiventsi Point, with Big Bay farther NE. Green Bay has an extensive sand and gravel bank within it, and a ruined wharf and several cabins on its north side.

Small craft can obtain anchorage in the 285 Ĵ vicinity of the ruined wharf in Green Bay.

Flagpole Point, opposite Big Bay, is a conspicuous 286 sloping point from which a rocky ledge, with a depth of 16 feet (4.9 m) at its extremity, extends about 0.1 mile north.

287

Flagpole Point light (597) is shown at an elevation of 22 feet (6.7 m) from a skeleton tower.

Windy Bay is on the east side of Flagpole 288 Ĵ Point. Whiskey Bay, a short distance NE, affords temporary anchorage for small craft, close inshore. An old log dump and gin pole are in the bay. A booming ground lies along the shore for 1.5 miles to the east.

Bachelor Bay, on the north shore opposite Windy 289 Bay, has a rock that dries 9 feet (2.7 m) off the south entrance point.

290 Tallheo is on the north shore of North Bentinck Arm, close NE of Custom House Point. The conspicuous red buildings on piles are the site of an abandoned cannery. A drying bank of gravel and stones extends about 0.1 mile south from Custom House Point.

Sutlej Point lies on the south shore, SE of Tallheo. 291

292 Sutlej (Deadman) Point **light** (598) is shown at an elevation of 19 feet (5.9 m) from a skeleton tower. A **booming ground**, log dump, **mooring buoys** and a B.C. Forest Service float, protected by a **breakwater**, extend west of Sutlej Point.

Bella Coola $(52^{\circ}22'N, 126^{\circ}45'W)$ is a settlement on the south shore of the river of the same name, about 0.8 mile inland from the head of North Bentinck Arm. Sir Alexander Mackenzie came down this valley after a journey across Canada, and first sighted salt water near the mouth of the river where a plaque is now displayed. Bella Coola has several stores, including a liquor store, a post office (V0T 1C0), a RCMP detachment, hospital, doctors, a dentist, a laundromat and showers. Taxi service is available to the village, which is approximately 3 km from the public wharves. Regular supplies are available by sea, air and road. The Harbour Masters office is at the head of the public floats.

295 **Tides**. — Tidal predictions for Bella Coola (Index No. 8937) are given in the Tide Tables, Volume 7.

Communications. — B.C. Ferries make regular stops during summer months. A highway leads to the interior and joins the Vancouver/Prince George highway at Williams Lake, 479 km inland. From Williams Lake it is 543 km by highway to Vancouver. A road leads to the head of the arm and serves the wharves. There is a 4,000-foot (1,219-m) asphalt landing strip and charter flights can be arranged.

297 Wharf. — Floats. — A rock breakwater 0.3 mile east of Sutlej Point protects a public wharf. The wharf has a concrete deck, elevation 5 feet (1.5 m), on concrete and steel piles and measures about 150 by 50 feet (46 by 15 m). Depths alongside the west and east sides are 23 and 10 feet (7 and 3 m), respectively. A turning dolphin north of the wharf has a timber-faced fender wall. The ferry and fuel barge berth at the loading ramp are on the west side of the wharf. The fuel float is at the inner end on the east side of the public wharf.

298 The Bella Coola Harbour Authority **public floats** are east of the wharf. The floats with 3,058 feet (932 m) of berthing space are protected by **floating breakwaters**. Power (110V/20 amp) and fresh water are laid on the floats and garbage and used oil disposal facilities are available. A 3-tonne crane and a public telephone are on the wharfhead leading to the floats, and a launching ramp is nearby. A tidal grid is at the shoreline close east of the wharfhead.

299 A short distance east of the public floats is the former **B.C. Packers wharf** with **floats** on its east side. The drying mud flat projects a short distance beyond this wharf, which can be used only at half tide. Close east of B.C. Packers wharf are the ruins of two piers.

300 **Marina** facilities are listed in the Appendices.

301 Bella Coola breakwater **light** (598.5), on the outer end of the breakwater, is shown at an elevation of 25 feet (7.6 m) from a skeleton tower fitted with a red and white rectangular slatwork daymark.

302 There is no satisfactory anchorage for a large vessel near the head of North Bentinck Arm but small vessels can obtain **anchorage** about 0.1 mile north of the public wharf in 24 to 27 fathoms (44 to 49 m).

303 **Winds**. — The prevailing wind in North Bentinck Arm in summer is from SW; it generally sets in at about 10:00 and blows fresh until sunset, when it usually falls calm. During winter months winds up to gale force, from the valley to the east of Bella Coola settlement, can be expected periodically.

South Bentinck Arm

304 **South Bentinck Arm** (52°19'N, 126°59'W) leads 24 miles SE between high mountains.

305 **Bensins Island** and **Tallheo Hot Springs** are 6 miles within the entrance.

306 Larso Bay affords anchorage for vessels up to 150 feet (46 m) long in about 18 fathoms (33 m). The ruins of an old wharf and mooring buoys are in the bay. 307 Noeick River enters the east side of South Bentinck Arm across an extensive sand and mud flat which is steep-to along its outer side. Booming grounds, with snags and piles, line the outer edge of these flats on the north side of the river with a logging camp onshore. A float and dolphins are north of the logging camp and a ruined pier is at the camp.

Taleomey Narrows has a navigable width of about 0.1 mile and a least depth of 12 fathoms (22 m) in the fairway, which lies close to the west shore. The **Taleomey River** enters the north part of the narrows.

Anchorage, suitable for vessels of moderate size, can be obtained in the basin between Taleomey Narrows and Bentinck Narrows; there are depths of 33 fathoms (60 m) in this basin but the anchorage is well-sheltered during summer months.

Bentinck Narrows has a navigable width of only 300 feet (91 m) and a least depth of 9 fathoms (16 m) in the fairway, which lies close to the east shore. The west side of this narrows consists of extensive drying mud flats off the entrance to two rivers. This narrows is only suitable for small craft. It is reported that logging operations are on both shores about 1 mile south of Bentinck Narrows.

Winds. — During summer months prevailing winds in South Bentinck Arm are from the north; they generally set in about 10:00 and blow fresh until sunset when it usually falls calm. South of Taleomey Narrows there are seldom any winds of strength, no matter how strong they may be outside. During winter months winds up to gale force, blowing from the valleys to the south, can be expected periodically.



1-19

312 **Ice**. — During winter months it is not unusual for the south part of South Bentinck Arm to freeze up for varying periods.

Fisher Channel

Charts 3936, 3939

Fisher Channel entered between Walker Point and **DeCosmos Point** (51°57'N, 127°58'W) leads to Dean Channel and Cousins Inlet at its north end. Lama Passage, on its west side, is part of the main route of the Inner Passage leading west and north. Johnson Channel and Gunboat Passage, farther north, are alternative routes connecting with the main Inner Passage.

314 **Tides**. — Tidal differences in Fisher Channel, referenced on Bella Bella, are given for Ocean Falls (Index No. 8962), at the head of Cousins Inlet, in the Tide Tables, Volume 7.

315 **Tidal streams**. — The flood stream from the north meets the flood stream from the south about midway between Fog Rocks and the east entrance to Lama Passage.

Anchorages in Fisher Channel and Cousins Inlet can be found 0.2 mile NW of Humchitt Island, in Codville Lagoon, in Evans Inlet, in Wallace Bay on the east side of Cousins Inlet, or at the head of Cousins Inlet off Ocean Falls. Small craft can find good anchorage in Long Point Cove and indifferent anchorage in Port John.

Chart 3936

317 **DeCosmos Lagoon** $(51^{\circ}56'N, 127^{\circ}58'W)$, a landlocked lagoon, is a wildlife refuge.

Two rocks with less than 2 m over them lie 0.2 mile north of Humchitt Island ($51^{\circ}56'N$, $127^{\circ}54'W$).

Anchorage that affords little shelter, but might be useful on a temporary basis, can be obtained 0.2 to 0.4 mile NW of Humchitt Island in 38 to 44 m.

320 **Kipling Island**, north of Humchitt Island, has drying rocks and shoals extending 0.2 mile south of it. The passage between Kipling Island and **Kisameet Islands** to the NE is obstructed by an islet and several drying rocks. **Kisameet Bay**, east of Kisameet Islands, has numerous drying rocks in it.

Fog Rocks, 0.7 mile WNW of Kisameet Islands, consist of six flat rocks of a whitish colour; close to their south end are small black drying rocks and below-water rocks. Fog Rocks can be passed on either side, but the better route lies west of them passing at a distance of at least 0.5 mile.

****.

Fog Rocks **light** (591), on the largest rock, is shown at an elevation of 7.2 m from a skeleton tower.

323 **Carpenter Point** on the west shore and **Bernhardt Point** on the east shore are about 2.5 miles north of Fog Rocks.

Clayton Island, on the west side of Fisher Channel and 1 mile north of Carpenter Point, has several islets and drying and below-water rocks extending off the SE side and about 0.3 mile north from it. The Trap, the passage west of Clayton Island, affords shelter but is less than 0.1 mile wide at its narrowest part and should only be used by small craft. White Top Rock lies in the north approach to The Trap.

325 Long Point is 1 mile north of Clayton Island. Long Point Cove is an excellent anchorage for small craft. A rock that dries 0.9 m lies in the entrance to the cove, about 0.2 mile north of Long Point.

Pointer Island, about 0.5 mile north of Long Point, lies close-off the west shore of Fisher Channel on the south side of the entrance to Lama Passage (described later in this chapter). The island is connected to shore by a drying ledge.

327 Pointer Island **light** (592) is shown at an elevation of 11.9 m from a white tower. It operates during hours of darkness only.

328 **Miller Rock** and **Bickford Rock**, both 1 m high, lie close to shore SSW of Pointer Island.

329 **Walbran Rock**, 0.3 mile SE of Pointer Island, has less than 2 m over it. Port bifurcation **buoy** "EA" is north of the rock.

330 **Clearing mark**. — The light structure on White Point on the north side of Lama Passage, bearing 315°, and well open of **Kaiete Point**, the NE point of Hunter Island, leads close NE of Walbran Rock.

Lagoon Bay is on the east side of Fisher Channel, opposite Pointer Island; Nob Point is its north entrance point and Codville Hill lies on its south shore. At the head of Lagoon Bay, a narrow passage leads east into Codville Lagoon. A rock with less than 2 m over it lies in this passage, slightly north of mid-channel.

332 Codville Lagoon Marine Park is undeveloped but well-sheltered anchorage for small and medium sized vessels is obtainable. Codville Island lies in the central part and drying rocks lie in the north part of the lagoon. A landslide (October 2003), in the southeast corner of the lagoon, has produced a conspicuous scar on the hillside and reported shoaling to the charted 30-m depth contour.

Evans Inlet, on the east side of Fisher Channel, is entered between **Brend Point** (52°06'N, 127°53'W) and **Bold Point. Luke Island** and **Matthew Island** are in the entrance to Evans Inlet; a rock that dries 0.6 m lies in the middle of the passage between them. **Luke Passage** is the best entrance to Evans Inlet. **Matthew Passage** is obstructed by **Peril Rock** that dries 0.6 m and is steep-to and a rock that dries 1.2 m close WSW. A group of islets and rocks, drying and awash, lie at the SE end of Matthew Passage. **Septimus Point** is on the south side of Evans Inlet; **Boot Island** lies near the head and has shallow water extending 0.1 mile NW and NE of it. A 3.2-m shoal lies off the south shore east of Boot Island.

Anchorage suitable for vessels of moderate size can be obtained at the head of Evans Inlet in 27 to 37 m.

Port John ($52^{\circ}07'N$, $127^{\circ}51'W$) is entered between **Salisbury Point** and **Exeter Point**. A steep-to reef, about 0.2 mile from its head near the mouth of **Hook Nose Creek**, has **Mark Rock** at its SW end.

Anchorage of indifferent quality for small craft can be obtained close to shore in Port John.

Farewell Point is 1.5 miles west of Port John. The land on this side of the channel rises steeply from shore.

339 Farewell Point **light** (594) is shown at an elevation of 6.5 m from a skeleton tower.

Chart 3939

Salisbury Cone (52°09'N, 127°50'W), NE of Bold
Point, rises abruptly to its summit. North of Salisbury Cone the
land on the east side of Fisher Channel slopes more gradually.
Georgie Point (52°11'N, 127°53'W) is the SE entrance
point to both Gunboat Passage and Johnson Channel, both
described later in this chapter.

342 Sunny Island lies 0.6 mile ENE of Georgie Point.
343 Sunny Island light (595), on a bare rock 0.1 mile south of the island, is shown at an elevation of 6.3 m from a skeleton tower, 3 m high.

344 **Dean Island**, **Stokes Island** and **Clitheroe Island** lie close to the west shore of Fisher Channel.

345 **Rattenbury Point** is 5 miles NE of Sunny Island.

Cousins Inlet

Chart 3939

Cousins Inlet is entered between Boscowitz Point $(52^{\circ}16'N, 127^{\circ}47'W)$, which is steep-to and prominent, and Barba Point. Ocean Falls $(52^{\circ}21'N, 127^{\circ}41'30''W)$ is at the head of the inlet. High, precipitous hills lie on both sides of the inlet.

347 A **speed limit** of 5 kn is recommended to avoid causing damage to floats.

348 **Water aerodrome**. — Cousins Inlet is a water aerodrome known as Ocean Falls.

349 A **magnetic anomaly** of 2° to 3° is reported to exist between Boscowitz and Wearing Points.

350 **Meteorological information** for Ocean Falls is given in the Appendices.

Tides. — Tidal differences for Ocean Falls (Index No. 8962), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

Wallace Bay is on the east side of Cousins Inlet about 1.3 miles north of Barba Point; Benn Point forms its south entrance point. There are a number of cottages around the bay. Guns Rock, with less than 6 feet (2 m) over it, is not usually marked by kelp.

353 Wallace Bay is used as a **booming ground** and logbooms may be along the shore.

Wearing Point, on the west side of Cousins Inlet, is precipitous and backed by a 450-foot (137-m) high hill that is conspicuous from south. A **shoal** depth of 7.7 m lies 0.4 mile SSW of Wearing Point. **Coolidge Point** is near the head of the inlet.

355 Lights. — Wearing Point light (599) is shown at an elevation of 18 feet (5.6 m) from a skeleton tower.
 356 Cousins Inlet light (599.5), 1.7 miles north of Wearing Point, is shown at an elevation of 12 feet (3.6 m) from a skeleton tower.

Solution State Coolidge Point light (600) is shown at an elevation of 21 feet (6.5 m) from a white tower.

Benrot Island, 0.5 mile NW of Coolidge Point, is covered with grass. **Martin River** enters the north extremity of Cousins Inlet. The residential district in this area is connected to Ocean Falls by road.

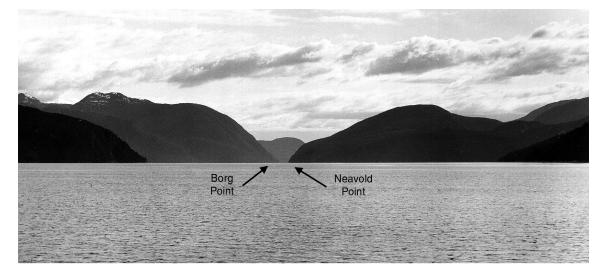
Anchorage can be obtained at the head of Cousins Inlet, east of Coolidge Point, in depths of 20 to 25 fathoms (37 to 46 m). Winds from Link Lake, to the east, can be troublesome in this anchorage if they attain a fair strength because the hills on each side create turbulent conditions. Under these turbulent conditions vessels usually move to the anchorage in Wallace Bay.

360 Link River, at the head of Cousins Inlet, drains Link Lake.

361 **Meteorological information** for Ocean Falls is given in the Appendices.

Ocean Falls is at the head of Cousins Inlet on the north side of Link River. A large dam, providing power to Shearwater and Bella Bella, and multi story buildings dominate the head of the inlet. Once a busy community of more than 5,000 there are now about 50 year round residents. The paper mill was closed in 1980 and machinery removed. Some houses were demolished in 1986, but many large buildings were spared though these are now empty and in disrepair. Precipitous hills rise immediately north of the townsite and south of the millsite. B.C. Ferries make regular weekly stops from mid June until early September. Scheduled flights to Port Hardy and then to Vancouver are available year round. There are no roads to Ocean Falls.

The town has a post office (V0T 1P0), a lodge with shower and laundry facilities, and several cafes. A doctor is



DEAN CHANNEL — BORG POINT BEARING 065° — 5.5 MILES (1972)

flown in once a month (usually the first Tuesday). A general store is at Martin River. A Canadian Coast Guard Auxiliary unit is available for marine search and rescue.

364 **Public floats**, at the townsite, are managed by the Ocean Falls Harbour Authority. Power, fresh water, garbage disposal facilities and a marine railway, operated by the Ocean Falls Yacht Club, for vessels up to 18 m (20 tons), are available.

365 The **ferry landing** is east of the public floats.

Docks at the former millsite are in a state of disrepair with some parts being dismantled for use elsewhere.

367 A **commercial fish hatchery** has been built next to the former mill. Fully treated effluent discharges through a submarine pipeline extending from the south side of the millsite 700 m WNW. The western end is marked by a buoy.

Dean Channel

Charts 3974, 3939

Dean Channel, 53 miles long, lies between high, often precipitous mountains. Depths in the fairway are great and the shores are, for the most part, steep-to. Dean Channel can be entered from Fisher Channel, north of Rattenbury Point ($52^{\circ}15'N$, $127^{\circ}46'W$), or from Burke Channel by way of Labouchere Channel.

Anchorages along Dean Channel can be found in Elcho Harbour, about 14 miles NE of Rattenbury Point, or in Kimsquit Bay, near the head of the inlet. Small craft can also find anchorage in Jenny Inlet, Eucott Bay, Bryneldson Bay, Nascall Bay, Carlson Inlet and Skowquiltz Bay. Winds. — The prevailing wind in Dean Channel in summer is from the SW, being led up the channel as through a funnel, following the direction of the channel. The breeze usually sets in about 10:00 and reaches a maximum in early afternoon; it continues blowing fresh until sunset when it usually falls calm. During winter months, periodical winds, often reaching gale force, can be expected to blow down the channel from the north.

Ice. — The head of Dean Channel, as far south as Kimsquit Narrows, and sometimes beyond, frequently becomes icebound for lengthy periods during winter months.
Tidal streams between Rattenbury Point and Carlson Inlet, about 30 miles to the NE, attain 1 to 2 kn. To the north of Carlson Inlet they gradually weaken until in the vicinity of Engerbrightson Point they almost disappear. In summer, tidal streams become masked by the effect of the freshet from the rivers and creeks, and an overlay of fresh water is quite marked; in these circumstances the current is mostly an ebb. South of Carlson Inlet this effect is almost lost and the normal tidal streams remain, with the ebb somewhat stronger. Dean Channel is free of tide-rips and eddies.

Chart 3939

Barba Point to Fougner Point

Jenny Inlet $(52^{\circ}15'N, 127^{\circ}37'W)$ is entered between Neavold Point and Fosbak Point. Several streams empty into the head of the inlet and drying banks extend off the mouths of these streams. A ruined barge with a wreck sign on it is on the east shore about 0.7 mile from the head of the inlet (1999). Anchorage for small vessels can be obtained near the head of Jenny Inlet in about 23 fathoms (42 m). Small craft can find anchorage near shore.

Chart 3974

Borg Point, Thorenson Point and **Hokonson Point** are on the north side of Dean Channel; **Loken Point** is on the south side. A log dump and **booming ground** are in the bay 2.5 miles ENE of Loken Point (1998).



Hokonson Point **light** (600.6) is shown at an elevation of 4.7 m from a skeleton tower.

379 **Elcho Harbour** is entered 1 mile north of Hokonson Point; **Elcho Creek**, at its head, has an extensive flat at its mouth.

Anchorage can be obtained anywhere within Elcho Harbour in depths of 16 to 19 fathoms (29 to 35 m). It is reported to be a good, well-sheltered anchorage.

381 Sir Alexander Mackenzie Park extends NE from Elcho Point. A cairn marks the place where Sir Alexander Mackenzie landed on July 21, 1793 at the end of his cross-country journey. Mackenzie's Rock lies close-off this cairn.

Cape McKay, 2.7 miles NE of Elcho Point, forms the east side of **McKay Bay**. Fougner Point, is 1.3 miles to the east. Fougner Point light (600.8) is shown at an elevation of 10.5 m from a skeleton tower.

Chart 3974

Cascade Inlet

383 **Cascade Inlet** is entered between Cape McKay and **Cascade Bluff** ($52^{\circ}25'N$, $127^{\circ}24'W$). The shores of the inlet are precipitous and numerous streams cascade down the mountains. The fairway is deep and the inlet is free of dangers. At the head of the inlet, there is a mud and grass flat but this flat is steep-to and depths off it are too great for anchorage.

Fougner Point to Ram Bluff

384 **Eucott Bay** is 3 miles NE of Fougner Point $(52^{\circ}24'N, 127^{\circ}23'W)$. A drying mud bank extends off the NW side of the bay and from its head. A **float** with a private fresh water pipe on it is on the east shore about 0.5 mile from the entrance. **Eucott Hot Springs** are near the head of the bay. The pool is formed by rocks and concrete blocks.

385 Anchorage with good shelter can be obtained by small craft in 8 to 12 feet (2.4 to 3.7 m) in Eucott Bay.

Edward Point is the north extremity of King Island. **Ram Bluff** lies 1.5 miles ENE. A float camp and gin pole are in the cove 0.9 mile NE of Ram Bluff with log storage in the cove between (1988). 387 Edward Point **light** (596) is shown at an elevation of 24 feet (7.3 m) from a skeleton tower, 10 feet (3 m) high.

Labouchere Channel

388Labouchere Channel (52°24'N, 127°14'W) connectsDean Channel to Burke Channel.

← 389 **Tidal streams** in Labouchere Channel are weak.

Winds. — Labouchere Channel is usually calm in summer, no matter how strong the winds may be in Burke and Dean Channels. During the winter very strong north or NE winds can be experienced.

391 **Ovesen Point** is on the west side of Labouchere Channel. On the east side, about 1 mile SE of Ram Bluff is a small cove known locally as **Bryneldson Bay**. The **floats** are used by local fishermen.

Anchorage for small craft can be obtained in Bryneldson Bay in 18 feet (5.5 m), but there is only 7 feet (2.1 m) in the entrance.

393 **Deas Point light** (601), on a flat rock close west of the point, is shown at an elevation of 15 feet (4.5 m) from a skeleton tower.

394 Some ruins and a waterfall are on the west shore 1.3 miles SSW of Deas Point.

Ram Bluff to the Head of Dean Channel

395 **Nascall Bay** is 3 miles NNW of Ram Bluff. A lodge and marina are reported to be under construction at **Nascall Hot Springs** (1997). **Nascall River** drains **Nascall Lake**.

396 **Anchorage** for small craft can be obtained in Nascall Bay but it is exposed to SE winds. A steady current flows out of the bay from the Nascall River.

Chart 3974

Nascall Rocks $(52^{\circ}30'N, 127^{\circ}14'W)$ and Nascall Island lie off the east shore of Dean Channel 1 mile south of White Cliff Point. The channel between the island and the east shore of Dean Channel has a least depth of 18 feet (5.5 m), but should only be attempted by small craft.

398 **Carlson Inlet**, on the NW side of the channel, is well-sheltered but does not provide anchorage except for small craft off the drying flat at the head.

Skowquiltz Bay is 2.5 miles NE of Carlson Inlet. There is an extensive drying mud flat at the head of the bay. Along the edge of the flat are some old piles, the remains of a wharf. **Skowquiltz River** flows into the bay over the drying flat.

400 Anchorage for small craft can be obtained in the NE corner of Skowquiltz Bay, in about 12 fathoms

SIR ALEXANDER MACKENZIE CAIRN (1988)



MACKENZIE'S ROCK (1988)



(22 m), close to the edge of the drying flat. A drying rock lies close-off **Skowquiltz Point**.

401 **Sylvester Point**, on the north, and **Wattie Point**, on the south side of the channel, 4 miles ENE of Skowquiltz Point, are bold as is **Engerbrightson Point**, 2 miles NE. 402 **Purcell Rock**, which dries 3 feet (0.9 m), and **Ironbound Islet** lie in the bay between Sylvester and Engerbrightson Points. This bay offers no anchorage due to its depths and mariners are advised to give it a wide berth to clear Purcell Rock. **Jump Across Creek** and **Swallop Creek** are on the east shore abreast Purcell Rock.

DEAN CHANNEL LOOKING NORTH FROM ABEAM RAPHOE POINT (1988)



403 **Raphoe Point**, on the west shore 5.2 miles NNE of Sylvester Point, is bold and conspicuous. **Sutslem Creek** is about 1 mile SW and **Humpback Creek** 1.5 miles NE from Raphoe Point. About 3.3 miles NNW of Raphoe Point, and on the same side of the channel, there are three conspicuous slides and a large boulder on the beach.

404 **Kimsquit Narrows**, 6 miles north of Raphoe Point, has the delta of **Dean River** on its east side. A small drying spit, on the west side of the narrows, consists of grass and stones and extends about 300 feet (91 m) from the mouth of **Manitoo Creek**; it is steep-to and presents no danger. The navigable channel is about 0.3 mile wide with depths over 40 fathoms (73 m) in the fairway.

405 The former Indian village **Kimsquit**, at the mouth of Dean River no longer exists. The ruins of a cannery and wharf are on the west shore of Kimsquit Narrows, near the mouth of Manitoo Creek.

406 **Kimsquit Bay** has a private float at its head. **Anchorage** can be obtained near the head of Kimsquit Bay, about 0.1 mile offshore, but the water is deep.

407 Beyond Kimsquit Bay, the channel trends 3.5 miles NW to a steep-to drying flat at its head. The **Kimsquit River** flows into the head of Dean Channel over the flat. A ruined pier is on the west side of the drying flats. Depths at the head of the channel are too great for satisfactory anchorage.

408 **Note**. — It is reported (1981) that the shapes of the mud flats at the mouths of the Kimsquit and Dean Rivers have changed considerably from those charted.

Lama Passage

Charts 3936, 3938, 3939

409 **Lama Passage** (52°04'N, 127°57'W) is the main passage used by all sizes of vessels connecting Fisher Channel

with Seaforth Channel and Milbanke Sound. The east entrance can be identified by a conical mountain 277 m high on the NE end of **Hunter Island**. The passage leads south and west of **Denny Island**. The north shore at the east end of the passage is bold.

410 **Buoyage**. — The upstream direction for buoyage in Lama Passage is proceeding west and north.

411 **Tides**. — Tidal predictions in Lama Passage are given for Bella Bella (Index No. 8976), at the north end of the passage, in the Tide Tables, Volume 7.

412 **Tidal streams** are strong in the northern entrance of Lama Passage and in the narrow passage between the NE end of Campbell Island and Saunders Island.

Chart 3936

Start Point to Beak Point

413 **Start Point** (*52°05'N*, *127°56'W*) is on the north side of the east entrance of Lama Passage; **White Point** is 0.9 mile west. **Cliff Bluff** and **Canal Bight** lie 3 and 4.5 miles farther west.

414 White Point **light** (592.5) is shown at an elevation of 8.8 m from a skeleton tower fitted with a starboard hand daymark.

415 **Serpent Point** is 1 mile west of White Point, on the south side of Lama Passage; drying rocks lie close north and east of Serpent Point.

416 Serpent Point **light** (593), on a rock close north of the point, is shown at an elevation of 5.1 m from a white tower.

417 **Fancy Cove**, 1.2 miles SW of Serpent Point, affords protected **anchorage** for small craft. The holding ground is reported to be good. A rock with less than 2 m over it lies at the entrance to the cove.

418 Harbourmaster Point light (605.5), 1.1 miles west of Fancy Cove, is shown at an elevation of 4.3 m from a skeleton tower.

LAMA PASSAGE LOOKING NORTH FROM ABEAM ARCHIBALD POINT (1986)



DRYAD POINT LIGHT (2018)



419 **Cooper Inlet** is entered between Harbourmaster Point and **Westminster Point**, 1.6 miles WNW. Numerous islets and drying and below-water rocks lie across its entrance but several coves offer shelter for small craft.

420 Ada Cove, between Harbourmaster Point and Strom Point, is entered on the SW side of two islets situated midway between the entrance points. Drying rocks and a rock with less than 2 m over it lie between the islets and Harbourmaster Point.

421 **Jane Cove**, entered between Strom Point and **Gibson Point**, is obstructed by a drying rock and shoals close within the entrance. A rock that dries 4.3 m lies about 0.1 mile NW of Strom Point.

422 Fannie Cove, on the west side of Gibson Point, and Lizzie Cove, the west arm of Cooper Inlet, are fronted by numerous islets and rocks; local knowledge is advised. Gus Island is 0.2 mile NW of Gibson Point. Hogan Rock and a rock with less than 2 m over it lie 0.3 mile NW of Gus Island.

423 **Anchorage** for vessels up to 76 m long can be obtained in about 24 m, about 0.2 mile north of Hogan Rock, or in 20 m midway between Strom and Gibson Points. Anchorage for small craft is obtainable in any of the coves.

424 **Beak Point** $(52^{\circ}04'N, 128^{\circ}07'W)$ is steep-to. **Bay Rocks** lie 0.5 mile ESE. **German Point**, 1 mile NW of Beak Point, is the NW entrance point to Hunter Channel, which is described in Chapter 4. **Twilight Point** is 1.4 miles east of German Point.

Lama Passage — North Arm

425 **Walker Island** (52°06'N, 128°07'W) is connected to shore by a drying rocky ledge; drying rocks extend 0.3 mile SSE from Walker Island.

426 Walker (Camp) Island **light** (606) is shown at an elevation of 7.9 m from a white tower.

427 Alarm Cove, on the east side of the passage, is entered north of Alert Island. The cove is encumbered with drying and below-water rocks. Archibald Point, a short distance north, is steep-to.

428 **Napier Point light** (607), on the west side of the passage, is shown at an elevation of 5.4 m from a skeleton tower.

Chart 3938

429 **McLoughlin Bay** $(52^{\circ}08'N, 128^{\circ}09'W)$ is a short distance NNW of Napier Point. A shoal with 12.1 m over it is in the centre of the bay.

430 A private float and dolphins are in the south part of the bay. The **Bella Bella Fish Plant** building, wharf and float are in the centre of the bay, fresh water is available. The **B.C. Ferries landing**, in the centre of the bay, is marked by a light. The ferry makes regular stops during summer months.

431 A submarine pipeline extends in a NE direction into the middle part of McLoughlin Bay.
 432 Story Point, 0.6 mile NE, is on the east side of Lama Passage.

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433 **Story Point light** (608) is shown from a skeleton tower.

434 A **submarine cable area** (power) crosses Lama Passage 0.4 mile north of Story Point.

435 Lama Passage in front of Bella Bella is a water aerodrome.

436 **Old Bella Bella**, a former fish company settlement with a wharf and floats, is on the east shore of the passage. It now belongs to the Indian settlement of Bella Bella. Net floats are NE of the main wharf with fresh water available. Close SW of the wharf is the Fisheries and Oceans Canada office and float. Coast Guard has a **year round rescue unit** based here. It is equipped with a 14 m search and rescue vessel and a rigid hull inflatable. A boat works is between Bella Bella Islands and Spirit Island, approximately 0.5 mile NE from the wharf. It offers a repair yard and a marine railway capable of hauling vessels up to 45 tonnes.

437 A **conspicuous radio tower** at the north extremity of Denny Island has a red air obstruction light.

Bella Bella Islands consisting of several small islets connected at LW by rocky ledges are an Indian cemetery. A detached drying rock lies about 250 m east of the islets. A narrow boat passage between Bella Bella Islands and the NW side of Denny Island has a least depth of 6.5 m.
Tidal predictions for Bella Bella (Index No. 8976) are in *Tide Tables, Volume 7*.

Bella Bella is a large Indian community on the west side of Lama Passage about 1 mile NNW of Story Point. It has a grocery store, hardware, bank, accommodation, restaurants, school, churches, and hospital and drug store operated by the United Church of Canada. **Waglisla** Post Office (V0T 1Z0) is in the community. Coastal supply vessels make regular calls. An asphalt airstrip, north of the community, is 1,128 m (3,700 ft) long. There are regularly scheduled flights to Port Hardy and Vancouver.

441 A conspicuous microwave tower, north of the community $(52^{\circ}10'13''N, 128^{\circ}08'38''W)$, is fitted with a red obstruction light.

442 **Submarine pipelines** (sewer outfalls) extend into Lama Passage in the vicinity of Bella Bella.

443 A **submarine cable** (power) is laid from the islet north of the public wharf to 0.6 mile SW of Dryad Point.

444 The **public wharf** has a berthing face 61 m long with a least depth of 7.3 m alongside. A metal freight shed and a fuel company office are on the wharf. Floats for small craft are attached to the inshore side of, and parallel to the wharf. The **fuel dock** supplies gasoline, diesel fuel, naphtha, kerosene and lubricants. Garbage disposal facilities, fresh water, showers, a marine railway and hull and engine repairs are available. There is also a seaplane float. 445 **Port hand buoy "E17"** lies off the edge of a shallow bank, about 0.1 mile south of the wharf.

446 **Campbell Island** community is on a small island 0.5 mile north of the public wharf. **Martins Cove**, close north of the small island, is protected on its east side by a rock breakwater and port hand **light buoy** "E19" (610.5) marks the rock awash at the entrance. In the cove are public floats with 543 m of berthing for small craft. West of the floats is a small boatyard with a large aluminum shed. It has a marine railway capable of hauling vessels up to 55 tonnes.

447 **Anchorage** can be obtained in about 27 m about 0.4 mile ENE of the public wharf at Bella Bella.

448 **Cavin Cove**, 1.0 mile north of Bella Bella, has a bar 0.2 mile within its entrance with a rock that dries 2 m. It is only suitable for small craft.

449 The north end of Lama Passage is constricted to a least width of about 0.2 mile between the NE end of **Campbell Island** and **Saunders Island**. Care should be taken to keep in mid-channel through this passage.

450 **Saunders Island light buoy** "E20" (610), a starboard hand buoy, marks the edge of the foul ground projecting SW from the island.

451 **Dryad Point** (52°11'N, 128°07'W) is at the junction of Lama Passage and Seaforth Channel.

452 **Dryad Point Sector light** (611) is shown from a white structure. White buildings with red roofs and a radio tower with a red air obstruction light are near the light.

Shearwater and Approaches

Charts 3938, 3939

454 **Kliktsoatli Harbour** (52°09'N, 128°05'W) is entered between **Spirit Island** and **Robins Point**, about 1 mile ESE. **Whisky Cove** lies south of Spirit Island. **Shearwater Island** is on the west side of the harbour. Several shoals are in the approach to the harbour.

455 **Clayton Passage** leads west of Shearwater Island. A reported 9-m **shoal** lies near the centre of Clayton Passage, extending 70 m from the west shore of Shearwater Island. The former Canadian Pacific Fisheries facility on the NW side of Clayton Passage is closed and in disrepair.

456 **Wheelock Passage** lies between rocks off Robins Point and a shallow bank 0.2 mile ENE of Shearwater Island. Reefs and shoal water extend up to 0.15 mile north and NE of Shearwater Island. Shoal water and drying rocks fringe the east side of the harbour.

457 A **daybeacon range** (B.C. Ferries), 0.3 mile south of Klik Island, leads through Wheelock Passage.

1-27

458 A **starboard hand buoy** (B.C. Ferries) marks the south extremity of the shoal area on the west side of Wheelock Passage.

459 A **light** (B.C. Ferries) is at the ferry landing on the SW side of the harbour.

460 **Mooring buoys** are N of Shearwater Island and a private mooring buoy is E of **Atli Point**.

461 **Anchorage** with good holding ground can be obtained in 20 m, mud bottom, about 0.3 mile SE of Shearwater Island.

462 Kliktsoatli Harbour is a **water aerodrome** known as Bella Bella/Shearwater.

463 A **log breakwater** 300 m long fronts marine facilities at Shearwater.

464 **Shearwater settlement** is close north of Atli Point. It has a grocery store, hardware and marine supply store, and a resort hotel with restaurant and pub. Bella Bella post office (V0T 1B0) is in Shearwater.

465 **Shearwater Marine Resort** is the most complete marine facility between Port Hardy and Prince Rupert. There is extensive berthing with power, fresh water, laundry, shower and garbage disposal facilities. Onshore there is an ATM, Internet and e-mail, hardware and charts. A full service shipyard has a 70-ton hoist and a marine ways that can haul vessels up to 24 m long and 100 tonnes displacement. A marine fuel station has diesel fuel, gasoline, aviation fuel, lubricants, bait, ice and fresh water. Welding, electronic and engine repairs, and hull and fibreglass repairs are available.

A seaplane float is in the basin W of Atli Point.
B.C. Ferries wharf is close SE of Atli Point.

467

468 **Marina** facilities are listed in the Appendices.

469 **Communications.**—An asphalt airstrip 1.2 mile SE of the harbour is 2,954 feet (890 m) long. Water taxi service operates from Shearwater to Old Bella Bella and Bella Bella. B.C. Ferries make regular stops during summer months.

Kakushdish Harbour and Approaches

Chart 3939

471 **Kakushdish Harbour** $(52^{\circ}09'N, 128^{\circ}01'W)$ is approached from either south or east of **Cypress Island**. The latter channel, between **Calver Point** and the east end of Cypress Island, is about 0.2 mile wide but is contracted to half that width by drying and below-water rocks extending more than 0.1 mile NW and west from Calver Point.

472 A shallow bar extends across the harbour about 0.3 mile within the entrance. An **overhead cable** (power) across the entrance has a vertical clearance of 23 m. A drying rock is in the middle of the basin near the head of the harbour, anchorage for small craft can be obtained SE of this rock in 6.4 m, mud.

Gunboat Passage

473 **Gunboat Passage** $(52^{\circ}10'N, 128^{\circ}00'W)$ leads east from the east end of Seaforth Channel, between **Denny Island** and **Cunningham Island**, to the south end of Johnson Channel close to the junction with Fisher Channel. The passage is narrow, intricate and has many rocks and kelp patches. Recommended for small vessels only.

474 Upstream direction for buoyage purposes in Gunboat Passage is proceeding from Seaforth Channel in an easterly direction toward Johnson Channel.

475 **Tides**. — Tidal differences for Forit Bay (Index No. 8958), referenced on Bella Bella, are in Tide Tables, Volume 7.

← 476 **Tidal streams** are not strong and generally set west.

477 The passage between **Meadow Island** and Saunders Island is encumbered by **Pole Island**, **Yates Island**, **Hodges Reef** and rocks. The passage between Meadow and Cypress Islands is encumbered with an islet and rocks.

478 **Rainbow Island** $(52^{\circ}10'N, 128^{\circ}04'W)$ is connected to Cypress Island by a drying bank. Several islets and rocks lie within 0.1 mile of the NE side of Rainbow Island and 0.3 mile north of Cypress Island. **Blow Reef** lies 0.6 mile NE of Rainbow Island.

479 **Blow Reef light** (609.9) is shown from a skeleton tower.

480 **Bark Island**, close-off the NE end of Cypress Island, is connected to it by a drying ledge.

481 **Bark Island light** (609.8) is shown from a skeleton tower.

482 **Cone Point** is 1.2 miles ENE of Bark Island. **Mount** Verney, 1 mile NW of Cone Point, is conspicuous. **Manson Point** is 0.5 mile SE of Cone Point. A **starboard hand daybeacon** is on a drying rock close-off Manson Point.

483 Two bays fronted by islets and drying ledges are on the north side of the passage, about 1 mile east of Manson Point. The east bay provides **anchorage** with excellent shelter for small vessels. Enter east of the islet in the middle of the bay and avoid drying rocks on the west side of the cove. **Beales Bay** is separated from **Beales Lagoon** by tidal rapids.

484 **Dunn Point**, 1.3 miles east of Manson Point, is fringed with rocks. A rock that dries 3.5 m lies about 90 m off the east side of the entrance to **Dunn Bay**.

485 Rocks lie on the south side of the fairway in the west approach to the unnamed bay immediately west of **Anthony Point**. An islet and rocks are in the middle of the bay. 486 Drying rock ledges and below-water rocks off the south shore extend 0.3 mile SE of Anthony Point. **Clute Point** is on the north shore.

487 **Magee Islet**, **Dingle Island** and **Picture Island** lie on the north side of the passage, between Clute Point and **Draney Point**.

488 Gunboat Front Range daybeacon, on Magee Islet, and Gunboat Rear Range daybeacon, on the reef west of Picture Island, consist of towers with orange range daymarks.
489 Shoal water extends north from Denny Island into Gunboat Passage, SW of Picture Island. Starboard buoy
"E28" lies close north of these dangers. Make sure to keep this buoy on your starboard side when proceeding east and on your port side when proceeding west.

490 A **submarine cable** (power) crosses Gunboat Passage from close west of Draney Point to the south shore; it is marked by signs.

491 An **overhead cable** (power), vertical clearance 17 m, crosses the entrance to the cove north of Draney Point.

492 **Shoals** lie near mid-channel 0.2 mile SW and 0.1 mile SSW and SE of **Algerine Island**.

493 Rocks and shoal water extend into the entrance of **Gosse Bay** from the east side of Algerine Island. Two isolated shoals lie in the middle of the bay. **Anchorage** for small vessels can be obtained in Gosse Bay in 15 m, mud. 494 The passage between **Maria Island** and **Denny Point** is restricted by a drying rock south of Maria Island and a large shoal NE of Denny Point.

497 Drying and below-water rocks lie south and west of **Shave Point**. A rock with 12 feet (3.6 m) over it lies close-off **Hampden Point**.

498 **Anchorage** can be obtained in **Hampden Bay** in 20 fathoms (37 m), mud bottom, about 0.1 mile from its head.

499 **Leila Island** has a drying rock close NE and shoal areas SE and south of it. A drying rock lies close-off the Denny Island shore abreast the north end of Leila Island.

500 Forit Bay is entered between a rock that dries 4.6 m and a rock awash lying close north of Flirt Island. This narrow passage has a least depth of 3 fathoms (5.5 m). Good sheltered **anchorage** for small craft can be obtained in about 5 fathoms (9 m), mud, close west of Flirt Island. Wakash Point lies just north of Forit Bay.

501 **Tides**. — Tidal differences for Forit Bay (Index No. 8958), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

502 Johnson Channel is entered between Madigan Point and Teal Island, 1 mile NE of Wakash Point.

Johnson Channel

503 **Johnson Channel**, entered between **Georgie Point** (52°11'N, 127°53'W) and Sunny Island 0.6 mile NE, is free of dangers in the fairway. **Teal Island** lies close-off Georgie Point.

504 Sunny Island and its light, Dean and Stokes Islands are described earlier in this chapter under Fisher Channel. Three drying rocks lie within 0.2 mile west of the south end of Stokes Island.

505 Teal Island **daybeacon** has a port hand daymark.

506 **Madigan Point** is 0.5 mile NW of Georgie Point. A concrete memorial, about 5 feet (1.5 m) high, is on the point. A **submarine cable** (power) crosses Johnson Channel from Madigan Point to a point 0.7 mile NE.

507 **Bainbridge Cove**, 0.5 mile NW of Madigan Point, is only suitable for small craft as it is shallow and encumbered with rocks and islets.

508 A narrow lagoon, 1 mile NNE of Madigan Point, has drying mud flats and a drying rock at its mouth.

509 **Sardonyx Point** is 5 miles NNW of Madigan Point. **McCroskie Islands** have islets, drying ledges and below-water rocks extending NNW of them.

509.1 Johnson Channel (Wallace) **light** (594.8) is shown at an elevation of 6.1 m from a skeleton tower located 1.7 miles SE of McCroskie Islands. **Wallace Point** is a local name and not charted.

Chart 3940

Beaumont Island $(52^{\circ}18'N, 127^{\circ}57'W)$, near the north end of Johnson Channel, has **McKernan Rock**, with 0.4 m over it, close north of it and shoal water fringing its SE and SW parts.

512 Beaumont Island **light** (604) is shown at an elevation of 7.6 m from a skeleton tower.

513 **Anchorage** for small craft can be obtained west of Beaumont Island. Approaching this anchorage from north, there is an islet close to the west shore, and a rock that dries 3.6 m connected to the west shore by a drying sandy ridge. Approaching south of Beaumont Island, a drying reef and a rock awash project to mid-channel from a point on the south side, and rocks with 1.1, 3.5 and 2.7 m over them lie near mid-channel south of Beaumont Island.

514 **Albert Islet** lies close-off the east shore, 0.6 mile NE of Beaumont Island.

Roscoe Inlet

515 **Roscoe Inlet** extends 21 miles north and east in a winding manner. The shores are very rugged and, for the most part, the inlet is free of mid-channel dangers.

1-29

516 **Tidal streams** in Roscoe Inlet are negligible.

517 **Nicholson Island** $(52^{\circ}19'N, 127^{\circ}57'W)$, in the approach to the inlet, has foul ground extending 0.1 mile from its north and south ends. **Roscoe Rock**, 0.5 mile north, is awash. A rock with a depth of 9.4 m lies 0.1 mile NNW and a rock with 6.8 m over it is 0.25 mile south of Roscoe Rock.

517.1 Nicholson (Hoonees) Island **light** (604.2) is shown at an elevation of 6.7 m from a skeleton tower. **Keyes Point**, 2 miles NNE, is prominent and steep-to.

519 **Clatse Bay**, 2.5 miles ENE of Keyes Point, is entered east of **Clatse Point**. The shores of the bay are fringed with drying shingle ledges on which there are above-water rocks. A landslide on the west shore narrows the bay 0.6 mile from the entrance. **Clatse Creek** flows into the head of the bay over a drying flat.

520 Anchorage can be obtained about 0.3 mile within the entrance of Clatse Bay in a depth of 35 m.
521 Shack Bay, 1 mile north of Clatse Bay, is fringed

with drying shingle ledges on which there are some abovewater rocks. An above-water rock lies about 91 m off the north entrance point.

522 Anchorage for small vessels can be obtained in the north portion of Shack Bay in about 17 m.

523 **Roscoe Point**, with a drying rock close-off it, is on the west side of Roscoe Inlet opposite Shack Bay.

524 **Ripley Bay**, 2 miles north of Shack Bay, is too deep for convenient anchorage.

525 A **rock**, with less than 2 m over it, lies about 0.1 mile from the east shore and 0.8 mile NW of the west entrance point of Ripley Bay.

526 **Boukind Bay**, 5 miles NNW of Roscoe Point, has shores fringed by ledges but is free of dangers outside a distance of 46 m.

Anchorage for small vessels can be obtained off a bight on the east shore of Boukind Bay in 18 m. More confined anchorage can be obtained in 4 m near the head of the bay.

528 **Roscoe Narrows**, between **Boukind Bluff** and **Holm Point**, both of which are precipitous, is narrow but deep.

529 **Hansen Point**, 3.5 miles NE of Roscoe Narrows, has **Pan Rock** lying on a drying ledge extending north from it. This ledge reduces the navigable channel north of Hansen Point to 0.2 mile wide. A remarkable precipice, about 366 m high, is about 0.8 mile SW of Hansen Point.

A point on the south shore, 0.9 mile east of Hansen Point, has a rock that dries 0.9 m close-off it.

531 **Quartcha Bay** has depths too great for anchorage except for small craft close-off the drying flat near the head; caution should be exercised as the edge of the flat is steep-to.

532 **Thumb Point**, 1.8 miles SE of Quartcha Bay, is prominent and forms the east side of a bay, which is too deep for anchorage.

533 **Latch Islet** 0.1 mile west of **Latch Point** is 1.7 miles SE of Thumb Point. A stream south of Latch Islet has a boulder spit extending north from its mouth; this spit and Latch Islet reduce the fairway to about 0.1 mile wide but depths in the fairway are 33 m.

534 **Roscoe Creek**, 1.6 miles NE of Latch Point, flows into a drying bay.

535 Anchorage can be obtained about 0.5 mile from the head of Roscoe Inlet in a depth of about 26 m.
 536 Directions. — With the exception of the portion of the inlet between Hansen and Thumb Points, where the north shore should be favoured, Roscoe Inlet can be navigated safely on a mid-channel course.

Return Channel

537 **Return Channel** (52°19'N, 127°57'W) connects the north end of Johnson Channel to Seaforth Channel.

538 **Eddies** that can be troublesome to small craft sometimes occur off Donald Point $(52^{\circ}18'N, 128^{\circ}06'W)$ in the vicinity of Lorne Islet. Disturbed water can also be encountered in the vicinity of the 21.1-m shoal lying 0.6 mile WNW of Jagers Point.

539 **Jagers Point** (52°18′N, 127°58′W) is steep-to. Troup Passage, entered 1 mile west, is described later in this chapter.

540 **Roberson Islets** and a rock that dries 4.2 m lie 0.6 mile NNW of Jagers Point.

541 **Rochester Island**, 0.6 mile west of Roberson Islets, is covered with bushes. A rock with 1.2 m over it lies about 91 m south of the island.

542 A conspicuous slide is on the shore of **Florence Peninsula** NE of Rochester Island.

543 **Nealon Point**, 2 miles west of Rochester Island, is the north extremity of **Chatfield Island**. Between Nealon Point and **Donald Point**, 2 miles WSW, the Chatfield Island shore is steep-to.

544 Donald Point **light** (605) is shown at an elevation of 5.3 m from a skeleton tower.

545 **Lorne Islet**, 0.2 mile SW of Donald Point, lies about 91 m offshore. Several drying rocks lie between Lorne Islet and Donald Point. **McArthur Point** lies on the north side of Return Channel.

546 **Nedden Rock**, with 2 m over it, lies in the approach to Morehouse Bay. It is not usually marked by kelp and is steep-to on its north and east sides.

547 **Orton Hill**, 2 miles SE, has two summits and is conspicuous from west.

RETURN CHANNEL ENTRANCE (1972)



548 **Morehouse Bay** is encumbered with numerous islands and drying and below-water rocks.

549 Anchorage, suitable for small craft, can be obtained in the cove in the SW part of Morehouse Bay over mud and sand bottom. When approaching this anchorage take care to avoid the dangers on both sides of the approach. 550 The passage leading south between Chatfield and Dearth Islands is described with Seaforth Channel later in this chapter.

Dakin Islets $(52^{\circ}17'N, 128^{\circ}09'W)$ are close-off the coast of Yeo Island, 2.2 miles WSW of Donald Point. A rock awash and a rock with 1.3 m over it lie 0.2 mile NE and WSW and **Holt Rock**, which dries 1.4 m, lies 0.3 mile WSW of Dakin Islets.

552 **Wigham Cove** $(52^{\circ}17'N, 128^{\circ}10'W)$, at the south end of **Yeo Island**, has a chain of drying rocks in its entrance; the fairway is west of these rocks and about 91 m wide. Two islets lie in the middle of the cove.

Anchorage for small craft can be obtained at the NE end of Wigham Cove; the holding ground is good. When entering Wigham Cove keep to the west side of the channel until the islets in the middle of the cove are abeam, then pass to the north of them.

554 **Hay Island** is on the west side of the approach to Wigham Cove. **Law Islands** lie south of Wigham Cove. A rocky drying ridge extends a short distance east from the NE Law Island.



555 Law Islands **light** (615.2) is shown at an elevation of 4.9 m from a skeleton tower.

Briggs Inlet

556 Briggs Inlet is entered east of Coldwell Point (52°19'N, 128°01'W), the south extremity of Coldwell Peninsula. Coldwell Point is known locally as Sisters Point.
556.1 Sisters Point light (604.5) is shown at an elevation of 7 m.

557 Mid-channel depths south of the narrows $(52^{\circ}22'N, 128^{\circ}00'W)$, 2.5 miles within the entrance, are generally 40 to 50 m but a rock with a depth of 4.5 m over it lies in mid-channel 1.2 miles within the entrance.

558 The channel through the narrows has a depth in the fairway of 10.8 m and leads west of a drying rock lying near mid-channel in the south part of the narrows. **Tidal currents** in the narrows reach 3 kn. Within 0.5 mile north of the narrows, two rocks with 4 m over them extend 0.1 mile from the east shore.

Emily Bay $(52^{\circ}23'N, 128^{\circ}01'W)$, on the west side of Briggs Inlet, has several drying rocks across its entrance and a rock with 2.1 m over it lies 0.1 mile off the north shore, 0.2 mile within the entrance. **Anchorage** in Emily Bay is well-protected with good holding over a bottom of sand and shell.

560 Near the head of the inlet, where it narrows, a rock with 6.5 m over it lies in mid-channel.

The entrance passage to the lagoon at the head of the inlet is about 15 m wide, with a depth of less than 2 m, which leads south of two drying rocks in mid-channel.

Tidal currents in the entrance to the lagoon reach 5 kn or more. The tidal range inside the lagoon is one-half the range outside.

563 The lagoon has a below-water rock lying in mid-channel NE of the only island, and an islet 4 m high and a 2.5-m shoal lie in the entrance to the cove at the SE end of the lagoon. Fish boats occasionally anchor in the lagoon and it is reported that the SE corner provides sheltered **anchorage** for small craft.

Bullock Channel

564 **Bullock Channel**, entered east of **Ettershank Point** ($52^{\circ}19'N$, $128^{\circ}03'W$), leads north from Return Channel to Spiller Channel. The channel is deep and free of mid-channel dangers. Two small islets lie in the south entrance to the channel and drying rocks and shoal water extend up to 0.15 mile from shore throughout the channel.

565 Two islands, 35 and 45 m high, with drying and below-water rocks extending south from them, lie on the west side of the channel, 1.6 and 1 mile south of the north entrance.

566 Small craft can obtain fair **anchorage** in 10 m in the mouth of a bay on the west side of Bullock Channel 2.8 miles south of the north entrance. A rock that dries 0.9 m lies in the north part of the cove.

567 Good **anchorage** can be found 0.8 mile east of **Gerald Point** in the bay behind a small peninsula on the east side of the north entrance to Bullock Channel in 15 m, sand bottom. A rock awash lies almost midway between the peninsula and an island, 39 m high, 0.1 mile north. An above-water rock lies 0.3 mile north of the island.

Troup Passage

Chart 3939

568 **Troup Passage** (52°15'N, 128°02'W), known locally as **Deer Passage**, leads SW from Return Channel to Seaforth Channel. The north entrance, north of Troup Narrows, is encumbered with islands, above- and below-water rocks and rocks awash. Local knowledge is advised.

569 **Tides**. — Tidal differences for Troup Passage (Index No. 8981), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

570 **Anchorage** for small craft can be obtained in the east part of the north entrance to Troup Passage, but local knowledge is advised to enter between the islands.

571 **Troup Narrows** has a drying rock and rocks awash lying up to 200 feet (61 m) off the Cunningham Island side, a drying reef near the south end, and depths of 2 to 3 fathoms (3.7 to 5.4 m) in mid-channel. **Tidal streams** in the narrows are about 2 kn.

572 Two large islands, about 1 mile SSW of Troup Narrows, have several rocks close-off them. Several smaller islands and some drying reefs lie within 1 mile SSW of the large islands. 573 The cove entered SE of the above-mentioned islands is reported to afford an excellent **anchorage**. Drying rocks lie on the west side of the entrance channel.

574 Lang Island, which has a drying reef NE of it, Handyside Island, Rudge Rock, Pear Island, Sabiston Island, and several small islets and a drying reef, lie in the south entrance to Troup Passage.

575 **Dumas Point** is the SE entrance point of Troup Passage.

South Approach to Return and Spiller Channels

576 Graven Point $(52^{\circ}15'N, 128^{\circ}13'W)$, the west extremity of Dearth Island, has a shoal rock close west. Grappler Bight affords some shelter for small craft.

Chart 3940

577 **Glaholm Islet** (52°16′N, 128°13′W) lies close-off the NW point of Dearth Island.

S78 Glaholm Islet **light** (615) is shown at an elevation of 4.2 m from a skeleton tower.

579 **Hyndman Reefs**, consisting of three groups of drying rocks, lie 0.8 mile west of Dearth Island.

580 Hyndman Reefs light (614), on the south rock, is shown at an elevation of 5 m from a skeleton tower. 581 Image Island, 0.8 mile WNW of Hyndman Reefs light, is wooded. Drying and below-water rocks extend 0.3 mile NNE and about 0.1 mile SSW of the island. Two drying rocks lie 0.5 mile SSW and SW of Image Island. West of Image Island are Foote Islets, and north of them is Locke Island. Reefs extend north and south of Foote Islets. A narrow channel suitable for small craft leads along the west side of Foote Islets and Locke Island. Local knowledge is advised for this channel.

Spiller Channel and Inlet

582 **Spiller Channel**, entered between **Grief Island** $(52^{\circ}17'N, 128^{\circ}13'W)$ and **Shingle Rock**, close-off **Don Peninsula**, to the west, is wide and deep.

583 **Tides**. — Tidal differences in Spiller Channel, referenced on Bella Bella, are given for Gerald Point (Index No. 8996), in the Tide Tables, Volume 7.

584 **Early Passage**, suitable only for small craft, leads east of Grief Island and **Mid Island**. A rock that dries 1.2 m lies close-off **Early Point**.

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585The Tankeeah River enters Spiller Channel2 miles west of Early Point. Drying rocks lie close

offshore north of the river entrance. Temporary **anchorage** can be obtained off the drying flats.

586 Yeo Cove, entered south of Dove Point, has numerous drying rocks in its entrance and local knowledge is advised to enter the cove. A logging operation and **booming** grounds line the north shore.

587 The entrance to **Tate Lagoon**, 3 miles north of Yeo Cove, is encumbered with numerous drying rocks, shoals and thick kelp. Strong tidal currents are reported in the entrance. Local knowledge is advised to enter the inlet.

588 Drying and below-water rocks lie 0.2 mile off the west shore 0.5 mile south of **Mosquito Bay** ($52^{\circ}24'N$, $128^{\circ}10'W$).

Solution Seekas Inlet $(52^{\circ}27'N, 128^{\circ}10'W)$ and Neekas Cove, the NE arm, are deep and clear of midchannel dangers. A reef with 9.4 m over it projects 0.5 mile SE from the point between the arms. It is reported that **anchorage**, well-protected except from SE gales, is obtainable at the head of Neekas Cove.

590 The passage east of the large island near the head of Spiller Channel is encumbered with drying rocks in its narrowest part. Small craft can find **anchorage** in the cove at the SE end of the passage and in the cove at the narrows.

591 **Ellerslie Bay** is at the head of Spiller Channel. The bay south of Ellerslie Lagoon, and separated from it by a peninsula, is known locally as **Ellerslie Anchorage**. A drying reef projects from its south side toward the islet in its centre. The bay affords well-sheltered **anchorage** in 12 to 35 m and is a convenient place to await favourable tidal conditions to enter Ellerslie Lagoon.

592 Ellerslie Lagoon, at the entrance to Ellerslie Lake, has an entrance channel less than 30 m wide with a depth of 0.9 m and encumbered with drying and below-water rocks. Tidal streams ebb at 5 kn or more in the entrance. Caution is advised. About 0.2 mile inside the entrance, a drying spit projects from the SW shore to within 30 m of the NE shore. Depths inside the lagoon are 2 to 7 m. A large waterfall is at the head of the lagoon. Tidal range inside the lagoon is one-half the range outside.

593 **Spiller Inlet** continues 10 miles north from Spiller Channel. A spectacular waterfall is at the mouth if **Ingram Creek**. A rock with 10.3 m over it lies in mid-channel east of Ingram Creek and a rock with 3 m over it lies off the mouth of the creek.

594 A **submerged cable** crosses the mouth of a bay on the west side of Spiller Inlet, 1.2 miles north of the entrance.

Seaforth Channel

Charts 3728, 3938

Seaforth Channel ($52^{\circ}12'N$, $128^{\circ}06'W$) is part of the deep draught Inner Passage route described in Sailing Directions booklet *PAC 200* — *General Information, Pacific Coast* and at the beginning of this chapter. Return Channel, entered from the NE side of Seaforth Channel, connects with Johnson Channel; it is the most easily navigated route from Seaforth Channel to Fisher Channel and Ocean Falls.

596 **Buoyage**. — The upstream direction for buoyage purposes in Seaforth Channel is proceeding from Lama Passage toward Milbanke Sound (east to west).

597 **Tides**. — Tidal predictions, in Seaforth Channel, for Bella Bella (Index No. 8976) and tidal differences for Troup Passage (Index No. 8981), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

598 **Tidal streams** in the channels between Idol Point, in Seaforth Channel and Ocean Falls, at the north end of Fisher Channel, are variable in direction and weak; the currents depend to a great extent on the prevailing winds.

Chart 3938

Dryad Point to Idol Point

599 Dryad Point (52°11'N, 128°07'W) and light are described earlier in this chapter under Lama Passage.

Ardmillan Bay, 0.7 mile NW of Dryad Point, on the west side of **Song Island**, is unsuitable as an anchorage. A narrow passage only suitable for small craft connects the bay to Ormidale Harbour and has a least depth of 2.5 m.

601 **Ormidale Harbour**, NW of Ardmillan Bay, is protected from north and east by **Thorburne Island** and **Nevay Island**. **Wellington Rock** lies in the approach to the main entrance west of Nevay Island. The passage between Nevay and Thorburne Islands is encumbered with drying and below-water rocks.

602 **Anchorage** can be obtained in Ormidale Harbour in 30 m, mud bottom, about 0.2 mile south of Nevay Island.

603 **Kynumpt Harbour**, known locally as Strom Bay, is entered between **Defeat Point** and **Lay Point**, which can be identified by **Oland Islet**, lying close-off it. **Shelf Point** lies on the west side of the harbour. **Active Islet** lies close SW of Defeat Point. **Green Neck**, at the head of the harbour, is a narrow isthmus of formerly cultivated land.

604 The best **anchorage** in Kynumpt Harbour is in 13 to 16 m about 0.1 mile west of **Spratt Point**, at the entrance to **Strom Cove**. It is suitable for vessels up to

60 m long. Holding is reported to be good over a sand and mud bottom.

Odin Cove, close west of Kynumpt Harbour, has a 605 shoal with 1.6 m over it on its east side.

Raymond Passage, entered west of Odin Cove 606 between Kintail Point and Hose Point, is described in Chapter 4.

Rithet Island (52°13'N, 128°08'W) lies in 607 mid-channel and has a drying reef extending 50 m west from it and shoal water lying to the NW.

Regatta Rocks are 0.5 mile NW of Rithet Island. 608

Regatta Rocks light (611.7) is shown from 609 a white tower with a red band at the top.

610 Dall Rocks, 0.6 mile WSW of Regatta Rocks, are a series of rocky shoals marked on the south side by Dall Rocks south cardinal buoy "ED". A dangerous submerged wreck is on the north side of the rocks.

Dall Rocks light and bell buoy "E33" (612), north 611 of the rocks, is a port hand buoy.

Wood Island and Ark Island are close offshore 612 at the junction of Seaforth Channel and Troup Passage. Newby Island, Munsie Point and Christiansen Point lie 0.5 to 2 miles WNW of Ark Island. Nose Island, 0.6 mile west of Christiansen Point, is steep-to on its south side and has a conspicuous tree about 60 m high. Beazley Islands lie north of Nose Island. The area surrounding Beazley Islands is encumbered with numerous small islets and drying and below-water rocks.

The passage entered between Christiansen Point and 613 Nose Island leads north to Return Channel.

Restless Rock, 0.5 mile NE of Noon Point, is a pin-614 nacle not usually marked by kelp. Insley Rock lies close-off the east end of Dearth Island.

Raven Cove affords anchorage for small craft only. 615 **Beak Island** and drying rocks lie in the entrance to the cove.

Ferrie Island, 1 mile WNW of Nose Island, has 616 reefs off its east and NW shores.

Bardswell Group consists of large islands bordering 617 the south side of Seaforth Channel between Raymond Passage and Milbanke Sound.

Mount Gowlland $(52^{\circ}13'N, 128^{\circ}14'W)$, at the NE 618 end of Horsfall Island, is conspicuous.

Dundivan Inlet, west of Mount Gowlland, is en-619 tered between McGown Point and the NE point of Dufferin Island. Depths within the inlet are too great for satisfactory anchorage, however small craft may be able to find anchorage in the small bay between Kimlock Point and Mallory Islands. Muir Island, Check Island, Penny Point, and Lockhart Bay are features in the inlet. Rait Narrows is described in Chapter 4.

Idol Point $(52^{\circ}14'N, 128^{\circ}17'W)$ is on the south side 620 of Seaforth Channel.



Idol Point light (613) is shown from 621 a white tower.

Idol Point to Cape Swaine

622 Denniston Point (52°14'N, 128°18'W) lies 1 mile WSW of Idol Point. Reefs and numerous drying and below-water rocks exist up to 0.3 mile off the coast between Denniston Point and Cape Swaine, 5 miles west, named ones are Gale Rock and Edge Reef. Gale Passage is described in Chapter 4.

Bullen Rock to Robb Point

Bullen Rock (52°15'N, 128°18'W) lies 0.1 mile 623 off the north shore of Seaforth Channel and a rock that dries 0.8 m lies close NE of it. Joanna Rock lies 0.5 mile west of Bullen Rock. Porter Reef is 0.5 mile west of Joanna Rock and about 0.3 mile SSW of **Bush Point**.

Berry Inlet is entered between Wootton Islet and 624 Fisher Point then leads between Evening Islets and the treed islet 40 m high lying in the fairway 0.1 mile NNE. Berry Inlet is useless as an anchorage however small vessels can find shelter in Mouat Cove. Local knowledge is advised.

Charts 3910

Balagny Passage (52°16'N, 128°22'W) has 625 drying rocks and shoals off its SE entrance point and numerous drying and below-water rocks encumber the passage. Halfway through the passage an islet and drying ledge extending east from Watch Island with drying rocks to the south almost block the passage. The fairway leading north to Blair Inlet is shallow and encumbered with drying and below-water rocks.

Harmston Island is connected to the south shore of 626 Watch Island by drying ledges.

South Island (52°16'N, 128°24'W) and Surf 627

Islet are connected to Ivory Island by drying ledges. Robb Point is the SW point of Surf Islet. An overhead cable, with a vertical clearance of 6.9 m, crosses between Surf Islet and Ivory Island.

628 Ivory Island light (617), on Robb Point, is shown at an elevation of 20.3 m from a skeleton tower, 5.2 m high.

Cod Bank, 1 mile SW of Robb Point, lies in the 629 middle of the entrance to Seaforth Channel.

Milbanke Sound is described in Chapter 2. 630

Chart 3910

Blair Inlet

Blair Inlet (52°17'N, 128°25'W) lies south and 631 SE of Cecilia Island. Mouse Rock, in the west approach to Blair Inlet, has less than 0.6 m over it and is generally

marked by kelp; the sea sometimes breaks on it. **Rat Rock** and several drying and below-water rocks lie between Mouse Rock and the west side of Ivory Island.

The outer part of Blair Inlet, between Ivory and Cecilia Islands, is encumbered with numerous islands and rocks. The preferred entrance is from Seaforth Channel by way of the passage, only suitable for small vessels, between Ivory and Watch Islands.

633 **Muster Rock**, at the west extremity of the reefs extending west from Watch Island, is marked by starboard hand **buoy** "E50".

634 Perrin Anchorage **light** (617.5), on the outer end of a drying ledge extending east from Ivory Island, is shown at an elevation of 4.1 m from a skeleton tower, 3 m high.

635 **Perrin Anchorage** lies in the fairway of vessels proceeding north toward Reid Passage; it is surrounded by drying and below-water rocks and exposed to SE gales.

636 **Overhead cables**, with a vertical clearance of 0.4 m, cross between the islets and the NE extremity of Ivory Island.

637 **Branks Islet, Roar Islets**, with drying reefs between them, form the west side of the fairway leading north. An islet 33 m high, 0.3 mile ENE of Branks Islet, forms the east side of the fairway; its west shore is fringed with drying and below-water rocks.

638 **Powell Anchorage** is a capacious and wellsheltered anchorage with a mud bottom. **Deep Rock**, on the NE side of Powell Anchorage, has some bushes on it and a white tombstone on its summit.

Chart 3938

639 **Knarled Point**, on the north shore, and **Sun Point**, on the south shore, are at the entrance to the east arm of Blair Inlet. A rock, with less than 1.6 m over it, lies 0.1 mile north of the islet just west of Sun Point. East of Sun Point numerous islands and rocks lie off the south shore. **Tuno Creek** flows into the head of the inlet.

640 Reid Passage, which leads north from Powell Anchorage, is described in Chapter 2.

Inner Passage Milbanke Sound to Skeena River and Chatham Sound

General

Chart 3002

Che Dixon Entrance Dixon Sandspit He cate Strait Queen Charlotte Sound Vancouver (sland-Cape Caution Vancouver (sland-Barlos

1 This chapter covers the Inner Passage from Milbanke Sound to Chatham Sound. The mainland inlets and connecting passages east of this route are also described.

2 Commencing from the west end of Seaforth Channel, described in Chapter 1, the usual route through Milbanke Sound is between Susan Rock and Cross Ledge. The Inner Passage then follows Finlayson, Tolmie, Princess Royal, Grenville Channels, Arthur and Malacca Passages into Chatham Sound.

Vessel Traffic Services (vts). — The area covered in this chapter is primarily in *Sector 1* with only the northern portion in *Sector 2* of the *Prince Rupert Traffic Zone*. The assigned frequencies are *Sector 1* – 156.55 MHz, Channel 11 and *Sector 2* – 156.575 MHz, Channel 71.

4 A brief description of this Vessel Traffic Services (VTS) System is given in Sailing Directions booklet *PAC 200 — General Information, Pacific Coast*; full details are given in *Radio Aids to Marine Navigation (Pacific and Western Arctic).*

The Calling-in Points are

6 *Calling-in Point No. 6*, called *Freeman Point*, is at Freeman Point light (638). Northbound mariners shall report an ETA for Boat Bluff light and Ditmars Point and shall advise if intending to transit Hiekish Narrows.

7 *Calling-in Point No. 7*, called *Ditmars Point*, is at Ditmars Point. Southbound mariners shall report an ETA for Boat Bluff light and Freeman Point.

8 *Calling-in Point No. 8*, called *Griffin Point*, is at Griffin Point light (645). Northbound mariners shall report which side of Work Island they intend to transit. Southbound mariners shall advise if intending to transit Hiekish Narrows.

9 *Calling-in Point No. 9*, called *Kingcome Point*, is a line joining Kingcome Point light (648) and Angler Cove. Southbound mariners shall report which side of Work Island they intend to transit.

10 *Calling-in Point No. 10*, called *Money Point*, is at Money Point light *(651)*. Mariners bound for Kitimat shall report an ETA for Emilia Island light.

11 *Calling-in Point No. 11*, called *Sainty Point*, is a line joining Sainty Point light (665) and Yolk Point. Northbound

mariners shall report an ETA for Tom Island light and Pitt Island light.

12 *Calling-in Point No. 12*, called *Pitt Island light*, is at Pitt Island light *(670)*. Southbound mariners shall report an ETA for Tom Island light and Sainty Point light.

13 *Calling-in Point No. 13A*, called *Baker Inlet*, is a line across Grenville Channel from Baker Inlet light (670.5); it is a change line between *Sector 1* and *Sector 2* of the *Prince Rupert Traffic Zone*.

14 *Calling-in Point No. 13B*, called *Swede Point*, is a line across Ogden Channel joining Bareside and Swede Points; it is a change line between *Sector 1* and *Sector 2* of the *Prince Rupert Traffic Zone*.

15 *Calling-in Point No. 14A*, called *Lawyer Islands*, is a line joining Hunt Point and Lawyer Islands.

16 *Calling-in Point No. 14B*, called *Genn Islands*, is a line joining Lawyer Islands and Hazel Point.

Tidal stream chartlets of the channels between McKay Reach and Kitimat are given later in this chapter under McKay Reach.

Milbanke Sound

Chart 3728

18 **Milbanke Sound** is the main opening from seaward leading to Seaforth, Mathieson and Finlayson Channels. It is entered from seaward between Cape Mark ($52^{\circ}09'N$, $128^{\circ}32'W$), the SW extremity of Bardswell Group, and the group of islands and reefs extending SW from the south end of Price Island.

19 The main Inner Passage leading north from southern British Columbia toward Alaska enters Milbanke Sound from Seaforth Channel, passes between Susan Rock and Cross Ledge, and then leads north into Finlayson Channel. This Inner Passage is used by most coastal traffic.

Landmarks. — Approaching Milbanke Sound from SW Helmet Peak (52°21'N, 127°21'W), on Lake Island, is a conspicuous landmark. This remarkable peak bears a striking resemblance to a helmet, with the sloping side toward the west. Nearing the sound, the low, wooded shores of Cape Mark will be identified; the tops of the trees are about 150 feet (46 m) high. Jocelyn Hills on the east side of Price Island are conspicuous.

21 **Tidal streams**. — The north-going stream divides near the middle of Milbanke Sound, one portion running toward Finlayson Channel, another toward Mathieson Channel, and a third toward Seaforth Channel. The reverse takes place with the south-going stream.

The rate of the stream is variable, but seldom exceeds 1 kn in Milbanke Sound. In the channels adjoining Milbanke Sound the rate increases to 2 and 3 kn in the narrow parts.

23 **Meteorological information** for McInnes Island and Kitimat and **frequency of fog information** for McInnes Island are given in the Appendices.

24 A considerable **magnetic disturbance** has been observed along the east side of Milbanke Sound between Vancouver Rock and Keith Point.

Chart 3733

Milbanke Sound — West Side

25 **McInnes Island** (52°16'N, 128°43'W) is situated among a group of islands and reefs extending 2.5 miles SW from the south end of Price Island.

26 McInnes Island **light** (619) is shown at an elevation of 97 feet (29.5 m) from a white tower, 30 feet (9.2 m) high. It is fitted with an emergency light. The light is visible from 292°30' through north and east to 115°.

27 Catala Passage is described under Laredo Sound in Sailing Directions booklet *PAC 206 — Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters and Queen Charlotte Islands.*

28 **Day Point**, the south extremity of **Day Island**, has drying rocks lying close-off it and the island is joined to the south end of **Price Island**. The east coast of Price Island between Day Point and **Aldrich Point**, 4.3 miles NE, is indented by **Muir Cove** and other small bays exposed to the sea.

29 **Keary Rock**, which dries 3 feet (0.7 m), lies 1.3 miles NE of Day Point about 0.5 mile off Price Island.

Chart 3728

30 **Langford Cove**, close north of Aldrich Point, has a drying reef off the south entrance point and numerous drying rocks and rocks awash line the shore. The cove provides shelter for small craft.

Pidwell Reef, 6.6 miles NNE of Aldrich Point and close-off the south coast of Swindle Island, is 1.3 miles long and its highest part has an elevation of 8 feet (2.4 m); most of the reef consists of drying and below-water rocks.

32 **McGregor Bank**, 2 miles SE of Pidwell Reef, has a least depth of 23 fathoms (42 m).

Higgins Passage separates the north end of Price Island from Swindle Island. The west portion of the passage is described in Sailing Directions booklet *PAC 206 — Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters and Queen Charlotte Islands.*

34 Anchorage can be obtained by small vessels in 7 to 8 fathoms (12.8 to 14.6 m), sand bottom, 5.5 miles NW of Pidwell Reef, south of Higgins Lagoon.

ST. JOHN HARBOUR ENTRANCE (1987)



Higgins Lagoon (see Chart 3737) has tidal rapids, overfalls, rocks and kelp in its entrance. The 1996 survey is of a reconnaissance nature and no shoal examinations were done. The main basin has depths of 20 to 118 feet (6 to 36 m), the east arm depths of 13 to 30 feet (4 to 9 m) and the west arm depths of 10 to 23 feet (3 to 7 m). Drying rocks lie in both entrances to the west arm.

The unnamed inlet on the NE end of Price Island $(52^{\circ}29'N, 128^{\circ}41'W)$ has easy access and affords good shelter. Depths in the basin range from 62 to 20 feet (19 to 6 m). Seasonal **marine farm** facilities lie along the shores throughout the inlet.

Chart 3938

Cape Mark to Cape Swaine

37 **Cape Mark** $(52^{\circ}09'N, 128^{\circ}32'W)$ is the south extremity of a small island at the SW end of the Bardswell Group. The islands in its vicinity are wooded and the tops of the trees are about 150 feet (46 m) high.

****.

Cape Mark**light**(616) is shown at an elevation of 50 feet (15.2 m) from a skeleton tower.

Providence Rock, 0.8 mile west of Cape Mark, has 2.7 m over it. The sea seldom breaks over the rock in good weather. **Cheeseman Rock**, 0.8 mile NNW of Cape Mark, has 1 m over it and frequently breaks. Two shoal rocks lie 0.3 mile SE and a drying and below-water rocks lie about 0.8 mile NE of Cheeseman Rock.

40 **Wurtele Island**, about 1.2 miles NE of Cape Mark, is separated from the west coast of **Athlone Island** by a narrow passage. The SW and NE ends of this passage are encumbered with numerous islets and above- and below-water rocks. **Townsend Point** is the north extremity of Wurtele Island.

41 The coast between the entrance to St. John Harbour and Cape Swaine, about 3 miles NE, is fronted by drying ledges and offshore reefs that are covered with kelp.

42 Welch Rock and a number of above- and below-water, drying and awash rocks lie up to 0.5 mile off Cape Swaine.

43 **Yaaklele Lagoon**, close south of Cape Swaine, has its entrance obstructed by below-water rocks, drying ledges and islands. It is only accessible to small craft at or near HW and local knowledge is advised. There are **tidal rapids** in the entrance.

Chart 3938

St. John Harbour

44 **St. John Harbour** (52°11'N, 128°28'W) is confined but affords anchorage for small vessels. The harbour is fairly well protected at its entrance by **Rage Reefs**, which extend 0.7 mile NNE of Townsend Point and are marked by starboard hand buoy "E46" at the NE end. **Lenz Islet** lies about midway along the reefs.

45 Between **Cheney Point**, the NE entrance point of the harbour, and **Beeton Point**, 0.8 mile south, the coast is fringed with rock ledges extending up to 0.15 mile offshore.

46 **Caution**. — At HW, when Rage Reefs are covered, it is difficult to distinguish the entrance to St. John Harbour. At half tide and at LW the north end of Rage Reefs and the drying ledges along the east side of the channel are visible and no undue difficulties should be encountered.

47 **Reginald Island**, about 0.4 mile east of Townsend Point, has drying ledges and reefs along its north and west shores. The channel west of Reginald Island leads into **Louisa Cove**.

48 **Raby Islet**, 0.1 mile east of Reginald Island, lies in the entrance to **Dyer Cove**. Two seasonal fishing lodges are moored in the south part of Dyer Cove.

49 **Anchorage**, suitable for small vessels, can be obtained in 14 to 23 m in Dyer Cove; this is the usual anchorage for St. John Harbour.

50 **Directions**. — When approaching St. John Harbour from south, Cape Mark should be given a berth of about 2 miles. When approaching Rage Reefs, Cape Mark should be kept well open of the conspicuous wedge-shaped point 2 miles NNE of it, bearing not more than 212° astern, until the north end of Rage Reefs and the entrance to St. John Harbour have been clearly identified.

Chart 3941

Seaforth and Mathieson Channels — West Approach

51 **Emmaline Bank** (52°14'N, 128°30'W), 2 miles west of Cape Swaine, is a large area with depths of 50 to 12 fathoms

(91 to 22 m). Mohun Shoal, on the north end of Emmaline Bank, has 39 feet (11.9 m) over it.

Susan Rock (52°17'N, 128°30'W), in the middle 52 of the approach to Seaforth and Mathieson Channels, is 19 m high and bare.

Susan Rock light (618) is shown at an 53 elevation of 55 feet (16.7 m) from a skeleton tower. Skinner Rock, 0.5 mile NNE of Susan Rock, is 5 m 54

high and steep-to on its east side. Both Susan and Skinner Rocks are prominent showing up against the dark background of spruce and cedar trees that line the shores of Milbanke Sound. Shoal areas with 28.6 and 23.6 m over them lie 0.6 and 1.25 miles east of Skinner Rock.

Ada Shoal, 0.7 mile SSE of Susan Rock, has 11.5 m 55 over it. A rock 0.3 mile ESE of Susan Rock has 2.9 m over it and breaks in heavy weather.

Leading marks. — Idol Point light structure bearing 56 (52°14'N, 128°16'W) 110° and kept well open south of Ivory Island light structure leads about 0.4 mile SW of Mouse Rock, which is 0.5 mile west of Ivory Island.

Seaforth Channel and Blair Inlet are described 57 in Chapter 1; Mathieson Channel is described later in this chapter.

Cross Point (52°19'N, 128°27'W) is at the SW end 58 of Lady Douglas Island, which is low and wooded.

Cross Ledge, 0.7 mile SW of Cross Point, has less 59 than 6 feet (2 m) over it. A rock that dries 2.2 m lies close east of the ledge and foul ground lies between Cross Ledge and Cross Point.

Cross Point to Keith Point

Boulder Head, 1.5 miles NW of Cross Point, is a 60 conspicuous rocky headland forming the south extremity of Salal Island.

Boulder Ledge, midway between Cross Point and 61 Boulder Head, has a drying rock and several rocks with less than 6 feet (2 m) over them on it. Deep water with scattered shoals lies between Boulder Ledge and Lady Douglas Island and between the ledge and Boulder Head.

Clam Passage separates Salal Island from Lady 62 Douglas Island and dries at its narrowest part.

Boulder Bank lies 0.2 mile west of the west 63 extremity of Salal Island. Salal Point is the north extremity of Salal Island.

Vancouver Rock, 1.3 miles west of Salal Point, dries 64 12 feet (3.6 m) and is steep-to on its west side.

Vancouver Rock light and whistle buoy 65 "E54" (636), west of the rock, is a starboard hand buoy.

Clearing marks. — Boulder Head in line with the 66 islet lying close-off Cross Point, bearing 129°, leads SW of Vancouver Rock. Keith Point bearing 030° and just open NW of Gaudin Islands leads NW of Vancouver Rock.

Dowager Island (52°25'N, 128°23'W) is low and 67 wooded in its SW part.

Dallas Island, on the north side of the west entrance 68 to Moss Passage, has conspicuous white cliffs on its south side. The islands north and NE of Dallas Island are surrounded by drying rocks.

69 Keith Point, 1.7 miles north of Dallas Island, is low and wooded.

70 Gaudin Islands, 1 mile SW of Keith Point, are a group of islands, rocks and reefs. A rock that dries 2 feet (0.6 m) is near the south end and Fellowes Rock, at the north end, dries 5 feet (1.5 m) and is steep-to on its west side.

Merilia Passage, on the east side of the Gaudin 71 Islands group, is 0.4 mile wide with a least depth of 12.8 m between the rock ledges extending NW of Dallas Island and the drying rocks off the east side of Gaudin Islands.

A considerable magnetic disturbance has 72 been observed in Merilia Passage.

Leading marks. — Swindle Point (52°29'N, 73 128°28'W) bearing 006° and open of Keith Point leads through Merilia Passage to abreast the north end of Gaudin Islands.

74 Directions. — Approaching Milbanke Sound from SW in clear weather Susan Rock should be kept in line with Helmet Peak (52°21'N, 128°21'W) bearing 055°; these leading marks will lead through the entrance well clear of dangers.

In thick weather soundings will indicate the vessel's 75 approximate position when approaching Milbanke Sound as they become deeper as the entrance is approached.

Moss Passage

Chart 3941

Moss Passage (52°22'N, 128°25'W) leads between 76 Lady Douglas and Dowager Islands and connects Milbanke Sound to Mathieson Channel. Sloop Narrows at the east end is its narrowest part. Local knowledge is advised for navigating this passage. Oscar Passage north of Dowager Island, described later in this chapter, offers a better route.

77

Tidal streams in Moss Passage flood east and ebb west; both streams attain 4 kn at springs.

Aurelia Rock (52°22'N, 128°28'W), 0.3 mile south 78 of Dallas Island in the west entrance of Moss Passage, has an above-water head 1 m high, on a drying reef. A rock with a drying height of 0.2 m lies 0.3 mile ENE of Aurelia Rock.

Detached Islet, 0.9 mile east of Aurelia Rock, lies 79 close to the Dowager Island shore.

80 Kitty Patch, 1 mile ESE of Aurelia Rock, is a group of below-water rocks in the entrance to Morris Bay.

Anchorage can be obtained at the entrance 81 Ļ to Morris Bay, about 0.1 mile from its west shore, in 13 fathoms (24 m), sand bottom. In this anchorage the west entrance point to Morris Bay bears 284° and Detached Islet bears 000°. Small craft can anchor at the south end of the bay.

Chart 3910

82 **Canoe Islet** (52°22'N, 128°25'W) has a drying ledge with above-water rocks on it extending 0.15 mile west from it.

83 **Squaw Island** is low and has drying ledges extending 91 m south and west from it. A rock with 4.7 m over it lies 0.1 mile west of the SW point of the island.

84 **Sloop Narrows** is about 91 m wide with a depth of 13.2 m. A rock that dries 2.5 m lies in the narrows, about 61 m south of the east end of Squaw Island. East of Squaw Island, drying rocks and rock ledges extend from both sides of the passage.

85 **Agnes Point**, the NE extremity of Lady Douglas Island, has drying rocks off the drying ledge extending 0.1 mile east from it.

Guard Point, the SE extremity of Dowager Island, is fringed by a drying ledge extending 0.1 mile south of it.

Mathieson Channel

Charts 3910, 3941, 3942

87 **Mathieson Channel** $(52^{\circ}18'N, 128^{\circ}25'W)$, entered from Milbanke Sound between Cecilia and Lady Douglas Islands, leads 36 miles north. The fairway through the channel is deep and wide except at Perceval Narrows, which is near the south end between Lady Douglas and Lake Islands, and at Mathieson Narrows, which is at the north end.

Tides. — Tidal differences in Mathieson Channel, referenced on Bella Bella, are given for Port Blackney (Index No. 9005), Tom Bay (Index No. 9010) and Griffin Passage (Index No. 9020) in the Tide Tables, Volume 7.

EXAMPLE 89 **Tidal streams** flood north through Mathieson Channel and meet the flood flowing east through Sheep Passage in the vicinity of Mathieson Narrows, at the north end of Mathieson Channel.

Chart 3910

Rankin Point to Lady Trutch Passage

Cameron Point (52°17'N, 128°24'W) and **Rankin Point** form the SW extremity of Cecilia Island. Lilly Islet, 31 m high, and a group of islets and above- and below-water rocks north and east of it, lie between Cameron and Rankin Points. A passage suitable for small craft, with drying and below-water rocks and a least depth of 1.2 m, separates the Lilly Islet group from Cecilia Island. Drying and below-water rocks extend about 0.3 mile north of Rankin Point. Flounce Reef, which dries 0.9 m, is the outer rock on the north side of the approach to King Cove (52°18'N, 128°24'W). King Cove is useless as an anchorage. A rock with 3.2 m over it and a rock awash lie in the centre of the cove and drying ledges and rocks lie near the head of the cove.

92 **Bend Point** lies 0.5 mile ENE of Flounce Reef and the small cove close south of it nearly connects with Boat Inlet in Port Blackney.

⁹³ **Lang Point**, 0.8 mile NW of Bend Point at the SE end of Lady Douglas Island, is steep-to. The bay on the west side of Lang Point is foul.

94 **Bird Point** and **Promise Point**, at the north end of Cecilia Island, have **Tear Islet** and numerous drying and below-water rocks between them. **Cod Reefs** and **Walter Islet** 0.1 mile north and 0.2 mile NNW, respectively of Promise Point, lie in the approach to Port Blackney and Lombard Inlet.

Leighton Island, 0.4 mile NE of Cod Reefs, lies on the NW side of the entrance to Lambard Inlet, which leads 2 miles north. The inlet narrows to a width of about 61 m 1 mile from the entrance. Depths in the inlet are generally deep with a few mid-channel shoals; the narrows has a least depth of 4.2 m. **Booming grounds** are in the coves at the south and north ends of the inlet.

96 **Oke Islet**, in the west approach to Lady Trutch Passage, has a ledge with drying rocks extending 0.2 mile south of it. A rock that dries 1.8 m and a rock awash lie close-off the west side of the islet.

P7 Lady Trutch Passage is narrow and has several drying and below-water rocks in mid-channel. The south entrance is less than 0.1 mile wide between the group of drying rocks 0.2 mile SW of Bailey Point and a rock that dries 0.9 m 0.2 mile south of Hannah Island. The passage is narrowed to a width of about 25 m by and islet and a rock that dries 0.8 m off the east extremity of Lake Island.

The north end of Lady Trutch Passage east and north of **Nathan Island** is very narrow, shallow and encumbered with a drying rock and rock ledges. A rock with 5 m over it lies in the middle of the bay formed between Hyde Point and Nathan Island.

Port Blackney and Reid Passage

99 **Port Blackney** $(52^{\circ}19'N, 128^{\circ}21'W)$ is entered from north between Cod Reefs and **Schubert Point**, 0.2 mile SE. Drying rocks and a rock awash extend nearly 0.1 mile east from Promise Point and the west shore of the harbour is foul to a distance of 91 m offshore. **Diver Rock** lies in the middle of the harbour, about 0.2 mile SW of **Kent Point**.

100 **Tides**. — Tidal differences for Port Blackney (Index No. 9005), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

101 Anchorage can be obtained about 0.1 mile SW from Diver Rock in 30 m, mud bottom. In this anchorage Helmet Peak, on Lake Island, is just open east of Promise Point, and the islet close-off Diver Point bears 135°.

102 **Oliver Cove**, on the east side of Port Blackney, has drying ledges and rocks extending from its north and south shores. **Diver Point**, the south entrance point, has an islet close north of it. A rock, with 0.9 m over it, lies in the centre of the entrance to Oliver Cove.

103 **Passage Cove**, at the head of Port Blackney, has extensive drying flats at its head.

Oliver Cove Marine Park encompasses Oliver and Passage Coves; it is undeveloped. Small craft can obtain **anchorage**, sheltered from all winds, in the middle of Oliver Cove in 10 m, mud bottom.

Boat Inlet, on the SW side of Port Blackney, is entered north of **Lillie Point**. A rock with 0.6 m over it is on the south side of the entrance about 90 m north of Lillie Point. The entrance channel is narrow and has a limiting depth of 1.1 m. Favour the north side to avoid rocky ledges extending from the south shore. The basin at the head of the inlet affords anchorage in 4.3 to 9.2 m, mud bottom.

106 **Reid Passage** leads south from Port Blackney into Powell Anchorage; it provides a route for small craft following the Inner Passage that avoids the exposed waters of Milbanke Sound.

Tidal streams in Reid Passage generally set north on both the flood and ebb. The maximum is about 2 kn.

108 **Carne Rock** and a rock that dries 1.2 m close SW of it lie in the middle of Reid Passage.

 $\mathbf{N} \quad 109 \quad \text{Carne Rock light } (617.7) \text{ is shown at} \\ \text{an elevation of } 3.9 \text{ m from a skeleton tower.}$

110 A 2.2 m **shoal** lies in mid-channel, about 0.15 mile SSW of Carne Rock.

111 Drying and below-water **rocks** lie along the east side of the south entrance to Reid Passage; the outer rock dries 5.2 m.

112 Powell Anchorage is described in Chapter 1.

Perceval Narrows to Hyde Point

113 **Perceval Narrows** $(52^{\circ}20'N, 128^{\circ}22'W)$ the main route leading north through Mathieson Channel lies between **Lizzie Rocks** close-off **Grautoff Point**, the south extremity of **Lake Island**, and **Martha Island**. The navigable channel through the narrows is 0.15 mile wide and deep.

Tidal streams in Perceval Narrows flood north and ebb south with a maximum of 5 kn. With strong SE winds there are considerable tide-rips SW of Lizzie Rocks.

115 Secondary current station Perceval Narrows (Index No. 8520), referenced on Prince Rupert, is given in the Tide Tables, Volume 7.

The passage on the west side of Martha Island is encumbered with drying and below-water rocks and **Colonel Reef**. Drying rocks and rocks awash lie north of Martha Island.

117 **Reef Islet** and several below-water rocks lie in the bay on the east side of the fairway between **Brew Point** and **Stapleton Point**, 0.6 mile north. A rock that dries 0.3 m lies NE of Reef Islet.

118 **Alec Islet**, west of Reef Islet, is connected to Lady Douglas Island by a drying rock ledge. A shoal ridge and rocks awash extend 0.1 mile south and SE of the islet.

Cockle Bay has a broad expanse of sandy beach at its head. Small vessels can obtain good **anchorage** in Cockle Bay, about 0.2 mile NNW of Alec Islet, in 20 to 30 m. **Caution** is required in approaching this anchorage as the depths decrease rapidly toward shore. A shoal, with a rock that dries 1.4 m on it, lies in the north approach to Cockle Bay.

120 Moss Passage (described earlier in this chapter) is entered 0.8 mile north of Stapleton Point between Agnes and Guard Points.

Chart 3941

Hyde Point to Arthur Island

121 **Hyde Point** (52°22'N, 128°21'W) is the north extremity of Lake Island. North of Hyde Point the fairway through Mathieson Channel is deep and free of dangers.

Jermaine Point, 4 miles NE of Hyde Point, has a small wooded islet about 100 feet (30 m) high close-off it.

123 **Tom Bay**, SE of Jermaine Point, extends south from **Symonds Point** and is free of off-lying dangers. A small cove at the NE entrance is a **booming ground** (1988).

124 **Tides**. — Tidal differences for Tom Bay (Index No. 9010), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

 $\begin{array}{c} \begin{array}{c} \begin{array}{c} 125 \\ (40 \text{ m}) \log \text{ can be obtained in Tom Bay about 0.5 mile} \end{array} \end{array}$ south of Symonds Point in about 11 fathoms (20 m).

Arthur Island to Hird Point

126 Arthur Island $(52^{\circ}27'N, 128^{\circ}16'W)$ is on the west side of the fairway. A narrow but deep passage on its west and north sides separates the island from Dowager Island. The passage west of Arthur Island is reported to be obstructed by a marine farm (2004).

128 **De Freitas Islets** lie on the east side of Mathieson Channel abreast Arthur Island. A rock that dries 11 feet (3.4 m) lies about 0.1 mile NW of the north islet.

Anchorage, suitable for small vessels, can be obtained between De Freitas Islets and the east shore in about 12 fathoms (22 m).

130 **Salmon Bay**, 2 miles north of De Freitas Islets, is entered between **Carmichael Point** and **Ursus Point**. An islet is on the drying flat at the head of the bay.

131 **Anchorage** for small vessels can be obtained about 0.1 mile from the head of Salmon Bay in about 10 fathoms (18 m).

132 Oscar Passage, opposite Salmon Bay, is described later in this chapter.

133 **Miall Islet** $(52^{\circ}31'N, 128^{\circ}17'W)$ lies in the approach to Rescue Bay and Jackson Narrows. Drying reefs lie within 0.1 mile of the north side of the islet, a rock awash lies east and a rock with 10 feet (3 m) over it lies about 0.1 mile SE of the islet.

134 Rescue Bay, on the west side of **Spaniel Point**, affords good sheltered **anchorage** for small vessels about 0.2 mile from its head in about 9 fathoms (16 m). The passage between the islands on each side of the entrance is deep. Within the bay rock ledges and mud banks extend from both sides of the bay and a rock that dries 3 feet (0.9 m) lies about 0.1 mile from the head.

135 Jackson Narrows and Jackson Passage are described later in this chapter.

Chart 3942

136 Griffin Passage is entered west of Charles Head $(52^{\circ}35'N, 128^{\circ}17'W)$ at its south end and leads 12 miles north between Pooley Island and Roderick Island to Sheep Passage. A rock that dries 0.1 m is on the west side of the passage 0.4 mile NNW of Charles Head. Three drying narrows with hazardous tidal rapids are 1.8, 7 and 7.9 miles north of Charles Head.

137 The north part of the passage has a logging camp and **booming grounds** (1998) on the west shore 2.5 miles south of Lime Point.

138 **Tides**. — Tidal differences for Griffin Passage (Index No. 9020), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

Hird Point to Mathieson Narrows

Hird Point $(52^{\circ}34'N, 128^{\circ}15'W)$ is steep-to. The small bay east of Hird Point is too deep for satisfactory anchorage. **Counsel Point** is 1.7 miles north, and a conspicuous waterfall at **McPherson Creek** is 6 miles NNE, of Hird Point.

James Bay, 7.5 miles north of Hird Point, is entered west of **Pooley Point** and is free of off-lying dangers.

Anchorage for vessels up to 200 feet (61 m) long can be obtained about 0.2 mile south of the drying flat in James Bay in 16 fathoms (29 m), mud and shell bottom. The bay is open to south winds.

142 **Garvey Point**, 5 miles NNE of Pooley Point, is prominent and makes a good leading mark up the centre of the channel from Hird Point.

143 **Heathorn Bay**, 4.2 miles farther north, is too deep for satisfactory anchorage.

144 **Mathieson Narrows** connects Mathieson Channel to Sheep Passage and Mussel Inlet. The narrows is free of off-lying dangers with a depth of 24 fathoms (44 m) across the south end. **Mathieson Point**, at the north end of the narrows, is the NE extremity of Pooley Island.

145 **Tidal streams**. — The flood tidal stream that flows north through Mathieson Channel and the flood that flows east through Sheep Passage meet in the vicinity of Mathieson Narrows and cause some turbulence.

146 Sheep Passage and Mussel Inlet are described later in this chapter.

147 **Fiordland Recreation Area** encompasses the north portion of Mathieson Channel, Kynoch and Mussel Inlets. There are few anchorages and no development.



GRIFFIN PASSAGE SOUTH ENTRANCE (1988)

GRIFFIN PASSAGE NORTH ENTRANCE (1988)



Kynoch Inlet

Kynoch Inlet (52°46'N, 128°06'W), entered between 148 Garvey Point and Kynoch Point, has spectacular shores that are generally bold and steep-to. A conspicuous waterfall is on the north shore, 1.6 miles east of Garvey Point.

Desbrisay Bay, known locally as Big Bay, extends 149 north from Kynoch Inlet and terminates in a steep-to mud flat. Depths are too great for satisfactory anchorage.

Kainet Creek, 4.5 miles east of 150 Ů Desbrisay Bay, enters the head of Kynoch Inlet over an extensive drying flat. A conspicuous landmark on the north shore, about 0.5 mile west of the drying flat, consists of a deep and very narrow cleft, which is permanently filled with snow. Indifferent anchorage can be obtained off the mud flat at the head of Kynoch Inlet, but it is affected by the outflow from Culpepper Lagoon.

Culpepper Lagoon, at the head of Kynoch Inlet, is 151 entered through a narrow, shallow passage. Riot Creek and Lard Creek flow into Culpepper Lagoon.

Mussel Inlet

152 Mussel Inlet, entered east of Crosson Point (52°51'N, 128°10'W), leads north then east between high and mountainous shores. The inlet is very deep throughout and the only off-lying dangers are close to shore.

153 Barrie Point is 2 miles NNE of Crosson Point. A rock that dries 2 feet (0.6 m), with foul ground extending 300 feet (91 m) north, lies 0.1 mile SW of Barrie Point.

David Bay has no off-lying dangers but is too deep 154 to afford anchorage.

155 Thomas Islet, 0.8 mile NNW of Barrie Point, on the west side of the entrance to Oatswish Bay, has drying rocks extending north from it.

Oatswish Bay, entered between Thomas 156 Islet and Carse Point, is deep and provides only fair weather anchorage, for small craft, close-off the drying flat at its head in about 10 fathoms (18 m).

157 Lizette Creek, with a spectacular waterfall, and Feeder Creek flow into Oatswish Bay.

Mussel Bay, 3 miles east of Carse Point, is filled 158 with drying flats, which are moderately steep-to, and form the mouth of the Mussel River.

159 Poison Cove, close south of Mussel Bay, terminates in a steep-to drying flat of mud, sand and stones. Depths in the cove are too deep for satisfactory anchorage.

Finlayson Channel

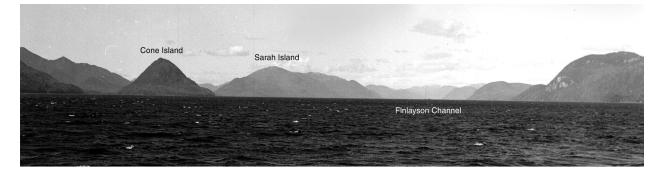
Charts 3941, 3943

160 Finlayson Channel (52°25'N, 128°29'W) leads 24 miles north from Milbanke Sound. The islands on both sides of the channel rise precipitously from the water's edge to elevations of 1,500 to 2,600 feet (457 to 793 m). The south part of Finlayson Channel, as far north as Sarah Passage and Tolmie Channel, is part of the main Inner Passage leading north toward Alaska.

161 Tides. — Tidal differences in Finlayson Channel, referenced on Bella Bella, are given for Klemtu (Index No. 9035) in the Tide Tables, Volume 7.

162 Tidal streams flood north through Finlayson Channel and ebb south. The north-going stream is stronger in Finlayson Channel than in Tolmie Channel. The south-going stream, however, is stronger in Tolmie Channel and runs for 1 h 30 min after the same stream has ceased in Finlayson Channel. In the narrow parts of these channels,

FINLAYSON CHANNEL



both streams attain 3 kn at springs but in the broader parts only 1 kn.

Chart 3941

Keith Point to Legace Point

163 Suzette Bay lies NE of Keith Point (52°24'N, 128°29'W). Factor Islets form a chain of several islets and drying and below-water rocks across the entrance.
164 Two islands, connected to shore by a drying ledge, lie midway between Suzette Bay and the entrance to Oscar Passage. The north island has a drying ledge extending 0.2 mile north from it.

165 **Legace Point** $(52^{\circ}28'N, 128^{\circ}25'W)$ is the SW extremity of **Susan Island**. A rock with 18 feet (5.5 m) over it lies 0.1 mile SW of the point.

Legace Point **light** (637.3) is shown at an elevation of 29 feet (8.7 m) from a skeleton tower.

Jorkins Point to Cone Island

167 **Jorkins Point** $(52^{\circ}26'N, 128^{\circ}30'W)$, the south extremity of Swindle Island, is bold and steep-to.

168 Jorkins Point **light** (637), 0.7 mile NE of the point, is shown at an elevation of 26 feet (7.9 m) from a skeleton tower.

169 A **fishing boundary marker** is on the point 1.5 miles NNE of Jorkins Point.

170 **Swindle Point**, 3 miles NNE of Jorkins Point, is the east extremity of Swindle Island.

Chart 3911

171 Freeman Point $(52^{\circ}33'N, 128^{\circ}29'W)$, 4.8 miles NNW of Swindle Point, is the south extremity of **Cone Island**. **Bell Peak**, known locally as **China Hat**, is the summit of Cone Island; it is conical and its east and west sides are precipitous.



172 Freeman Point **light** (638) is shown at an elevation of 5.7 m from a white tower.

Klemtu Passage

173 **Klemtu Passage**, between Cone and Swindle Islands, has a least mid-channel depth of 49 feet (14.9 m), encountered about midway through the passage. The passage is safe, provided a mid-channel course is kept.

174 **Speed**. — In order to avoid damage to vessels secured alongside the wharves and floats at Klemtu, mariners are advised to reduce speed to a minimum consistent with safe navigation when passing the settlement.

175 **Tides**. — Tidal differences for Klemtu (Index No. 9035), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

176 Tidal streams in Klemtu Passage are comparatively weak. The north-going (flood) stream is only slightly felt, the greatest body of water passing into Finlayson Channel. The south-going (ebb) stream seldom exceeds 1 kn.

177 **Fishing boundary markers** are on both shores at the north and south ends of Klemtu Passage.

178 Kean Point, 0.5 mile WNW of Freeman Point, is the SW entrance point to Klemtu Passage. Fish Island, Needle Rock, Stockade Islets, Star Island and Observation Islet form a chain on the west side of the fairway between Kean Point and Base Point. Clothes Bay is entered between Star Island and Base Point. The wreck of a tug is in the bay south of Fish Island. Freshwater Point, on Cone Island, is about 0.3 mile north of Star Island.

Klemtu Anchorage, abreast the entrance to Clothes Bay, is not recommended because it is in the middle of the fairway for Klemtu Passage which is used extensively by fish boats and during summer months the ferry. The depth in the anchorage is about 12 fathoms (22 m), sand and shell bottom. It is suitable for vessels up to about 150 feet (46 m) long.

Anchorage for small craft can be obtained in Clothes Bay in 30 feet (9.1 m) or west of Stockade Islets or Star Island. However, holding has been reported to be poor due to a rocky bottom and kelp.

KLEMTU (1987)



KLEMTU PASSAGE NORTH ENTRANCE (1986)



181 **Trout Bay**, 1 mile north of Base Point, is entered north of **Klemtu Point**. The settlement of Klemtu is on the north side and the Indian village is on the south side of Trout Bay.

182 **Klemtu**, on the north side of Trout Bay, has a store with a cafe and a post office (V0T 1L0). Gasoline, diesel fuel, lubricants and fresh water are obtainable. Coastal supply vessels make regular calls and B.C. Ferries make scheduled stops during summer months.

183 **Submarine pipelines** (sewer outfalls) extend into the channel close north of the fuel float and about 0.1 mile south of Klemtu Point.



184 **Marina** facilities are listed in the Appendices.

185 Wharves. — The B.C. Ferries wharf is at the south end of the village. A float for aircraft is on the south side of the wharf.

186 The **public wharf** has a depth of 33 feet (10.1 m) alongside.

187 A fish processing plant **wharf** is close north of the public wharf.

188 The **fuel wharf** is at the north end of the village. The **float** in the SW corner of Trout Bay is not for public use.

189 **Legge Point** is 0.7 mile north of Klemtu Point on the east side of Klemtu Passage.

190 Legge Point light (639) is shown at an elevation of 12 feet (3.6 m) from a skeleton tower.
 191 Jane and Sarah Passages are described later in this chapter under Tolmie Channel.

Chart 3941

Legace Point to Denton Point

192 **Dodd Islets** $(52^{\circ}31'N, 128^{\circ}26'W)$ consist of a chain of wooded islets with drying rocks and reefs between them. **Nowish Island**, 0.3 mile NE of Dodd Islets, lies across the entrance to Nowish Inlet.

193 **Charles Narrows**, at the south end of Nowish Island, has **tidal rapids** up to 6 kn. This narrows is obstructed by several drying reefs and rocks and should not be used. The

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recommended entrance to **Nowish Inlet** is through **Nowish Narrows**, which is suitable only for small craft.

194 **Tidal rapids** up to 6 kn run through Nowish Narrows.

195 Nowish Cove, on the west side of Susan Island, is sheltered by Nowish Island; it is approached from north and tidal streams are relatively weak in the fairway. Fell Point is the north entrance point to Nowish Cove.

Anchorage for small craft can be obtained in Nowish Cove in coarse sand in 12 to 15 fathoms (22 to 27 m).

197 Schofield Point $(52^{\circ}32'N, 128^{\circ}26'W)$ and Begg Point are the entrance points of Jackson Passage, described later in this chapter.

Mary Cove, 3.8 miles north of Begg Point, has a bar across it about 0.2 mile within the entrance with 18 feet (5.5 m) over it. Toward the head of the cove, the depths increase to nearly 60 feet (18.3 m). A sand beach is at the head of the cove.

199 Anchorage for small craft can be obtained near the head of Mary Cove; the holding ground is good.

Chart 3943

200 Watson Bay, 4 miles north of Mary Cove, is entered between Bancroft Point and Howay Point. Roderick Cove, east of Bolt Point, forms the head of Watson Bay. Depths in Watson Bay and Roderick Cove are too great for convenient anchorage.

201 **Bottleneck Inlet**, 1.2 miles north of Howay Point, has an entrance only 300 feet (91 m) wide with a least depth of 10 feet (3 m) through it. **Anchorage** for small craft, with good shelter, can be obtained anywhere within Bottleneck Inlet.

Wallace Bight, 1 mile north of Bottleneck Inlet, is entered between Golder Point and Denton Point. Depths in the bight are too great for anchoring; the cove at the north end is exposed and not recommended as an anchorage. A narrow channel on the east side of Wallace Bight leads into a lagoon in which there are depths of 24 to 90 feet (7.3 to 27.4 m). The narrow entrance channel to this lagoon has a least depth of 1 foot (0.3 m) through it and is only suitable for small craft at or near HW.

203 **Waterfall Point**, 1.9 miles SW of Denton Point, on the east side of Sarah Island, has two waterfalls on it.

Denton Point to Finlayson Head

204 Work Bay $(52^{\circ}46'N, 128^{\circ}29'W)$, on the east side of Sarah Island, is entered west of Adze Point. The main part of the bay is deep and exposed to the south.

Anchorage for small craft can be obtained in the small cove at the NE end of Work Bay. This is a good anchorage in about 7 fathoms (12.8 m).

Goat Bluff on the east side of the channel, 2 miles ENE of Adze Point, is a conspicuous steep-to and precipitous cliff.

Goat Cove has a passage at its SE end less than 300 feet (91 m) wide with a least depth of 31 feet (9.4 m) leading into a sheltered basin. Well-protected **anchorage** for small vessels can be obtained in the basin in about 17 fathoms (31 m).

Kid Bay, about 1 mile NNE of Goat Cove, is free of off-lying dangers but too deep for satisfactory anchorage. Finlayson Head ($52^{\circ}49'N$, $128^{\circ}26'W$), at the junction of Finlayson Channel, Hiekish Narrows and Sheep Passage, is high, bold and steep-to.

210 **Carter Bay**, 1.3 miles ENE of Finlayson Head, is easily identified by the high cliffs on its west shore. **Carter Point** is its east entrance point. A rock, with less than 6 feet (2 m) over it, and usually marked by kelp is about 0.2 mile north of Carter Point. **Carter River** flows into the head of the bay across an extensive sand flat. The **wreck** of the S.S. *Ohio* lies on the edge of the sand flat.

211 Temporary **anchorage**, which is exposed, can be obtained about 0.2 mile from the edge of the sand flat at the head of Carter Bay; depths are 14 to 15 fathoms (26 to 27 m), mud bottom.

212 Sheep Passage and Hiekish Narrows are described later in this chapter.

Oscar Passage

Chart 3941

213 **Oscar Passage** $(52^{\circ}29'N, 128^{\circ}20'W)$ leads east between Dowager and Susan Islands and joins Mathieson Channel between **Buckley Head** and **Miall Point**. The passage is deep except at its east end where there are shoals with depths of 18 and 27.4 m. A rock with 18 feet (5.5 m) over it lies at the west end, about 0.1 mile SW of Legace Point. The shores are, for the most part, steep-to. Along the Susan Island shore the **Hyne Range** attains elevations in excess of 1,200 feet (366 m).

214**Tidal streams** flood east and ebb west throughOscar Passage.

Bulley Bay, 1.5 miles within the east entrance, indents the shore of Dowager Island and has a drying reef close-off its east entrance point.

Anchorage for small vessels can be obtained in Bulley Bay, about 0.1 mile offshore, in about 15 fathoms (27 m); local knowledge is advised.

Jackson Passage

Chart 3941

217 **Jackson Passage** $(52^{\circ}32'N, 128^{\circ}22'W)$ separates Susan and Roderick Islands. The passage is very narrow and shallow near its east end, in Jackson Narrows. Between the west entrance and **Lochalsh Bay**, about 3 miles ESE, the north shore of Jackson Passage has several islets and drying reefs close-off it. **Marine farm** facilities are in Lochalsh Bay and on the south shore 1.5 miles west of the bay.

218 **Jackson Narrows** $(52^{\circ}31'N, 128^{\circ}18'W)$, near the east end of Jackson Passage, is very narrow and obstructed by below-water rocks and drying reefs. A navigable passage through the narrows, suitable for small craft, is close to the south shore and should only be attempted near HW slack. Rescue Bay is described earlier in this chapter.

Jackson Narrows Marine Park is undeveloped. **Anchorage** for small craft is obtainable in the bay at the west end of the narrows.

Sheep Passage

Chart 3942

220 **Sheep Passage** $(52^{\circ}49'N, 128^{\circ}24'W)$ is deep throughout with no off-lying dangers. At its west end a sill extends from Fawn Point to Finlayson Head, and near its east end another sill crosses the passage. The shores of the passage are moderately steep-to and the land rises steeply from the water's edge; the mountain peaks have elevations of about 3,000 feet (914 m). The slopes are thickly wooded except where landslides have removed the vegetation.

221 **Tidal streams** flood east through Sheep Passage and meet the flood flowing north through Mathieson Channel in the vicinity of Mathieson Narrows.

Fawn Point $(52^{\circ}48'N, 128^{\circ}23'W)$ is the SW entrance point to Sheep Passage. Lime Point, 2.3 miles SE of Fawn Point, is at the north end of Griffin Passage, which is described earlier in this chapter.

223 **Windy Bay** $(52^{\circ}47'N, 128^{\circ}13'W)$ is free of off-lying dangers. An islet close-off the east entrance point is separated from shore by a very narrow passage encumbered with drying rocks. A steep-to drying flat of stones and gravel is at the head of the bay.

Anchorage is obtainable, about 0.3 mile off the drying flat at the head of Windy Bay, in about 12 fathoms (22 m). Small craft can anchor east of the islet at the entrance.

> 225 **Bolin Bay** is 3 miles north of Windy Bay. **Anchorage** can be obtained in Bolin Bay in about

25 fathoms (46 m) or for small craft, near the head of the bay, in 11 fathoms (20 m), mud bottom.

226 Mussel Inlet in the Fiordland Recreation Area is described earlier in this chapter.

Tolmie Channel

Chart 3943

227 Tolmie Channel $(52^{\circ}39'N, 128^{\circ}32'W)$, which separates Sarah Island from Swindle Island and Princess Royal Island, forms part of the main Inner Passage route. Jane and Sarah Passages are the south approach channels.

Channel and ebb south. The north-going (flood) stream is stronger in Finlayson Channel than in Tolmie Channel. The south-going (ebb) stream, however, is stronger in Tolmie Channel and runs for 1 h 30 min after the same stream has ceased in Finlayson Channel. In the narrow parts of these channels both streams attain 3 kn at springs but in the broader parts only 1 kn.

Chart 3911

Jane Passage

Jane Passage $(52^{\circ}37'N, 128^{\circ}31'W)$ separates Cone Island from **Jane Island**. Wedge Point is the north extremity of Cone Island and **Reef Point** is the south extremity of Jane Island.

230 **Tidal streams** in Jane Passage flood NW and ebb SE.

Wedge Rock, about 150 feet (46 m) east of Wedge Point, is 3 feet (0.9 m) high.

Hogan Bank, in the centre of Jane Passage, has 10 fathoms (18.3 m) over it.

Jane Patch, 0.2 mile west of Reef Point, on the north side of Jane Passage, consists of three rocks, with less than 6 feet (2 m) over them, usually marked by kelp.

234 Lights. — Wedge Point Sector light (639.3) is shown at an elevation of 17 feet (5.1 m) from a skeleton tower.

235 Reef Point Sector light (639.8) is shown at an elevation of 16 feet (4.9 m) from a skeleton tower.
 236 The red sectors of these lights cover Jane Patch.

Sarah Passage

237 **Sarah Passage** separates the north end of Jane Island from Sarah Island. **Pering Point** is at the SE end and **Boat Bluff** is at the SW end of Sarah Island.



BOAT BLUFF LIGHT (1986)



TOLMIE CHANNEL LOOKING SOUTH FROM SPLIT HEAD (1986)



238 **Tidal streams** in Sarah Passage flood NW and ebb SE.

239 **Hazard Rock**, which dries 1 foot (0.3 m), is on the south side of Sarah Passage, about 0.1 mile off the north extremity of Jane Island.



240 **Caution**. — The ebb tidal stream will set a vessel down toward Hazard Rock.

241 Boat Bluff Sector **light** (640), on the SW side of Boat Bluff, is shown at an elevation of 38 feet (11.5 m) from a skeleton tower, 24 feet (7.3 m) high. White buildings with red roofs are near the light.

242 **Directions**. — Tolmie Channel should be entered from south by way of Sarah Passage where the only danger is Hazard Rock. A southbound vessel from Tolmie Channel when proceeding with the ebb tidal stream, may, if attempting to proceed through Sarah Passage, get set toward Hazard Rock when the tidal stream gets on the port quarter. Southbound vessels with the ebb tidal stream are recommended to proceed west of Jane Island and then through Jane Passage, thus using Jane Island as a natural traffic separation zone. **Caution**. — Traffic may be encountered which is not conforming with the traffic separation routes recommended above.

Chart 3943

Boat Bluff to Tenas Island

244 **Split Head** (52°41'N, 128°33'W), locally known as **Separation Point**, the north extremity of Swindle Island, is 2.2 miles NNW of Boat Bluff.

245 Split Head (Separation Point) light (641) is shown at an elevation of 28 feet (8.5 m) from a skeleton tower. The light is obscured by trees from the entrances of Meyers Passage and Alexander Inlet.

246 **Parry Patch**, 0.3 mile north of Split Head in the centre of the fairway of Tolmie Channel, has a least depth of 6.3 m.

An island, 0.7 mile NNE of Split Head, is on the north side of the fairway and connected to Sarah Island by a drying ridge. Foul ground, with a drying rock, extends 450 feet (137 m) south from this island.

248 Lights. — Parry Patch Sector light (640.5), 0.5 mile ESE of Split Head, is shown at an elevation of 16 feet (4.8 m) from a skeleton tower.

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HIEKISH NARROWS NORTH ENTRANCE (1972)



Channel Sector light (641.5), 0.9 mile north of Split Head, is shown at an elevation of 18 feet (5.5 m) from a white tower.

250 The red sectors of these lights cover Parry Patch.

251 **Tenas Island**, 1.8 miles north of Split Head, lies close to the Sarah Island shore.

252 Tenas Island **light** (642), on the NW side of the island, is shown at an elevation of 27 feet (8.1 m) from a skeleton tower.

Directions. — It is recommended that Parry Patch be used as a natural traffic separation zone; the red sectors of both Parry Patch Sector light and Tolmie Channel Sector light cover Parry Patch and will assist in this traffic separation at night. Southbound vessels are recommended to pass between Split Head and Parry Patch. Northbound vessels are recommended to pass east and then north of Parry Patch taking care to avoid the foul ground and drying reefs lying on the north side of the fairway.

254 **Caution**. — Traffic may be encountered which is not conforming with the traffic separation routes recommended above.

Errigal Point to Ditmars Point

255 Errigal Point $(52^{\circ}40'N, 128^{\circ}34'W)$ is the south entrance point to Alexander Inlet. Between Tunis Point, on the north side of the inlet, and Bingham Narrows, about 2.3 miles SW, several islets and drying and below-water rocks encumber the fairway. Bingham Narrows is contracted to a width of about 200 feet (61 m) by a drying ledge on the east side. Small craft can find well-protected anchorage at the head of the inlet.

Nash Point lies in Tolmie Channel 1 mile north of Errigal Point. **Brown Cove**, on the west side of Nash Point, is too deep for convenient anchorage. A **marine farm** is located south of Brown Cove.

Cougar Bay, 2.6 miles north of Nash Point, is entered west of **Ditmars Point**. **Anchorage** for small craft can be obtained in the cove on the east side of Cougar Bay in about 10 fathoms (18.3 m). Holding ground is reported to be poor.

Ditmars Point to Sarah Head

Hook Point (52°47′N, 128°32′W) is on Sarah Island,
3.2 miles NNW of Ditmars Point.

Tolmie Point $(52^{\circ}53'N, 128^{\circ}32'W)$ is the NW entrance point to Tolmie Channel. **Sarah Head** is 0.9 mile east. Below-water rocks with a least depth of 6 feet (2 m) over them extend 0.1 mile off Sarah Head.

Sarah Island light (643), on Sarah Head, is shown at an elevation of 24 feet (7.3 m) from a skeleton tower.

Hiekish Narrows

261 **Hiekish Narrows** (52°52'N, 128°29'W) connects the head of Finlayson Channel to the junction of Tolmie Channel and Graham Reach of Princess Royal Channel.

262 **Tidal streams**. — Predictions of the time and rates of maximum current and the time of slack water when the direction of the current turns are given for Hiekish Narrows (Index No. 7500) in the Tide Tables, Volume 7. The maximum flood is 4 kn the ebb is 4¹/₂ kn, the flood setting north and the ebb south.

263 Hiekish Narrows **light** (642.6), about 0.9 mile NW of Finlayson Head (52°49'N, 128°26'W), is shown at an elevation of 16 feet (4.9 m) from a skeleton tower.

264 **Ohio Rock**, with less than 6 feet (2 m) over it, lies 300 feet (91 m) off the SW entrance point to Hiekish Narrows. In 1909 the S.S. *Ohio* struck this rock.



265 Hiekish Narrows **daybeacon**, on Sarah Island about 3.3 miles NW of Finlayson Head, is fitted with two port hand daymarks.

266 **Hewitt Rock**, with less than 6 feet (2 m) over it, lies at the NW end of a shoal area in the middle of the fairway 1 mile SE of Sarah Head.

267 Hewitt Island, 0.3 mile NW of Hewitt Rock, is separated from Sarah Island by a narrow, shallow passage.
268 Hewitt Rock light buoy "EH" (642.7), SE of

the rock, is a starboard bifurcation buoy. 269 Hewitt Island **light** (642.8), on the east side of the island, is shown at an elevation of 19 feet (5.7 m)

Princess Royal Channel

Charts 3943, 3740, 3944

from a skeleton tower.

270 **Princess Royal Channel** (52°53'N, 128°31'W), entered from Tolmie Channel or Hiekish Narrows at its south end, extends 38 miles NW to Whale Channel. Princess Royal Channel is divided into four parts consisting of Graham Reach, Butedale and Malcolm Passages, Fraser Reach and McKay Reach.

Tides. — Tidal differences in Princess Royal Channel, referenced on Bella Bella, are given for Butedale (Index No. 9053) in the Tide Tables, Volume 7.

Tidal streams in Princess Royal Channel come from north and south and meet in Graham Reach in the vicinity of Aaltanhash Inlet. In Graham Reach, between the north end of Sarah Island and Aaltanhash Inlet, the flood sets north and the ebb south. In Butedale Passage, Fraser Reach and McKay Reach the flood sets toward the SE and the ebb NW. Tidal streams in McKay Reach, at the NW end of Princess Royal Channel, are complicated and described later, in that section.

Chart 3943

Graham Reach

273 **Graham Reach** is entered abreast Sarah Head (52°53'N, 128°31'W), previously described. **Quarry Point** is 1.1 miles NNW of Sarah Head.

Quarry Point light (644) is shown at an elevation of 16 feet (4.9 m) from a skeleton tower.

Green Inlet, 1.5 miles NNE of Quarry Point, is entered north of **Netherby Point**. A rock with 22 feet (6.7 m) over it lies in the middle of the entrance. **Horsefly Cove** is on the north side of the inlet, 0.6 mile inside the entrance. **Baffle Point** is 4 miles within the entrance of Green Inlet. The **tidal** **rapids** at Baffle Point and the remainder of Green Inlet NE of them are unnavigable.

276 **Green Inlet Marine Park** encompasses Horsefly Cove; it is undeveloped. **Anchorage** for small craft can be obtained in Horsefly Cove in about 13 fathoms (24 m).

Chart 3944

Flat Point, 3.5 miles north of Netherby Point, is comparatively low and wooded. Carroll Island, 0.9 mile NW of Flat Point, is connected to Princess Royal Island by a drying flat. Drying and below-water rocks extend 0.2 mile south from the island.

A **conspicuous waterfall**, 1.3 miles north of Carroll Island and west of **Swanson Point**, is reduced to a trickle in very dry weather.

279 **Swanson Bay** (53°01'N, 128°31'W) has the ruins of a wharf, sawmill, pulpmill and chimney at its head. The bay does not afford satisfactory anchorage, except for small craft close inshore.

280 Griffin Point is 3.4 miles NNW of Swanson Point.
281 Griffin Point light (645) is shown at an elevation of 20 feet (6.1 m) from a white tower.

282 **Canoona River**, 0.8 mile NW of Griffin Point, has flat land on both sides of its mouth. A heavy outflow of water enters Graham Reach from this river. Concrete fish ladders that cross the river are visible from the reach.

283 **Khutze Inlet**, on the east side of Graham Reach, is entered between **Baudre Point** and **Asher Point**. **Green Spit**, 0.5 mile east of Baudre Point, extends 0.3 mile from the south shore; it has shoal depths over it and is usually marked by kelp. Between the north end of Green Spit and **Meldrum Point** the fairway is only 0.1 mile wide. **Pardoe Point**, 2.5 miles east of Green Spit, is on the south side of the inlet opposite **Boxer Cliff**.

284 **Khutze River** flows into the head of Khutze Inlet along the north side of an extensive drying mud flat. A dangerous wreck was reported (1977) to lie off the SW extremity of the mud flat. It was not visible at LW in 1987.

285 Depths in Khutze Inlet are generally too great for satisfactory anchorage. Small vessels can obtain temporary **anchorage** about 0.1 mile from either side of Green Spit in depths of 10 to 20 fathoms (18 to 37 m).

Aaltanhash Inlet, 2.5 miles north of Khutze Inlet, is entered south of Heddington Point and extends 4 miles east. Garnier Bluff is 1 mile east of Heddington Point. The depths in this inlet are too great for satisfactory anchorage. Aaltanhash River and Head Creek flow into the head of the inlet.

Butedale and Malcolm Passages

Redcliff Point (53°09'N, 128°38'W), at the SE end 287 of Butedale Passage, has a reddish brown cliff behind it.

288 Redcliff Point light (646) is shown at an elevation of 16 feet (4.9 m) from a skeleton tower, 10 feet (3 m) high.

Butedale Passage, on the south side of 289 Work Island, is the passage most frequently used; it is deep and clear of dangers.

290 Work Island light (647), near the NW end of the island, is shown at an elevation of 15 feet (4.7 m) from a skeleton tower.

291 Butedale, in a bay on the south side of Butedale Passage, is the site of a former cannery. Many buildings are in ruins and the wharf is in disrepair. Fuel and supplies are not available, but fresh water has been piped out to 150 m of float space that can be used by visiting small craft. Good fendering is recommended due to wakes generated by passing ferries and cruise ships. A caretaker lives on site. Waterfalls on the west side of the bay are conspicuous.

Caution. — When approaching the wharf 293 at Butedale exercise caution as the current from the waterfalls is strong, particularly at LW.

Tides. — Tidal differences for Butedale 294 (Index No. 9053), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

Malcolm Passage, on the north side of Work Island, 295 is deep and clear of dangers. Klekane Island, 0.3 mile east of Work Island, at the SE end of Malcolm Passage, is connected to the mainland by a drying flat; Marmot Cove, close north, is filled with a drying flat.

Klekane Inlet is entered east of Maskill Point. 296 From a vessel approaching from south through Graham Reach the inlet appears to be a continuation of Graham Reach. The drying sand and mud flats fronting the Klekane River at the head of Klekane Inlet are steep-to.

Depths within Klekane Inlet are too great for 297 Ů satisfactory anchorage. Small craft can find anchorage in Scow Bay, close to the edge of the drying flat.

Fraser Reach

298 Fraser Reach (53°11'N, 128°42'W) has steep-to shores with high mountains on both sides.

Conspicuous waterfalls, on the Princess Royal 299 Island shore about 2 miles WNW of Work Island, flow continuously and are used as a landmark by mariners familiar with the area. The heavy outflow of water from these falls can be heard at a fair distance and are used as a guide during thick weather.

Elephant Head Point, on the west shore of Fraser 300 Reach, 3.7 miles SE of Kingcome Point (53°18'N, 128°54'W), is a prominent landmark.

301 A valley on the Princess Royal Island shore penetrates the steep mountains west from Elephant Head Point.

302 Elephant Head Mountain, a bold cliff face, forms the south side of this valley. When viewed from Fraser Reach it resembles the head of an elephant. Three conspicuous logged off patches (1987) are on the mainland shore from opposite Elephant Head Point to Angler Cove in Ursula Channel.



Kingcome Point light (648) is shown at an 303 elevation of 20 feet (6 m) from a skeleton tower.

McKay Reach

304 McKay Reach separates the north end of Princess Royal Island from Gribbell Island.

305 Tidal stream chartlets showing the tidal streams in knots from McKay Reach to Kitimat are on adjacent pages.

306 Pilot Point is the SE extremity of Gribbell Island and Fellbrook Point is 1.7 miles NW. The high summits of the Wimbledon Range are a short distance inland.

A rockfill breakwater is on the west side of the bay 307 2.6 miles west of Kingcome Point.

308 Trivett Point, 4.6 miles west of Kingcome Point, is the north extremity of Princess Royal Island.

309 Trivett Point light (649) is shown at an ٩ elevation of 15 feet (4.6 m) from a skeleton tower.

Chart 3945

310 Point Cumming, 3.1 miles west of Trivett Point, is the SW extremity of Gribbell Island.

Point Cumming light (650) is shown at an 311 elevation of 20 feet (6 m) from a skeleton tower.

Nelly Point (53°17'N, 129°06'W) is the NW 312 extremity of Princess Royal Island.

Ursula Channel

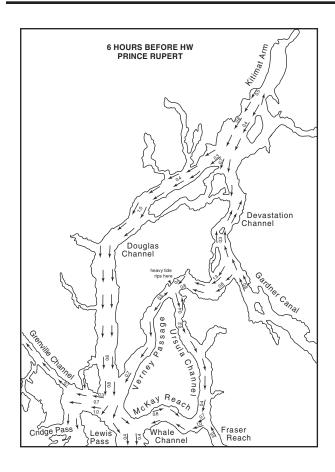
Charts 3742, 3944

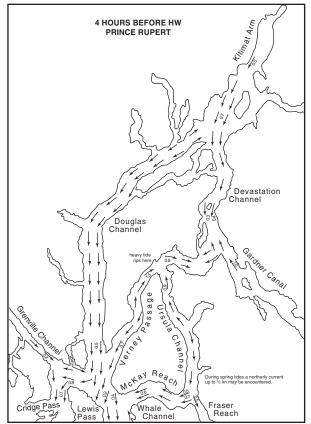
Ursula Channel (53°19'N, 128°54'W) connects 313 Princess Royal Channel to Verney Passage. The mountains on both sides of the channel rise abruptly from the coast.

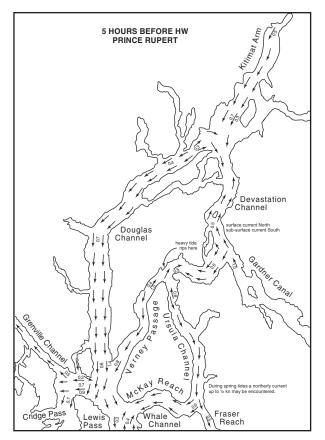
Tidal stream chartlets are given on adjacent 314 ←≪ pages.

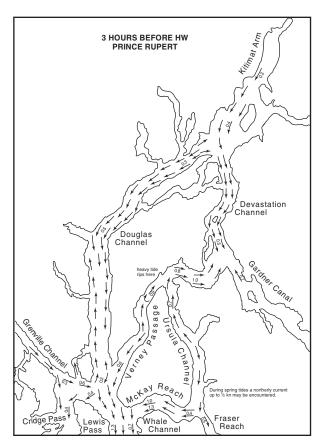
Note. — Tidal streams in Ursula Channel can 315 be increased or decreased by as much as 1 kn due to weather conditions. The range of tide appears to have little



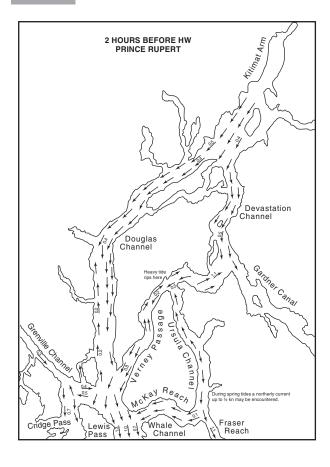


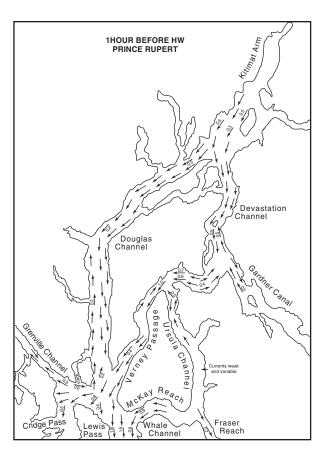


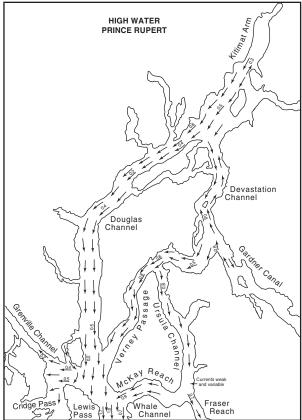


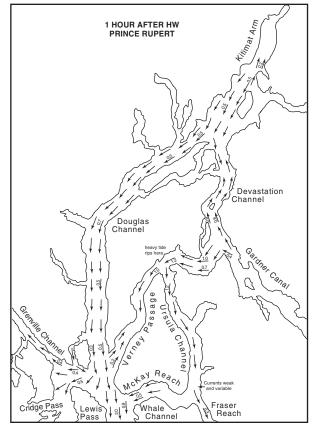


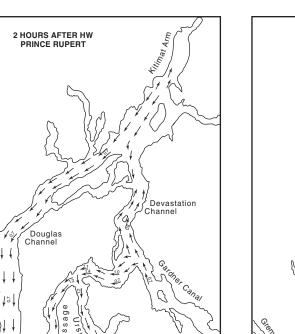
2-18 PAC 205 Inner Passage — Queen Charlotte Sound to Chatham Sound

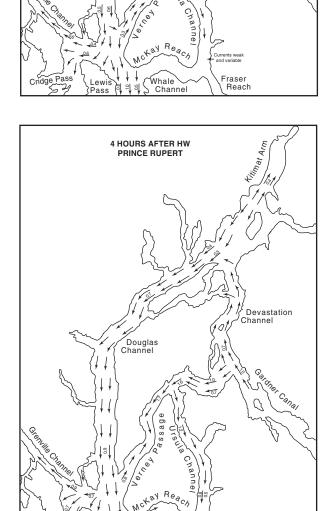










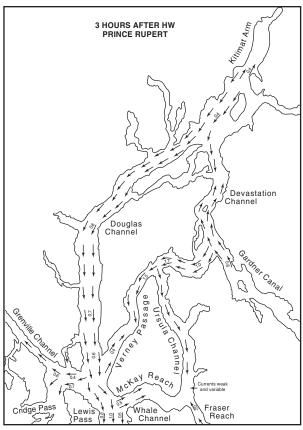


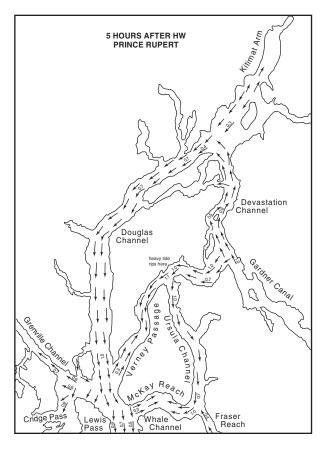
Lewis Pass

Cridge Pass

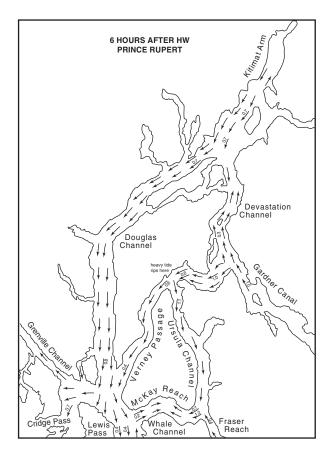
Fraser Reach

6





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effect on the streams though there are large inequalities in the tidal stream rates.

Due to the amount of fresh water drainage into 316 this channel the subsurface current can, at times, flow in an opposite direction to the surface current.

Chart 3944

Angler Cove $(53^{\circ}19'N, 128^{\circ}53'W)$, at the SE 317 entrance to Ursula Channel, has a small island connected to its south entrance point. The drying flat at the head of the cove is steep-to and a small stream enters the cove over it.

318 Angler Cove affords indifferent anchorage in 30 fathoms (55 m) with the island off its south entrance point bearing 210°; from this anchorage the depths decrease suddenly to the edge of the drying flat.

319 Goat Harbour, 2.5 miles north of Angler Cove, is entered south of Kid Point; depths are too great for convenient anchorage. The drying flat at the head of the harbour is steep-to. A hot springs is located here. A booming ground, log dump and access road are 1.1 miles NE of Kid Point.

Chart 3742

320 Shepherd Point (53°24'N, 128°55'W) is 2.5 miles NNE of Kid Point. Tomkinson Point, about 2 miles NE, is the south entrance point to Bishop Bay.

Tomkinson Point light (662) is shown at an 321 elevation of 13 feet (4.1 m) from a skeleton tower.

Bishop Bay (53°27'N, 128°53'W) is entered 322 between Tomkinson Point and Riordan Point. Shores are steep to and the water is deep for the most part. Bishop Bay – Monkey Beach Conservancy, at the head of the Bay, protects Bishop Bay Hot Springs one of the most popular marine hot springs and anchorage sites along the Inside Passage. There is a small boat dock, boardwalk, tent platforms, picnic shelter, pit toilet and bath house. Two mooring buoys, although marked Priv, are for public use. It is reported that anchorage is only fair to poor as the bottom slopes steeply into deep water, and that an uncharted shoal extends into the bay from shore a short distance south of the dock.

323 Boxer Reach extends from Riordan Point to Moody Point and Amy Point where it joins Verney Passage.

Bishop Cove is 3 miles NNW of Riordan Point and 324 close south of Egerton Point. An abandoned logging operation is in Bishop Cove. A private fishing camp and mooring **buoy** are in the cove 0.7 mile east of Moody Point (1998).

Gribbell Island Northeast light (661.6), SW 324.1 ٩ across from Bishop Cove, is shown at an elevation of 20 feet (6.0 m) from a skeleton tower.

A rock with less than 6 feet (2 m) over it lies off 325 Moody Point. A daybeacon with a starboard hand daymark is on Moody Point.

Wright Sound

Chart 3945

Wright Sound (53°21'N, 129°14'W) is the junction 326 of seven channels and forms part of the main Inner Passage leading north toward Alaska. The Inner Passage is heavily used by coastal vessels and consists, in this locality, of McKay Reach, Wright Sound and Grenville Channel. Whale Channel, Lewis and Cridge Passages all enter the south side of Wright Sound and are approach routes from sea-ward; they are described in Sailing Directions booklet PAC 206-Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters and Queen Charlotte Islands. On the north side of Wright Sound, Douglas Channel leads north toward Kitimat and Verney Passage leads NE to the junction of Gardner Canal and Devastation Channel leading to Kitimat.

2-2(



327 **Tidal stream chartlets** are given earlier in this chapter.

Tidal streams can be increased or decreased by as much as 1 kn due to weather conditions. From observations in Wright Sound, Douglas, Verney and Devastation Channels, the range of tide appears to have little effect on the velocity of the stream, though there are large inequalities in the tidal stream rates.

329 Due to the amount of fresh water drainage into these channels, the subsurface current can, at times, flow in an opposite direction to the surface current.

Home Bay, in the SE part of Wright Sound, is entered between Swirl Point ($53^{\circ}16'N$, $129^{\circ}05'W$) and Transit Point. A sand flat extends from the head of the bay and a rocky ledge, with above-water heads on it, fringes the south shore.

331 Anchorage for small vessels can be obtained in Home Bay in about 14 fathoms (26 m), sand bottom. In this anchorage Transit Point is in line with the SW extremity of Gribbell Island, and Mount Gil, on Gil Island, is just open north of Swirl Point.

332 **Maple Point** (53°17′N, 129°10′W) is on the east side of Gil Island at the junction of Wright Sound and Whale Channel. **Mount Gil**, 1.5 miles SW, has a well-defined peak near its north end.

Gil Rock, with less than 6 feet (2 m) over it, is 2 miles NW of Maple Point and about 0.2 mile offshore. Juan Point is 0.5 mile west of Gil Rock.

Fisherman Cove, at the north end of Gil Island, lies between **Turtle Point** and **Blackfly Point**. Most of the cove dries. It was named by Captain Vancouver to identify an anchorage just off its entrance.



334.1 Blackfly Point **light** (665.8) is shown at an elevation of 25 feet (7.7 m) from a skeleton tower.

335 **Anchorage** off the entrance to Fisherman Cove is indifferent and not recommended because of the steep drop-off in depths.

Promise Island (53°23'N, 129°15'W) has two domeshaped peaks, **Mount Brodie** and **Mount White**.

337 **Cape Farewell**, the south extremity of Promise Island, terminates in a high bold cliff. A rock 3 feet (0.9 m) high is close-off the cape.

Signal 338 Cape Farewell **light** (664) is shown at an elevation of 23 feet (7 m) from a skeleton tower.

339 **Coghlan Anchorage**, on the west side of Promise Island, is entered from Wright Sound between **Waterman Point** and **Thom Point**. A drying rock ledge extends about 300 feet (91 m) west from Thom Point.

340 **Caution**. — When entering Coghlan Anchorage keep in mid-channel to avoid the drying ledge off Thom Point.

341 **Tidal streams** set north through Coghlan Anchorage from about 4 hr. before HW at Prince Rupert. The south-going stream divides off Waterman Point with part turning east along the south shore of Promise Island and part turning west toward Grenville Channel. Tidal **stream chartlets** are given earlier in this chapter.

342 Coghlan Anchorage is sometimes used as a **booming ground** or log storage area and logbooms may be along both shores.

343 **Observation Point** is 1 mile NNW of Waterman
Point on the west side of Coghlan Anchorage. Harbour Rock,
0.5 mile north, lies nearly in mid-channel.

• 344 Harbour Rock **light** (651.5) is shown at an elevation of 11 feet (3.3 m) from a skeleton tower.

Otter Shoal, 1 mile NNW from Observation Point, extends from the NW shore of the anchorage. **Brodie Point**, 0.9 mile north of Observation Point, is the west extremity of Promise Island.

Anchorage can be obtained near the head of Coghlan Anchorage in 7 to 8 fathoms (13 to 15 m), sand bottom. In this anchorage Mount Gil is just open west of Thom Point and Letitia Point, on the NW coast of Promise Island, bears 053°.

- 346.1 Stewart Narrows West **light** (651.4), across from Letitia Point, is shown at an elevation of 10 feet
- (3 m) from a concrete tower fitted with a port hand daymark.

Anchorage to Douglas Channel along the north side of Promise Island. **Tidal streams** in the narrows are strong and the fairway is confined by ledges extending from both shores; it is therefore recommended for small craft only.

Stephens Point is at the NE end of the narrows.

348.1 Stewart Narrows East **light** (651.3) across from Stephens Point is shown at an elevation of 10 feet (3 m) from a mast fitted with a starboard hand daymark.

Verney Passage

Charts 3945, 3977

348

349 **Verney Passage** (53°22'N, 129°09'W) leads 20 miles NE from Wright Sound to the junction of Devastation Channel and Gardner Canal. The shores in Verney Passage are generally steep-to; depths in the fairway are for the most part great. A sill, with 13 to 16 fathoms (24 to 29 m) over it, crosses Verney Passage near the mouth of Ursula Channel.

350 **Tidal stream chartlets** are given earlier in this chapter.

Chart 3945

351 **Money Point** (53°23'N, 129°10'W) is the south extremity of Hawkesbury Island.

352 Money Point **light** (651) is shown at an elevation of 16 feet (4.8 m) from a skeleton tower.

Charts 3742, 3977

Jenkinson Point (53°27′N, 129°05′W), 4.8 miles NE of Money Point, is bold.

353.1 Verney Passage East light (661.5) east of Jenkinson Point is shown at an elevation of 22 feet (6.6 m) from a skeleton tower.

353.2 Verney Passage West **light** (661.4) north of Jenkinson Point is shown at an elevation of 22 feet (6.7 m) from a skeleton tower.

Fishtrap Bay (53°33'N, 129°01'W) is filled with drying flats. A drying spit extends 0.2 mile south into Verney Passage from its east entrance point.

355 Exposed **anchorage** can be obtained off the centre of the entrance to Fishtrap Bay, west of the drying spit, in 14 fathoms (26 m). In this anchorage **Mary Point** light bears 088° and Amy Point 153°.

356 Mary Point **light** (661), about 2 miles east of Fishtrap Bay, is shown at an elevation of 16 feet (4.9 m) from a skeleton tower.

A log dump with an access road is on the north shore 1.5 miles NW of Mary Point.

Danube Bay, 1.8 miles NNE of Mary Point, is too deep for anchorage. A gravel beach 0.1 mile wide, at the mouth of **Evelyn Creek**, is at the head of the bay.

Eva Point, 2.8 miles east of Mary Point, is prominent. A conspicuous hill, 0.5 mile north of the point, is 720 feet (219 m) high and is separated from the mountainous interior of Hawkesbury Island by low land.

359.1 Eva Point **light** (660.5) is shown at an elevation of 21 feet (6.5 m) from a skeleton tower.

360 **Staniforth Point**, 2.7 miles east of Eva Point, is at the junction of Gardner Canal, Verney Passage and Devastation Channel.

361

361 Staniforth Point **light** (660) is shown at an elevation of 20 feet (6 m) from a skeleton tower.

Gardner Canal

Chart 3977

362 **Gardner Canal** $(53^{\circ}34'N, 128^{\circ}49'W)$, entered north of Staniforth Point, is an inlet that trends about 45 miles SE. The shores are very steep and rise to high mountains on which there are some spectacular glaciers.

363 **Tides**. — Tidal differences in Gardner Canal, referenced on Kitimat, are given for Kemano Bay (Index No. 9150) in the Tide Tables, Volume 7.

Staniforth Point to Europa Point

364 **Crab River**, 1.7 miles east of Staniforth Point, is fronted by a gravel and boulder beach. The bay close south of the entrance to Crab River has broken piles close-off its shores; the depths in this bay are too great for anchorage. A First Nations reserve is on the north side of the river.

Rix Island lies in mid-channel. The main channel lies between Rix Island and Collins Point.

366 *Rix Island* **light** (656), on the NE point of the island, is shown at an elevation of 7 m from a white square tower with a red band on top.

367 **Collins Bay** is entered east of Collins Point. The bay is deep but **anchorage** for small craft can be obtained near the drying flat at the head of the bay; approach this anchorage with caution, especially at HW, because the drying flat is steep-to.

Ochwe Bay, SW of Rix Island, is too deep for anchorage. The **Paril River** flows into Ochwe Bay over an extensive drying flat. An abandoned **booming ground**, log dump and moorings are on the west side of the bay (2020).

369 **Triumph Bay**, south of Rix Island, is entered close west of **Walkem Point**. **Triumph River** flows into the head of Triumph Bay over an extensive drying flat, which is steep-to. A small islet, known locally as **Crew Island**, is at the edge of the drying flat. A white stone monument is on the islet.

Anchorage can be obtained in the wide part of Triumph Bay in depths of 22 fathoms (40 m). Small craft can find anchorage closer to the drying flat at the head of the bay but caution should be exercised as the drying flat is steep-to.

Anchorage can also be obtained in depths of 15 to 18 fathoms (27 to 33 m) on the ridge between Walkem Point and the south extremity of Rix Island.

Alan Reach, entered at its NW end between Walkem Point and Barker Point, extends 7 miles SE to Europa Point. Shearwater Point is on the north shore.

Chart 3948

373 Indifferent **anchorage** can be obtained in 15 to 20 fathoms (27 to 37 m) in the centre of the bight lying NE of Shearwater Point.

The bay 2 miles SE of Shearwater Point, known locally as Europa Bay, has a drying flat at the head. The *Shearwater Hot Springs Conservancy (BC Parks)*, known locally as Europa Hot Springs, is on the north side of the bay. There is a bath house and picnic shelter. Two **mooring buoys**, marked Priv, are for public use. A cabin, at the mouth of the creek on the SE side of the bay, is available for overnight use. Contact the *Haisla Nation* for use of the cabin. **KEMANO** (1988)



375 *Europa Point* light (657), on the point, is shown at an elevation of 6.6 m from a white square tower with a green band on top.

The Kiltuish Haisla Cabin (*Haisla Nation*) is in the cove of the creek across from Europa Point.

Europa Point to Kemano Bay

Kiltuish Inlet, 2 miles SE of Europa Point, has a narrow entrance encumbered with rocks, with less than 2 m over them, and drying ledges extend from its shores. Local knowledge is advised to safely navigate this entrance. Kiltuish River enters the head of the inlet over a drying flat.

377 **Europa Reach** extends from Europa Point to Cornwall Point. **Bare Point**, on the north shore, is cliffy and steep-to. **Allen Point** is on the south shore, 1.6 miles east of Bare Point.

378 Allen Point light (658) on the point, is shown at an elevation of 6.8 m from a white square tower with a red band on top.

379 **Salient Point**, 1 mile NE of Allen Point, is prominent and steep-to.

380 **Cornwall Point**, at the west end of Barrie Reach, has prominent bare cliffs forming the west side. **Owyacumish Bay**, to the north, is too deep for anchorage. **Owyacumish Creek** and **Brim River** flow into the head of the inlet over a drying flat.

381 *Cornwall Point* light (659), on the point, is shown at an elevation of 7 m from a white square tower with a red band on top.

382 **Barrie Reach** extends from Cornwall Point to Kemano Bay with **Icy Point** on the north shore and **Pocklington Point** on the south shore.

Kemano Bay

383 Kemano Bay (53°29'N, 128°07'W) is the site of facilities developed by the Aluminum Company of

Canada. Entrance Point, on the west side of the bay, is low and fringed by a drying ledge. A spit with a least depth of 1.5 m over it extends 0.2 mile south of Entrance Point. The west and north shores of the bay are fronted by extensive drying flats. Entrance Bluff and most of the east shore of the bay are steep-to.

383.1 Entrance Bluff Sector **light** (659.5) is shown at an elevation of 7.6 m from a skeleton tower.

Booming grounds lie along the west and north sides of Kemano Bay.

385 Anchorage can be obtained in Kemano Bay in depths of 30 to 77 m. Caution should be exercised inside the 20 m line as depths shoal rapidly toward the drying flats.

386 **Tides**. — Tidal differences for Kemano Bay (Index No. 9150), referenced on Kitimat, are given in the Tide Tables, Volume 7.

387 **Kemano**, in the NE corner of Kemano Bay, is built on the drying flats. A road leads 15 km across the drying flats and along the east bank of **Kemano River** to **Kemano** settlement. This settle-ment was built by the Aluminum Company of Canada to develop large hydroelectric sites to supply elec-tricity to the smelter in Kitimat. The townsite is now closed and there are no public facilities in Kemano Bay.

388 In the NE corner of Kemano Bay a narrow wharf extends from the causeway built across the drying flats; there is a depth of 6.4 m at the head of the wharf. A barge loading ramp and a boat launch ramp are in the area NE of the wharf.

389 **Communications**. —A private ferry, operated by the Aluminum Company of Canada, operates between Kemano Bay and Kitimat.

Kemano Bay to Kitlope River

390 Whidbey Reach (53°26'N, 128°06'W) extends 12 miles SE from Kemano Bay to Queen Point.

2-23

391 Chief Mathews Bay, entered west of Courageux Point, is too deep for anchorage. The Kowesas River flows across an extensive drying flat at the head of the bay. Queen Point, 5 miles SE of Courageux Point, is prominent.

Egeria Reach extends 5 miles south and SE where it terminates in an extensive drying flat at the head of Gardner Canal. The drying flat is composed of sand and mud and has grass on it that covers only at HW.

393 **Price Cove**, 3 miles south of Queen Point, is filled with a drying flat. Small vessels can obtain **anchorage** in 15 to 20 fathoms (27 to 37 m) off the drying flat.

394 **Kitlope Anchorage** at the head of Gardner Canal has silted in. Mariners are still using this area as an anchorage, but caution must be used when approaching due to changing depths.

395 **Kitlope River** flows into the head of Gardner Canal through a broad wooded valley. **Tsaytis River** and **Icy Creek** flow into the head of the canal from the NE and SW respectively.

Devastation Channel

Chart 3977

Devastation Channel (53°35'N, 128°50'W) leads 12 miles north from its junction with Verney Passage and Gardner Canal and joins Kitimat Arm. The shores of the channel are steep-to.

397 **Tidal stream chartlets** are given earlier in this chapter.

398 Note. — There is a noticeable difference in current velocities between spring and neap tides in this channel which is not apparent in the adjoining channels, and spring tides increase the rate of both the north-going and south-going streams by as much as ½ to 1 kn.

399 **Staniforth Bank**, at the south end of the channel, has a least depth of 13 fathoms (24 m) over it.

400 Sheltered **anchorage** is available in 13 fathoms (24 m) in **Kitsaway Anchorage**, between the north end of **Kitsaway Island** and Hawkesbury Island. Small craft can anchor farther south, off the drying bank.

401 **Dorothy Island**, in the middle of Devastation Channel, is conspicuous. **Dorothy Narrows**, the passage east of the island, is the one generally used. **Anderson Point** is at the SE end of the narrows. **Heysham Creek** flows into the east shore south of Anderson Point.

402 Dorothy Island **light** (655), on the NE point of the island, is shown at an elevation of 14 feet (4.4 m) from a skeleton tower.

403 A **booming ground**, log dump and a float camp are along the shore north of **Pike Creek** (1995).

404 **Weewanie Creek**, 2.5 miles NE of Dorothy Island light, empties into a small bay that dries. The remains of a logging operation are in this bay.

405 **Weewanie Hot Springs** are in a cove about 0.5 mile north of Weewanie Creek; these hot springs have been developed by the Kitimat Aquanauts Scuba Club. Two **mooring buoys** and an old log dump are in the cove.

Gaudin Point, the NE extremity of Hawkesbury Island, is bold. Hugh Creek enters the channel 1.8 miles ENE of Gaudin Point. Walbran Point and Hopkins Point, 3 miles north of Gaudin Point, are the north entrance points of Devastation Channel.

Douglas Channel

Chart 3742

407 **Douglas Channel** (53°23'N, 129°12'W) leads 30 miles north and NE from Wright Sound to the junction of Kitimat Arm and Devastation Channel. Depths in Douglas Channel are great and the shores are steep-to, rising to high mountains a short distance inland. The NW shore is indented by several inlets. **Hawkesbury Island** separates Douglas Channel from Verney Passage and Devastation Channel.

408 **Tides**. — Tidal predictions for Kitimat (Index No. 9140), at the head of Douglas Channel, and tidal differences for Hartley Bay (Index No. 9130), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

409 **Tidal streams** in Douglas Channel are noteworthy in that the stream is predominantly south-going due to the large runoff of fresh water from the rivers emptying into the channel. A slight north-going stream, of about ¹/₄ kn, may be encountered abreast Promise Island from 3 hours before to HW at Prince Rupert; this current is felt along the west shore of the channel as far north as Kitkiata Inlet. North winds reduce or eliminate the north-going stream; south winds tend to increase its strength and duration. **Tidal stream chartlets** are given earlier in this chapter.

Chart 3945

Hartley Bay and Approaches

410 Dawson Point (53°25'N, 129°14'W) is the north extremity of Promise Island. Nessie Point, west of Dawson Point, is the south entrance point to Malsey Bay, which dries.
411 Hartley Bay is north of Dawson Point between Sutton Point and Halsey Point. Hartley Bay Indian settlement has a church, a helipad and post office (V0V 1A0). An L-shaped rock breakwater extends over

HARTLEY BAY (1988)



and across the front of the drying flat. A **wharf** and a three-fingered **float** are behind the breakwater in the basin dredged to 11 feet (3.4 m) (1984). Fuel and garbage disposal facilities are on the wharf. The **floats** at Sutton Point are for aircraft.

411.1 Halsey Point **light** (651.6) is shown at an elevation of 23 feet (7 m) from a skeleton tower.

412 **Marina** facilities are listed in the Appendices.

413 Hartley Bay breakwater **light** (651.2), on the end of the breakwater, is shown at an elevation of 26 feet (7.9 m) from a skeleton tower.

413.1 A **barge loading facility** is in the NE part of the bay. A submerged rip-rap reef marked by a private buoy is close SE of this facility.

414 A **submarine pipeline** (sewer outfall) is laid on the SW side of the bay and extends about 300 feet (91 m) beyond Sutton Point.

414.1 A submarine cable is laid on the east side of the bay and extends approximately 114 m SW, and then 0.2 mile SE to an underwater platform at a depth of 96 m.
 415 Water aerodrome. — Douglas Channel fronting Hartley Bay is a water aerodrome.

415.1 Two **obstructions** with depths of 21 fathoms (38 m) and 77 fathoms (141 m) are close to shore on the east side of Douglas Channel, about 5 miles north of Hartley Bay.

Chart 3977

Halsey Point to Gertrude Point

416 **Kiskosh Inlet** $(53^{\circ}31'N, 129^{\circ}15'W)$, with the exception of the first 0.5 mile, is only suitable for small craft. A

rock with 6 feet (2 m) over it lies 0.7 mile within the entrance, slightly north of mid-channel. Inside the above-mentioned rock the shores of the inlet are fringed with drying ledges for about 1.5 miles; these drying ledges reduce the channel to less than 0.1 mile wide and the fairway is shallow. A rock with less than 6 feet (2 m) over it lies in mid-channel 2 miles within the entrance. The inner portion of Kiskosh Inlet widens and depths increase. The entrance to a lagoon at the head of the inlet is choked with drying rocks.

416.1 Kiskosh Inlet **light** (651.7) at the entrance to the inlet is shown at an elevation of 23 feet (7 m) from a skeleton tower.

417 Anchorage, suitable for vessels up to 250 feet (76 m) long, can be obtained about 0.4 mile within the entrance to Kiskosh Inlet with the north entrance point bearing 064° and the south entrance point bearing 135°. Care must be taken not to anchor too far inside the inlet as depths shoal suddenly.

418 **Kitkiata Inlet**, 6 miles north of Kiskosh Inlet, is entered between **Helen Point** and **Gertrude Point** but most of the inlet is filled with an extensive drying flat. The **Quaal River** flows into the head of the inlet over the drying flat. A **breakwater** and dolphins, on the north shore about 1 mile west of Gertrude Point, are the remains of a logging operation. A **bridge**, vertical clearance unknown, crosses the mouth of **Kitkiata Creek**.



418.1 Helen Point light (651.9) is shown at an elevation of 25 feet (7.6 m) from a skeleton tower.
419 Anchorage can be obtained in Kitkiata Inlet

in 22 fathoms (40 m) with Gertrude Point bearing 067° and Helen Point bearing 159°.

2-25

421 Hawkesbury Island **light** (652.2), on the west coast of the island about 1.9 miles ESE of Gertrude Point, is shown at an elevation of 16 feet (4.8 m) from a skeleton tower.

Gertrude Point to Hilton Point

422 **Grant Point**, 6.3 miles NE of Gertrude Point, is at the west extremity of **Maitland Island**.

423 Maitland Island Southwest End light (652.5), 0.4 mile NE of Grant Point, is shown at an elevation of 22 feet (6.5 m) from a skeleton tower.

423.1 Douglas Channel **light** (652.4), west of Grant Point, is shown at an elevation of 23 feet (7 m) from a skeleton tower.

424 A **conspicuous waterfall** is on the mainland coast about 1.8 miles west of Grant Point. **Kihess Creek** and **Stair Creek** flow into the channel between Gertrude and Paisley Points.

425 **Paisley Point**, 4.2 miles NNE of Grant Point, is the west entrance point to **Drumlummon Bay**; there is no satisfactory anchorage in this bay.

Foch Lagoon, at the head of Drumlummon Bay, has a narrow entrance with depths in its fairway of 12 feet (3.7 m). The lagoon can only be entered by small craft at or near slack water; at other times, the strength of the tidal streams makes entrance impossible or extremely hazardous. In the entrance to Foch Lagoon HW slack occurs between 30 minutes and 1 hour after HW at Prince Rupert; LW slack can occur as late as 2 hours after LW at Prince Rupert.

427 **Emilia Island**, 2 miles east of Paisley Point, is conspicuous.

428 Emilia Island **light** (653), on the SE side of the island, is shown at an elevation of 16 feet (4.9 m) from a skeleton tower.

429 **Point Ashton** is 1 mile NE of Emilia Island. An islet and a rock on a drying ledge lie up to 0.5 mile SW of the point. 430 **Gilttoyees Inlet** (53°50'N, 128°58'W) terminates in an extensive drying flat at the mouth of **Gilttoyees Creek**. On the east shore of the inlet, about 0.8 mile north of Point Ashton, shoal water extends 0.2 mile from shore.

431 **Miskatla Inlet** has below-water rocks and drying ledges close to its east shore.

432 **Anchorage** can be obtained in mid-channel, about 0.7 mile north of Point Ashton, in 10 to 20 fathoms (18 to 37 m); take care to avoid the shoal water extending from the east shore. The entrance to Miskatla Inlet also affords anchorage in about 15 fathoms (27.4 m).

433 **Directions.** — Gilttoyees Inlet can be entered on either side of Emilia Island; when using the entrance east of Emilia Island give the 65 foot (20 m) high islet a wide berth to avoid the drying ledge extending SW from it. Small craft can also enter between Point Ashton and the islet. The west shore of Gilttoyees Inlet should be favoured to avoid the shoal water north of Point Ashton. The wooded island, 3 miles north of Point Ashton, should be passed on its west side. The north part of the inlet can be navigated safely on a mid-channel course. Miskatla Inlet requires no special directions other than to maintain a mid-channel course.

434 **Kersey Point**, 3 miles east of Point Ashton, is the NE extremity of Maitland Island.

435 Kersey Point **light** (654) is shown at an elevation of 18 feet (5.4 m) from a white tower.

Sue and Loretta Channels

436 Sue Channel (53°41'N, 129°05'W) has a least depth of 90 feet (27.4 m) through the fairway, encountered about 1 mile within the west entrance. The fairway is narrowed to a width of 0.1 mile, 2 miles within the west entrance, by a gravel bank extending off the mouth of a small stream on the Hawkesbury Island shore. A large conspicuous stump is grounded on the end of this gravel bank (1988). A rock that dries 8 feet (2.4 m) lies close-off the Hawkesbury Island shore, about 4.5 miles within the west entrance. A rock, 7 feet (2.1 m) high, is 0.3 mile SW of the SW extremity of Loretta Island. A drying reef lies 0.3 mile south of the above-mentioned rock, close-off the Hawkesbury Island shore. A bay on the south side of Loretta Island has booming grounds in it and an islet off its east entrance point. The passage east of the islet is encumbered by a rock with less than 6 feet (2 m) over it, and a rock 5 feet (1.5 m) high.

437 **Anchorage**, in 19 fathoms (35 m), can be obtained about 0.5 mile from the head of the bay in Loretta Island. It is well-sheltered with good holding ground. Good anchorage in 19 fathoms (35 m) can also be obtained in the bay on the south shore of Sue Channel, due south of the SW end of Loretta Island.

438 **Loretta Channel**, between Maitland and Loretta Islands, is deep in the fairway and the shores are steep-to. An islet, with a shoal close NE of it, lies in mid-channel.

Kitimat Harbour

439 **Kitimat Arm** extends NE from the junction of Douglas and Devastation Channels and terminates in low land fronted by an extensive drying flat with the **Port of Kitimat** facilities on its west side. The Port of Kitimat consists of privately owned and operated waterfront facilities.

440 **Pilotage** is compulsory; for information on obtaining a pilot *see* Sailing Directions booklet *PAC 200 — General Information, Pacific Coast.*

441 **Tides**. — Tidal predictions for Kitimat (Index No. 9140) are given in the Tide Tables, Volume 7.

2-27

442 **Tidal streams** in Kitimat Arm attain 1 kn on the ebb and ½ kn on the flood. **Tidal stream chartlets** are given earlier in this chapter.

443 **Meteorological information** for Kitimat is given in the Appendices.

444 **Hilton Point** (53°49'N, 128°52'W) is prominent and steep-to. The bay, on the south side of the point, has a mud flat at its head. Depths within this bay are too great for satisfactory anchorage. **Jesse Falls**, about 1.3 miles north of Hilton Point, are conspicuous. *Jesse Falls Protected Area (BC Parks)* encompasses the falls. No facilities are available. **Nanakwa Shoal**, 1 mile east of Jesse Falls, has a least depth of 17.4 m.

445 *Hilton Point* light (654.2), on the point, is shown at an elevation of 6.9 m from a white square tower with a green band on top.

446 Nanakwa Shoal ODAS **light buoy** "46181"(654.5), on the shoal, is equipped with a number of subsurface floats. Mariners are advised to give this buoy a wide berth.

447 **Markland Point**, on the NW shore, about 3.3 miles NE of Hilton Point, forms the east side of an exposed bay. A **rock** that dries 0.5 m lies about 0.1 mile offshore at the head of the bay and depths less than 10 m extend more than 0.1 mile SW from the rock.

448 **Coste Island**, east of Markland Point, fronts the entrance to Kildala Arm. **Coste Rocks** are a group of above-water, drying and below-water rocks lying between 0.7 and 1.3 miles SW of **Louis Point**, the south extremity of Coste Island. *Coste Rocks Provincial Park (BC Parks)* encompasses the rocks. No facilities are available. **Brentzen Rock**, with 3.5 m over it, is 0.2 mile NE of **Coste Point**, the north extremity of Coste Island.

448.1 *Coste Island* **light** (654.7), on the island, is shown at an elevation of 6.9 m from a square skeleton tower.

448.2 *Coste Rocks* light (654.4), on the rock, is shown at an elevation of 11.8 m from a white square tower with a red band on top and is fitted with starboard hand daymarks.

449 **Amos Passage**, between Coste Island and the mainland to the east, is deep and, with the exception of Coste Rocks and Brentzen Rock, free of dangers.

449.1 *Amos Passage* light (654.8), at the north end of the passage on an islet, is shown at an elevation of 7.2 m from a white square tower with a red band on top.

450 **Eagle Bay**, on the east side of Amos Passage, is entered between **Legeak Point** and **Steel Point**. A rock that dries 2.4 m lies close-off Legeak Point. The bay offers good **anchorage** to small craft in 20 m about 0.2 mile from its head. *Eagle Bay Provincial Park (BC Parks)* encompasses the bay. A cabin, available for overnight use, and pit toilets are available at the head of the bay. Contact the *Haisla Nation* for use of the cabin. No other facilities exist. A First Nations reserve is on the NE side of the bay. A treed islet and a rock that dries 4 m lie close offshore 1.2 miles NNE of Steel Point.

451 **Gobeil Island**, on the east side of Amos Passage near its junction with Kildala Arm, has above-water and drying rocks close-off it.

452 **Kildala Arm** (53°52'N, 128°41'W) is entered north or south of Coste Island by Amos Passage.

454 **Kobeil Bay**, known locally as **Mud Bay**, is on the north side of the entrance to Kildala Arm. Small craft can find indifferent anchorage at the head of the bay. A cabin, in the next bay east, is available for overnight use. Contact the *Haisla Nation* for use of the cabin. A First Nations reserve is at the NW point of the bay.

455 **Atkins Bay**, 4.3 miles ESE of Gobeil Bay, affords no anchorage. A cabin, on the north side of the bay at the creek, is available for overnight use. Contact the *Haisla Nation* for use of the cabin.

456 **Dala River, Falls River** and **Kildala River** flow into the head of Kildala Arm across extensive drying flats. *Dala-Kildala Rivers Estuaries Bay Provincial Park (BC Parks)* encompasses the head of Kildala Arm. No facilities are in the park. A cabin, at Falls River, is available for overnight use. Contact the *Haisla Nation* for use of the cabin. A First Nations reserve is on the east shore of the arm between the Dala and Kildada Rivers.

456.1 Caution. — Depths at the head of Kildala Arm are subject to change as a result of silting and scouring.

457 **Kildala Arm** (landing) is at the head of the arm east shore, just north of the edge of the Kildala River drying bank. A small **float** is at the landing. Conspicuous buildings are onshore above the float.

Chart 3908

458 **Emsley Point**, on the west side of Kitimat Arm, forms the east shore of **Emsley Cove**, which does not afford anchorage and is partially filled with a steep-to stone and gravel drying flat. A First Nations reserve is in the cove on the south side of the creek.

Bish Creek, which enters Kitimat Arm about 1.8 miles NE of Emsley Point, is fronted by a gravel flat extending about 0.2 mile offshore. The cove on the west side of the mouth of Bish Creek affords indifferent anchorage to small vessels in 20 to 40 m. A dock, barge loading ramp, and wharf that are privately owned and protected by a **floating breakwater** are in this cove. Numerous piles in ruins line the west shore of this cove.

460 **Clio Bay**, north of Amos Passage and on the east side of Kitimat Arm, is entered between **Clio Point** and **Raley Point**. Clio Bay affords **anchorage** to small craft in depths of 10 to 20 m near the drying bank at its head.

| Berth | Wharf Length (m) | Least Depth (m) | Elevation (m) | Remarks |
|----------------------------------|---------------------|--------------------|---------------|---|
| Alcan Terminal Wharf No. 1 | 229.5 | 10.5 | | Operated by Alcan Aluminium Ltd. (250)639-8000. Access by 732x244 m dredged channel. Imports bulk alumina, pitch, coke and fluoride. Exports aluminum ingots. Open storage. |
| Methanex Terminal | 80 | 12.9 | | Operated by Methanex Corporation (250)639-9292 Berthing area 430 m north/south and 90 m east/west. Mooring dolphins north and south of berth; distance between breasting pads approx. 78 m and overall length between dolphins 300 m. |
| Eurocan Terminals Berth 1 | 137 | 13.7 | | Operated by Eurocan Pulp and Paper Co. (250)639-3518. Linerboard, sackkraft paper, lumber and SPF woodchips. Mooring dolphins at each end. Open storage. Warehouse capacity 73,2000 m ² . |
| Eurocan Terminals Berth 2 | 137 | 10.7 | | Operated by Eurocan Pulp and Paper Co. (250)639-3518. Linerboard, sackkraft paper, lumber and SPF woodchips. Mooring dolphins at each end. Open storage. Warehouse capacity 73,2000 m ² . |
| Eurocan Terminals Barge Berth | | | | Chip loading facility 265 bone dry tons/hour at north end terminal. Log storage west side of terminal. |

Major Port Facilities — Kitimat

It is reported that logging debris on the bottom can foul an anchor.

461 *Clio Point* **light** (654.9), 0.4 mile SW of the point, is shown at an elevation of 7.9 m from a white square tower with a red band on top.

462 **Wathlsto Creek**, on the east shore, is 2 miles NNE of Raley Point.

463 A **Spoil Ground** (disposal site), under permit through the *Canadian Environmental Protection Act*, is located at 53°57.5'N, 128°40.9'W.

464 **Kitamaat Village** (53°58'N, 128°39'W) is a small community on the east side of Kitimat Arm, close south of **Wathl Creek**. The **Haisla** Post Office (V0T 2B0) is in the village. An extensive drying flat, on which there are numerous large stumps and deadheads, fronts the village and the mouth of Wathl Creek.

465 A **submarine pipeline** (sewer outfall) extends 0.2 mile across the drying flats and into Kitimat

Arm. A **submarine cable** (power) close north of the pipeline extends from the shore 0.2 mile into Kitimat Arm, 0.1 mile north and then 0.1 mile SW to an underwater platform at the approximate depth of 65 m.

466 Kitimaat Village **floats**, operated by the *Haisla* Nation, 0.7 mile south of the mouth of Wathl Creek, are protected by a **floating breakwater**. A launching **ramp** is available close north of the floats.

467 *MK Bay Marina* **floats** and facilities, in the cove north of the mouth of Wathl Creek, is protected by rock and floating **breakwaters** and offers permanent and transient moorage. **Marina** facilities are listed in the Appendices.

468 Privately operated **lights** are on the breakwaters at the marina.

470 **Conspicuous towers** of the power transmission line from Kemano extend north from Wathl Creek along the

east shore and across the drying flat at the head of Kitimat Arm. The vertical clearance of the power line across the drying flats is 23 m.

471 Private mooring **buoys** are on the west shore opposite Kitimaat Village.

472 Caution. — Depths at the head of Kitimat Arm are subject to change as a result of silting and scouring.

473 Major Port facilities in Kitimat, all privately owned, are at the head of Kitimat Arm and are presented in the adjacent table. For latest depths and terminal information contact the terminal operator.

Kitimat townsite is about 13 km inland from the port facilities, on the NE side of the **Kitimat River**. The townsite has shopping centres, a liquor store, a post office (V8C 2G5), a hotel and motels, schools, banks, and a hospital with a heliport. An RCMP detachment is stationed here.

475 **Boating Restriction Regulations** prohibit the use of power driven vessels on the Kitimat River.

477 Temporary **anchorage** for vessels awaiting berth at Kitimat can be obtained approximately 0.2 mile SW of the LNG Canada Marine Terminal wharf in about 83 m, mud bottom. The anchorage is indifferent, being on a narrow bank with limited swinging room. While at anchor a radio watch should be maintained on 156.55 mHz, Channel 11.

478 *Rio Tinto Terminal*, at the head of Kitimat Arm, is at the NW corner of the arm. Details of the terminal are given in the Major Port Facilities table earlier in this chapter.

479 Methanex Corporation **light range**, on the causeway north of the berth, in line bearing $001\frac{1}{2}^{\circ}$, leads to the Methanex berth. The front and rear lights are shown from masts fitted with white daymarks with red vertical stripes.

481 *LNG Canada Marine Terminal*, at the head of Kitimat Arm, is 0.4 mile east of the *Rio Tinto Terminal*.



Details of the terminal are given in the Major Port Facilities table earlier in this chapter.

482 Privately operated **lights** are on the southernmost mooring dolphin and the south end of the Methanex Corporation berth.

483 **Light buoys**. — A port hand **light buoy** marks the west side and a starboard hand **light buoy** the east side of the dredged channel to Terminal Wharf No. 1. Both buoys are privately operated.

484 Four private **mooring dolphins** are on the west side of the dredged channel leading to Terminal Wharf No. 1. These mooring dolphins are suitable for vessels up to 175 m long and are used by vessels waiting for a berth.

The Kitimat Yacht Club is in a basin approached via a channel, dredged to a depth of 1.2 m and a width of 43 m, leading north from the north end of Terminal Wharf No. 1. The basin, 79 by 91 m, is dredged to a depth of 1.3 m. Fresh water is available at the floats.

487 Three berthing facilities lie 0.3 mile south of Rio Tinto Terminal Berth 2. The southernmost is a barge loading ramp with berthing dolphins belonging to Lihigh Cement. Close north is a wharf used by Rio Tinto Nechako for small passenger ferries that operate to Kemano. Farther north is the SAAM Towage wharf. A public launching **ramp** is close north of the SAAM Towage wharf.

487.1 *Royal Canadian Marine Search and Rescue* (*RCM-SAR*) *Unit 63* are close north of the Rio Tinto Nechako wharf.

488 **Towing services**. — Tugs of 1800 hp for berthing vessels are operated by *SAAM Towage*.

489 **Supplies**. — Fresh water is available at the wharves. Ships stores, food supplies, diesel fuel, gasoline and lubricants are available in small quantities; advance notice is required for large amounts.

490 **Communications**.—A highway connects Kitimat to the city of Prince George, 637 km inland; from Prince George highways lead south to Vancouver (784 km), east to the interior and north to Alaska. Canadian National Railways branch line from Kitimat connects with the main line at Terrace, about 64 km inland.

491 A gravel landing strip 914 m long is at Kitimat. The nearest airport is at Terrace, about 64 km from Kitimat. A limousine service operates between Kitimat and the airport, which has regular air service to Vancouver.

492 **Minette Bay**, at the head of Kitimat Arm, is obstructed at its entrance by extensive drying flats. The entrance channel, which is accessible only at HW, lies close to the east shore. There are numerous snags and stumps in the area and local knowledge is advised. The basin near the head of the bay has depths of 10 to 37 m. 493 **Overhead cables**, with a vertical clearance of 23 m, cross the drying flats at the entrance to the bay.

494 **Booming grounds** line the east shore of the basin in Minette Bay and log dumps are on both sides of the basin.

495 *Minette Bay Marina* **floats**, near the head of the basin on the east shore of Minette Bay, offers permanent moorage only. No facilities are available.

Grenville Channel

Charts 3945, 3946

496 **Grenville Channel** (53°22'N, 129°19'W), which leads 45 miles NW from Wright Sound, is part of the main Inner Passage route leading north toward Alaska.

497 The channel is deep throughout except near its NW end where some shoals lie along the south side of the fairway. The narrowest part of Grenville Channel is 0.2 mile wide in the vicinity of Ormiston Point. Both sides of the channel are mountainous and for the most part densely wooded.

498 **Tides**. — Tidal differences in Grenville Channel, referenced on Bella Bella, are given for Lowe Inlet (Index No. 9195) in the Tide Tables, Volume 7.

499 **Tidal streams** flood from seaward through the NW and SE entrances of Grenville Channel and meet off Evening Point $(53^{\circ}40'N, 129^{\circ}45'W)$; the separation of the ebb tidal stream takes place about 1 mile farther NW. These meeting and separation points of the tidal streams are subject to considerable change, depending on the winds outside. At springs the streams in the narrow portion of Grenville Channel attain 2 kn. The ebb streams continue to run for 1 h 30 min after LW by the shore.

500 Strong eddies can be encountered abreast Lowe Inlet with the ebb stream.

Chart 3946

Sainty Point to Ormiston Point

501 **Sainty Point** (53°22'N, 129°19'W) is at the SE end of Grenville Channel. **Mount Pitt** rises 2.2 miles NW.



502 Sainty Point **light** (665) is shown at an elevation of 15 feet (4.6 m) from a white tower.

503 Yolk Point, 0.9 mile SW of Sainty Point, is the east extremity of Farrant Island, which attains its maximum elevation about 1 mile WSW of the point. Davenport Point, 4 miles NW of Yolk Point, is the north extremity of Farrant Island.

504 **Pitt Island** is separated from Farrant Island by Union Passage. Hawkins Narrows and Union Passage are described in Sailing Directions booklet *PAC 206 — Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters* *and Queen Charlotte Islands*. **Red Bluff Creek**, 5.5 miles NW of Davenport Point, enters the south side of a cove on the coast of Pitt Island across a drying flat.

505 **Mosley Point** is 1 mile east of Red Bluff Creek. **Belowe Creek** flows across a drying flat close south of the point. The **Countess of Dufferin Range** extends along the NE side of Grenville Channel between Mosley Point and Lowe Inlet. **Anchor Cone**, near the north end of Countess of Dufferin Range, has a remarkable conical summit.

505.1 A **safety zone** has been established around a wreck, which has **unexploded ordnances** on board, on the west side of Grenville Channel, 0.6 mile ENE of Sylvan Peak. The Brigadier General M G Zalinski was a US Army transport vessel that sank in 1946. This steel hulled vessel was 77 m long, 13 m wide and now rests upside down in approximately 27 m of water with about 20 m of water over it. Weakness and cracking in the hull are resulting in oil seepage. Mariners are requested not to anchor or fish within 200 m of the wreck.

Lowe Inlet $(53^{\circ}33'N, 129^{\circ}35'W)$ is entered between Hepburn Point and James Point. At Don Point the fairway is reduced to about 0.1 mile wide by shallow ledges on both sides. A group of drying and below-water rocks, the largest of which dries 22 feet (6.7 m), lies about 450 feet (137 m) off the west shore at the north end of these ledges. Whiting Bank extends across the inlet between Don Point and the west shore.

507 **Nettle Basin**, at the head of Lowe Inlet, is entered between **Pike Point** and **Mark Bluff**; both entrance points are fringed by reefs, which reduce the fairway to about 450 feet (137 m) wide. The extremity of Pike Point has the appearance of an islet. **Kumowdah River** flows into the east end of Nettle Basin over **Verney Falls** and drains **Lowe Lake**, which lies to the north. Pilings in ruins are on the north shore of Nettle Basin.

508 **Lowe Inlet Marine Park** encompasses Lowe Inlet and Nettle Basin; it is undeveloped.

Anchorage can be obtained in Lowe Inlet about 0.2 mile SW of Pike Point in 17 fathoms (31 m). Small craft can anchor close inshore south of Don Point or in Nettle Basin, close to the north side of Pike Point. These anchorages should be used with caution due to strong winds funneling down the valley at the head of the inlet. 510 Tom Island, 0.2 mile NW of James Point, lies close to the NE shore of Grenville Channel. The Bare Top Range extends along the NE side of Grenville Channel, north of Lowe Inlet.



511 Tom Island **light** (666) is shown at an elevation of 11 feet (3.5 m) from a skeleton tower.

512 **Burnaby Range** lies along the SW side of Grenville Channel, opposite Lowe Inlet; at the north end of Burnaby Range a broad valley enters Pitt Island. **Ormiston Point**, 2.5 miles NW of Tom Island, is on the north side of the abovementioned valley.

513 Ormiston Point **light** (667) is shown at an elevation of 15 feet (4.6 m) from a white tower.

Ormiston Point to Klewnuggit Inlet

514 **Saunders Creek** flows into Grenville Channel 2.6 miles NW of Ormiston Point.

515 Saunders Creek **light** (668), on the NE side of Grenville Channel opposite Saunders Creek, is shown at an elevation of 12 feet (3.7 m) from a skeleton tower.

516 **Stella Creek**, on the west shore, and **Batchellor Creek**, on the opposite shore, are about 3.5 miles north of Saunders Creek.

517 **Nabannah Bay**, 4.5 miles NW of Saunders Creek light, between **Evening Point** and **Morning Point**, is fronted by **Barrier Rock**, which has drying and below-water rocks extending NW and SE from it.

518 **Morning Reef** extends 0.35 mile NW of Morning Point and consists of several drying rocks and some rocks with less than 6 feet (2 m) over them.

519 **Lights**. — Klewnuggit **light** (669), on the NW drying rock of Morning Reef, is shown at an elevation of 16 feet (5.0 m) from a white cylindrical tower.

520 **Pitt Island (Grenville Channel) light** (670), on Pitt Island 2.4 miles NW of Morning Reef, is shown at an elevation of 12 feet (3.7 m) from a skeleton tower.

Klewnuggit Inlet

521 Klewnuggit Inlet (53°41'N, 129°44'W) is entered between Rogers Point and Silas Point. A small islet and a rock that dries 11 feet (3.4 m) lie within 0.1 mile NW of Rogers Point. Harriot Island, 0.5 mile NE of Rogers Point, is separated from the north shore of Klewnuggit Inlet by a narrow channel with below-water rocks in it. West Islet lies close-off the SW side and Bare Islet lies close-off the south extremity of Harriot Island. Purple Cliff is on the south side of Klewnuggit Inlet, about 0.5 mile SE of Rogers Point.

522 Ship Anchorage lies to the east and north of Harriot Island. A reef that dries 1 foot (0.3 m) and a below-water rock lie 0.1 mile east of the north end of Harriot Island. Small vessels can obtain **anchorage** in Ship Anchorage off the east side of Harriot Island in 21 fathoms (38 m), mud bottom.

523 **East Inlet** has drying reefs and below-water rocks near the head. When entering, note the shoal water extending from the west entrance point. The basin at the NW end of East Inlet lies west of a relatively low peninsula; its entrance is about 300 feet (91 m) wide with a depth of 46 feet (14 m) through it.



524 Klewnuggit Inlet Marine Park encompasses East Inlet, Brodie Lake and Freda Lake. It is undeveloped.

525 Anchorage can be obtained at the south end of East Inlet in 15 fathoms (27.4 m). Small craft can obtain well-sheltered anchorage in the basin at the head of East Inlet in 9 fathoms (16.5 m).

526 **Exposed Inlet**, at the south end of Klewnuggit Inlet, terminates in a swamp fronted by drying sand flats. When entering, take care to avoid the rock that dries 20 feet (6 m) lying at the end of a drying reef extending from the east shore.

Klewnuggit Inlet to Baker Inlet

527 **Ormond Point** (*53°44'N*, *129°50'W*) has a reef that dries 16 feet (4.9 m) 0.2 mile SE of it.

528 **Kxngeal Inlet**, entered east of the abovementioned reef, affords **anchorage** for small vessels in 17 fathoms (31 m) near the head.

529 Between Ormond Point and **Griffon Point**, 6 miles NW, several drying reefs lie close-off the NE shore. **Northness Point** lies midway along this stretch.

530 **Baker Inlet** is entered close north of Griffon Point by way of Watts Narrows.

531 Baker Inlet light (670.5) is at the entrance, on the south side of Watts Narrows.

532 **Watts Narrows** is about 200 feet (61 m) wide and screened by overhanging trees; the least depth in the fairway is 10 fathoms (18.3 m).

533 **Tidal streams** in Watts Narrows attain a considerable rate. HW and LW slack occur about the times of HW and LW at Prince Rupert; the duration of slack water is about 5 minutes.

534 East of Watts Narrows, Baker Inlet broadens into an extensive basin, 4 miles long. Some shoal ledges with drying rocks on them lie along the south side of the inlet; the north shore is, for the most part, steep-to. **Anchorage** for small craft can be found at the head of the inlet in 11 fathoms (20 m). The holding ground is reported to be good.

Baker Inlet to Watson Rock

535 **Pa-aat River** (53°49'N, 130°00'W) is a stream of considerable size that drains the interior of Pitt Island; its mouth is choked with drying flats.

Chart 3947

536 **Stuart Bight**, 1 mile NW of Pa-aat River, lies SE of a high bold projection. Several drying rocks lie close offshore in this bight, a 3 fathom (5.5 m) shoal lies in the middle of the bight, and a rock with less than 6 feet (2 m) over it lies 0.1 mile off the south point of the bight. Anchorage in Stuart Bight is not recommended. 537 **Kumealon Inlet**, 2.5 miles north of Pa-aat River, is entered between **McMurray Point** and **Lerwick Point**.

538 When entering Kumealon Inlet from south take care to avoid the drying ledges and shoals extending 0.2 mile offshore south of McMurray Point. An islet, a group of drying rocks, and rocks with less than 6 feet (2 m) over them lie about 1 mile within the entrance.

A logging operation (1995), with a scow grid, floats and **booming ground** is in the bay 0.6 mile NE of Lerwick Point. A rock, with 11 feet (3.4 m) over it, lies in the approach to the bay.

540 Anchorage can be obtained about 0.8 mile within the entrance of Kumealon Inlet in 30 fathoms (55 m). Small craft can pass north of the islet and rocks in mid-channel and anchor near the east end of the inlet.

541 **Kumealon Narrows** leads north from the head of Kumealon Inlet into **Kumealon Lagoon**. The narrows is a shallow and tortuous narrow channel, encumbered with rocks, with tidal falls at its north end.

542 **Kumealon Island**, 0.3 mile west of Lerwick Point, shelters a small cove to the north that affords good **anchorage** for small craft.

543 **Baron Point** is 1.2 miles NW of Kumealon Island. **Ker Point** is 1.9 miles NW of Baron Point. The mainland coast for 2 miles NW of Ker Point is fringed by drying and below-water rocks lying up to 0.2 mile offshore.

544 **Bonwick Point** $(53^{\circ}51'N, 130^{\circ}04'W)$, at the north end of a low peninsula, has shoal water close-off it. A rock with 9 feet (2.7 m) over it lies 0.1 mile NE of the point.

545 **Stuart Anchorage** is 1 mile NW of Bonwick Point. **Stag Rock**, which dries 18 feet (5.5 m), lies in the approach to Stuart Anchorage. A ridge of foul ground extends 0.3 mile NW of Stag Rock and a rock that dries 4 feet (1.2 m) lies 0.1 mile south of it. **Anchorage** for large vessels, in 17 to 22 fathoms (31 to 40 m), is obtainable west of Stag Rock. Small craft can anchor in the cove 0.35 mile SW of Bonwick Point in 6 to 8 fathoms (11 to 15 m). A rock with 7 feet (2.1 m) over it lies in the entrance but the below-water rocks are generally marked by kelp.

546 **Pitt Point** is 2.2 miles NW of Bonwick Point and **Calvert Point** lies 0.7 mile NW of Pitt Point.

• Pitt Point **light** (671) is shown at an elevation of 14 feet (4.2 m) from a skeleton tower.

548 Pitt Point **light buoy** "D3" *(671.2)*, on a shoal 0.5 mile NE of Pitt Point, is a port hand buoy.

549 **Rippon Point**, 3 miles WNW of Calvert Point, is the north extremity of Pitt Island.

550 **Gibson Group**, 1.5 miles NE of Rippon Point, consists of several islands. **Gibson Island** lies at the south end of the group.

551 **Gunboat Harbour** lies between the SE side of Gibson Island and **Bloxam Island**. It affords

temporary **anchorage**, to small vessels, in about 3 fathoms (5.5 m) off the drying flat near its head. A shoal with 36 feet (11 m) over it lies in the approach to Gunboat Harbour.

552 **Watson Rock**, 0.2 mile off the SW side of Gibson Island, dries 18 feet (5.5 m). A shoal rocky ledge extends 0.3 mile NNW from the rock. A detached shoal rock, with 15 feet (4.6 m) over it, is 0.5 mile SE of Watson Rock.

553 Gibson Island **light and bell buoy** "D6" *(671.6)*, on the south side of the above-mentioned rock, is a starboard hand buoy.

554 Watson Rock **light** (672) is shown at an elevation of 12 feet (3.7 m) from a white tower.

Arthur Passage — South Approach

555 The south approach to Arthur Passage is between Gibson Group and Porcher Island. The main southern entrance to Telegraph Passage lies between Marrack and Kennedy Islands.

Tidal streams. — The flood (north-going) tidal stream from Ogden Channel divides near Rippon Point with one part turning SE into Grenville Channel and the other continuing north toward Arthur and Telegraph Passages. The ebb streams from Grenville Channel, Arthur Passage and Telegraph Passage unite off the north end of Ogden Channel and pass out to sea by it. The muddy water of the Skeena River, coming from Telegraph Passage, is usually distinguishable against the blue water of the other channels.

557 In case of fog, vessels approaching either Arthur or Telegraph Passages from south can find good **anchorage** on the mud bank extending south from Seabreeze Point and Cardena Bay $(53^{\circ}59'N, 130^{\circ}10'W)$.

Bedford Island lies 0.6 mile north of Gibson Island. A rock awash and several below-water rocks lie in the middle of the passage between these islands, and drying reefs and ledges lie along the north shore of Gibson Island. A drying flat extends west from Bedford Island. **Marrack Island** is the north island of Gibson Group; drying reefs lie 0.25 mile off the SW side and 0.1 mile south of the SE extremity of the island.

559 The channels between the islands of the Gibson Group are not recommended. The channels east and north of Gibson Group leading into Telegraph Passage are described later in this chapter.

560 **Oona River** flows from the interior of Porcher Island, down a broad valley, entering the channel between **Peninsula Point** and **Oona Point**. The mouth of the river is filled with a broad drying flat.

562 A large **rock breakwater** extends from the south shore of the entrance to Oona River. This breakwater shelters a basin that has been dredged to a depth of 11 feet (3.4 m), and has a **public float**. Another **public float** is 1 mile within the entrance. The public floats are managed by the Oona River Harbour Authority. A sawmill operation, with a loading dock, is on the drying flat east of the breakwater.

563 **Directions**. — Oona River should be entered only at HW and local knowledge is advised to make a safe entrance. If not in possession of local knowledge, examine the entrance at LW before proceeding into the river entrance on the following HW.

Oona River settlement began when Scandinavians came to homestead the area in the early 1900's. Once a centre for fishing, logging and boat building, some boat shop buildings still exist. There are approximately 15 full time residents. A post office (V0V 1E0), accommodation and floatplane service are available. **Oona River Retreat 250-628-3485** offers fishing, kayaking, diving, eco tours, accommodation, and gasoline and diesel fuel on a limited basis. Limited float space with water for visiting vessels is available. Call 250-628-3214 cell 250-622-9255 to contact the Harbour Authority. Visitors are advised to contact Oona River on VHF Channel 06 for instructions prior to arrival.

565 Between Oona Point and the entrance to Arthur Passage, 2.5 miles north, the coast of Porcher Island is fringed by drying ledges and drying rocks lying close offshore.

Arthur Passage

566 Arthur Passage (53°59'N, 130°13'W), a continuation of the main Inner Passage, connects Grenville Channel, at its SE end, to Malacca Passage, at its NW end. It lies between Kennedy Island, on the east side, and Lewis Island, Elliott Island and McMicking Island on the west side.

567 **Tides**. — Tidal differences in Arthur Passage, referenced on Prince Rupert, are given for Seabreeze Point (Index No. 9250) in the Tide Tables, Volume 7.

568 **Tidal streams** flood north and ebb south through Arthur Passage. About 0.5 mile south of Hanmer Island the flood stream attains 2½ kn.

Seabreeze Point to Bamfield Islands

569 **Seabreeze Point** (53°59'N, 130°11'W) is at the SW extremity of Kennedy Island. A large shoal area, with a least depth of 8.8 m, extends south from Seabreeze Point and **Cardena Bay**.

570 **Henderson Point**, 1.8 miles west, is the SE extremity of Lewis Island. Foul ground, on which there is a drying rock and a rock awash, extends 0.2 mile SE from Henderson Point.

571 **Kennedy Island** (54°02'N, 130°10'W) forms the east side of Arthur Passage; the land on this side of the island

2-33

is bold. Two conspicuous peaks rising to elevations of 2,290 and 2,470 feet (724 and 753 m) are near the middle of the island. **Elizabeth Peak** is the highest.

572 Kennedy Island **light** (673), on the west coast of the island about 1.8 miles NW of Seabreeze Point, is shown at an elevation of 16 feet (4.9 m) from a skeleton tower.

573 **Godfrey Point** is on the east coast of Lewis Island. **Herbert Reefs**, 1 mile north on the west side of the fairway, consist of two drying reefs 0.3 mile apart and a rock with 12 feet (3.7 m) over it 0.25 mile north.

574 Herbert Reefs **light** (674), near the north end of the north drying reef, is shown at an elevation of 28 feet (8.6 m) from a white and green cylindrical tower.

575 **Lawson Harbour** is between the north end of Lewis Island and **Break Island**, close east. Local knowledge is advised for entering this harbour. A rock, with less than 6 feet (2 m) over it, lies close NW of Break Island and a drying reef lies along the west shore of the harbour. **Anchorage** for small vessels can be obtained 0.1 mile within the entrance. The remains of an abandoned settlement are on the south shore of the harbour.

576 **Francis Point**, 1.7 miles NNW of Herbert Reefs, is the north extremity of Elliott Island.

577 Chalmers Anchorage $(54^{\circ}03'N, 130^{\circ}16'W)$, west of Francis Point, affords **anchorage** in 24 m. Drying and below-water rocks and an islet lie on the SW side of the anchorage, between Elliott and McMicking Islands.

578 **Hanmer Island** (54°04'N, 130°15'W), in the middle of Arthur Passage, is surrounded by drying ledges.

579 Lights. — Hanmer Island light (675) is on the south end of the island.

580 North Hanmer **light** (675.3), on the NE end of the island, is shown at an elevation of 5.8 m from a skeleton tower.

581 **Cecil Patch**, 0.8 mile west of Hanmer Island, is on the west side of the fairway. It is seldom marked by kelp.

582 **Cecil Patch light** (676.5), located on the shallowest part of the shoal patch, is shown from a white cylindrical tower with a green band on top and operates at night only.

583 Base Sand **light buoy** "D10" *(675.6)*, 1.4 miles NNW of Hanmer Island, is a starboard hand buoy.

584 **Bamfield Islands**, 0.9 mile WNW of Cecil Patch, consist of a chain of two rocky islets and numerous drying and below-water rocks lying parallel to the east shore of McMicking Island. A drying reef lies 0.3 mile east of and parallel to the islands.

Kelp and Chismore Passages

585 **Kelp Passage** (53°59'N, 130°14'W), between Lewis and Porcher Islands, is narrow and encumbered with drying

reefs, below-water rocks and kelp. It is only suitable for small craft and local knowledge is advised.

586 **Bloxam Passage** $(54^{\circ}02'N, 130^{\circ}15'W)$ separates Lewis Island from Elliott Island and is about 0.2 mile wide. **Cocktail Point**, the south extremity of Elliott Island, has a small islet 1 foot (0.3 m) high close south of it.

Anchorage can be obtained about 0.3 mile SW of Cocktail Point in 5 to 10 fathoms (9.1 to 18.3 m). Anchorage can also be obtained in mid-channel about 0.5 mile WNW of Cocktail Point, in 7 to 9 fathoms (12.8 to 16.5 m), NW of the 20 and 32 foot (6.1 and 9.4 m) shoals. The holding ground and shelter in these two anchorages are excellent.

588 **Chismore Passage** (54°02'N, 130°18'W) separates Elliott and McMicking Islands from Porcher Island and is contracted to about 0.1 mile wide at its north end by drying rocks and ledges on both sides. A reef, known locally as **Elizabeth Rock**, dries 20 feet (6.1 m) and lies close-off the McMicking Island shore about 1 mile SE of **Lamb Point**, the north extremity of McMicking Island. Another drying reef lies on the south side of the channel, 0.4 mile south of Lamb Point. **Lampost Islet** is on the end of a drying ledge SW of Lamb Point.

Malacca Passage

Charts 3947, 3956

589 **Malacca Passage** $(54^{\circ}05'N, 130^{\circ}19'W)$ joins Arthur Passage to Chatham Sound. The passage affords some shelter during SE weather; the sea becomes rough but there is little swell.

590 **Tides**. — Tidal differences in Malacca Passage, referenced on Prince Rupert, are given for Lawyer Islands (Index No. 9312) and Humpback Bay (Index No. 9309) in the Tide Tables, Volume 7.

591 **Tidal streams**. — The flood tidal stream sets NW through Malacca Passage and meets the flood setting NE from Edye Passage in the vicinity of Hunt Point.

592 **Genn Islands** (54°06'N, 130°17'W) consist of a large wooded island and **Little Genn Island**, both surrounded by drying ledges.



593 Genn Islands **light** (684) is on the NW extremity of the larger Genn Island.

594 **Bribery Islet**, 0.8 mile west of Genn Islands light, consists of two islets on a common drying reef. Several drying and below-water rocks extend east and WNW from Bribery

Islet to the south end of Lawyer Islands. **Client Reefs**, 0.4 mile north of Bribery Islet, has three drying heads.

Chart 3956

595 **Lawyer Islands** (54°07′N, 130°20′W) consist of several islands, islets and drying and below-water rocks.

596 A **submarine cable area** crosses Malacca Passage between Lawyer Islands and Porcher Island.

597 **Lawyer Islands South light (684.5)**, located on the south side of a small islet at the south end of the group, is shown from a white cylindrical tower with a red band and operates at night only. **Lawyer Islands North light (685.3)**, located on the north side of Cruice Rock, is shown from a white cylindrical tower with a red band and operates at night only.

598 **Cruice Rock**, 0.2 mile NW of Lawyer Islands light, lies on an extensive drying reef.

599 **Mason Point** $(54^{\circ}05'N, 130^{\circ}23'W)$ is the east entrance point to **Humpback Bay**, which is completely filled with a drying mud flat. Drying and below-water rocks extend 0.1 mile north from Mason Point. The passage between Mason Point and **Ada Islands**, to the NW, is about 140 m wide.

600 **Porcher Island** locality, the site of a former cannery, is approached through the channel between Mason Point and Ada Islands or through the channel west of Ada Islands. Old piles are all that remain of the former jetty and the buildings are in ruins.

NW of Ada Islands the depths are irregular and a rock that dries 0.4 m lies 0.5 mile NW of Ada Islands. A conspicuous powerline slash leads SW from the point close north of Ada Islands.

602 **Hunt Point**, 1.2 miles NW of Ada Islands, is the north extremity of Porcher Island. Drying ledges, on which there are some islands, extend 0.3 mile north from Hunt Point, with **Grace Island**, at their north end. Many shoals and drying rocks extend from 1 mile NW to 1.7 miles west and to 1.3 miles SW, respectively, from Hunt Point.

603 Chatham Sound and Prince Rupert are described in Chapter 3.

Skeena River — Approaches

Chart 3947

The Skeena River can be approached by way of Telegraph Passage, Marcus Passage or Inverness Passage.

Telegraph Passage

605 **Telegraph Passage** $(53^{\circ}57'N, 130^{\circ}07'W)$ can be entered from south between the Gibson Group and the mainland shore, or by way of the channel between Marrack and Kennedy Islands; the latter channel is preferable. Marcus Passage enters Telegraph Passage between the north end of Kennedy Island and De Horsey Island; this junction is known locally as **Standard Gap**.

606 **Tides**. — Tidal differences for Seabreeze Point (Index No. 9250) and Claxton Creek (Index No. 9260), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

607 **Tidal streams**. — The north-going flood stream and the south-going ebb both attain 3 to 4 kn. Abreast the east entrance of Marcus Passage the streams turn 1 hour after HW. In spring, the south-going ebb stream is greatly accelerated at times by freshets.

608 Ice. — During severe winters ice from the Skeena River can be encountered but it seldom reaches down as far as Kennedy Island.

609 **Sand waves** with amplitudes up to 1.6 m occur near the junction of Telegraph and Marcus Passages, south and east of Parry Point.

610 **Caution** is required because the drying and shoal banks in Telegraph Passage are constantly shifting. A sharp lookout should be kept for deadheads and other debris, particularly during periods of spring tides and freshets.

Bloxam Flat (53°55'N, 130°07'W), a shoal area with a least depth of 4 feet (1.2 m), extends up to 1.4 miles east of Bloxam Island, Gibson Island and Lamb Island. The fairway is 0.3 mile wide between the east side of Bloxam Flat and Buckley Point. The mainland shore, north and south of Buckley Point, is fringed with drying ledges; a rock that dries 14 feet (4.3 m) lies 0.1 mile offshore about 0.8 mile north of Buckley Point. An islet, with deep water between it and the mainland, lies on a drying reef 1.2 miles north of Buckley Point.

612 **Fleming Bay** is 1.7 miles north of Buckley Point; **Chell Point** is 1 mile farther north.

613 **Isbister Shoals**, with 15 feet (4.6 m) over them, lie in the centre of the east end of the channel between Marrack and Kennedy Islands.

614 **Daring Point** $(53^{\circ}59'N, 130^{\circ}09'W)$ is the SE extremity of Kennedy Island. Between Daring Point and a conspicuous grey cliff, about 2.3 miles NNE, shallow water extends about 0.7 mile from the SE side of Kennedy Island.

615 **Davies Bank**, 2.5 miles NNE of Daring Point, is an extensive drying bank separated from Kennedy Island by a channel about 0.1 mile wide.

616 **Moore Cove**, on the east side of Telegraph Passage 1 mile north of Chell Point, is choked by drying flats. **Clough Point**, 1 mile north of Moore Cove, is steep-to. **Inrig Point**, 1 mile farther north, is steep-to.

617 **Hegan Point** (54°04'N, 130°06'W) is known locally as **Longnose Point**.

A daybeacon, on Hegan Point, has a starboard hand 618 daymark.

Claxton Creek enters Telegraph Passage about 619 1 mile NNE of Hegan Point. Ruins of an abandoned settlement are near the mouth of the creek.

Lambert Point, known locally as Vancouver Point, 620 is 2 miles north of Claxton Creek. Ruins of a former cannery and steamer landing are south of Lambert Point and Carlisle Creek is north of the point.

Hanmer Point, 0.6 mile NNE of Lambert Point, is 621 cliffy. Kildala Creek flows across a drying flat close south of Hanmer Point. Orwig Islets lie close-off the mainland coast about 0.8 mile NE of Hanmer Point.

622 Veitch Point, known locally as Point Lambert, is the south entrance point to the Skeena River. An islet 1 m high lies close-off the point.

623 Robertson Banks, known locally as Carlisle Bar, are separated from Veitch Point by a narrow channel and extend about 3 miles SW. The greater part of the banks dry at LW. The fairway for Telegraph Passage lies between Robertson Banks and De Horsey Island. Veitch Rock, 0.1 mile SW of Veitch Point, dries 0.4 m and is at the north end of Robertson Banks.

De Horsey Island is at the north end and on the west 624 side of Telegraph Passage. Parry Point, the south extremity of De Horsey Island, is known locally as De Horsey Point, by some, and as The Horn, by others.

De Horsey Island light (678), on the east side 625 of the island about 2.6 miles NNE of Parry Point, is shown at an elevation of 5.8 m from a skeleton tower fitted with a white vertical daymark.

Marcus Passage

626 Marcus Passage (54°06'N, 130°14'W), known locally as Kennedy Gap, connects Chatham Sound to Telegraph Passage. Two bars obstruct Marcus Passage; one extends north from Base Sand and the second extends SW from Parry Point. Tides. — Tidal differences for Lawyer Islands (Index 627 No. 9312) and Claxton Creek (Index No. 9260), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

Tidal streams. — The east-going flood stream 628 and the west-going ebb stream attain 3 to $3\frac{1}{2}$ kn. In Telegraph Passage, abreast the east entrance of Marcus Passage, the streams turn 1 hour after HW. In spring, the westgoing ebb stream is greatly accelerated at times by freshets. Sand waves with amplitudes up to 1.6 m occur near 629 the junction of Marcus and Telegraph Passages, south and east of Parry Point.

630 Caution is required because the drying and shoal banks in Marcus Passage are constantly shifting. A sharp lookout should be kept for deadheads and other debris, particularly during spring tides and freshets.

Smith Island lies on the north side of Marcus 631 Passage. Mount McGrath, in the NW part of the island, is a good landmark from the offing.

632

637

A submarine cable area crosses Marcus Passage between Lawyer Islands and Smith Island.

Hazel Point $(54^{\circ}07'N, 130^{\circ}15'W)$ is near the south 633 extremity of Smith Island.

Oceanic Bar is the local name for a bar on which 634 there are two rocks awash and a drying area. The north end of this bar is 0.7 mile west of Hazel Point. The bar extends south to the NW end of Base Sand. The west side of Oceanic Bar is steep-to but shoal water extends from its east side.

Base Sand, known locally as Wilson Bar, is an 635 extensive drying bank forming the major portion of the south side of Marcus Passage. At its east end it is separated from Georgy Point, the north extremity of Kennedy Island, by a narrow gap locally known as Glory Hole. A drying rock ledge extends 0.1 mile NW from Georgy Point.

A daybeacon, 0.2 mile east of Georgy Point, has a 636 starboard hand daymark.

Marked Tree Bluff is 1.2 miles SE of Georgy Point. Marked Tree Bluff light (677) is shown at an 638 elevation of 8.5 m from a skeleton tower.

Croasdaile Island, known locally as Bay Island, 639 lies close south of Smith Island. Neill Islet is joined to the NW side of Croasdaile Island by a drying ledge. The narrow passage separating the north sides of Neill and Croasdaile Islands from Smith Island is known locally as Hells Gate Slough.

640 De Horsey Passage, known locally as Osland Passage, separates the NW side of De Horsey Island from Smith Island; most of this passage dries but it is used by local fishermen at HW. A float and occupied houses are at **Osland**, on the Smith Island shore of De Horsey Passage.

The detached drying bank, west and NW of Parry 641 Point, is known locally as Seal Bar. The deep basin between Seal Bar and the SW side of De Horsey Island is known locally as Simon Joe Hole.

Inverness Passage

Inverness Passage (54°11'N, 130°12'W) leads from 642 Chatham Sound to the entrance of the Skeena River around the north end of Smith Island.

643 The limits for the Harbour of Prince Rupert pass along the centre of the channel in the west entrance to Inverness Passage. West and north of this line the Port of Prince Rupert Practices and Procedures apply.

Conspicuous mountains. — Mount McGrath, in 644 the NW part of Smith Island, and Mount McDonald, 3 miles NNE, make good landmarks. A ridge trends 1.5 miles west from Mount McDonald then slopes sharply down to Porpoise Harbour.

645 **Tidal streams** attain 3 kn off Hicks Point. In spring, the west-going ebb stream is greatly accelerated at times by freshets.

646 **Ice**. — During winter months, Inverness Passage is sometimes encumbered with ice that comes down from the Skeena River.

647 **Caution** is required because the drying and shoal banks in Inverness Passage are constantly shifting. A sharp lookout should be kept for deadheads and other debris, particularly during spring tides and freshets. Because of strong tidal streams and floating debris, caution should be exercised when mooring at the floats in Inverness Passage.

648 Horsey Bank $(54^{\circ}10'N, 130^{\circ}18'W)$ extends south and SE from Kitson Island. The SW edge is marked by starboard hand **buoy** "D18".

649 **Kitson Island Marine Park** encompasses Kitson Island, **Kitson Islet** and the SW portion of Flora Bank. There are no anchorages and the park is undeveloped.

650 Lelu Island, 1.1 miles NE of Kitson Island, can be identified by a conspicuous hill at its south end close NE of Leer Point. Flora Bank, known locally as Kitson Bank, is an extensive drying bank between Kitson and Lelu Islands. A narrow channel, known locally as Small Craft Channel, separates the NE side of Flora Bank from Lelu Island; it dries at its north end. The narrow drying channel between the NE side of Lelu Island and Stapledon Island is used by small craft at half tide.

Tsum Tsadai Rock, with two drying heads, lies on the east side of the fairway of Inverness Passage 1.1 miles east of Kitson Island. It is the westernmost rock of a group of small islets and drying ledges extending from the north entrance point of Tsum Tsadai Inlet. Drying ledges and reefs also extend north from the south entrance point of this inlet.

652 **Tsum Tsadai Inlet** has a very narrow and shallow entrance. **Tidal streams** attain upwards of 5 kn through this entrance channel. The inlet is suitable only for small craft. Local knowledge is advised and entering at or near slack water is recommended. The inlet provides a good, well-sheltered **anchorage**.

653 An **overhead cable** (power), with a vertical clearance of 27 m, crosses the entrance to Tsum Tsadai Inlet.

654 **Soar Point**, 0.7 mile NNE of Tsum Tsadai Rock, is the west extremity of a wooded island. **Hicks Point**, 0.7 mile farther NE, is known locally as **Inverness Point**.

655 **Mathews Rock**, in the centre of the fairway between Hicks Point and Lelu Island, has one drying and one below-water head. Starboard bifurcation **buoy** "DC" lies off the SW side of the rock. 656 Inverness Passage **light** (689), on the mainland 0.3 mile NW of Hicks Point, is shown at an elevation of 3.7 m from a skeleton tower.

657 A **submarine cable area** (power) crosses Inverness Passage 0.4 mile east of Hicks Point.

A **daybeacon**, on Smith Island about 0.6 mile ESE of Hicks Point, has a starboard hand daymark.

Drying rocks lie on the north side of the fairway abreast the above-mentioned daybeacon. Drying reefs and a rock awash are close-off the Smith Island shore about 0.2 mile WNW of the same beacon.

660 **Tatenham Point**, on the south side of the channel, is 1.3 miles east of Hicks Point.

661 The **North Pacific Cannery Museum**, open to the public, is a preservation of an old cannery. It is connected by road to Prince Rupert.

662 **Caspaco Creek**, 1.7 miles ESE of Tatenham Point, is the site of a former cannery falling to ruin. A **float** is on the SE side of the pier.

663 **Osborn Point** is at the north entrance to De Horsey Passage.

664 **Eleanor Passage**, at the SE end of Inverness Passage, is contracted to less than 0.1 mile wide by a drying mud flat extending south and SW from **Gust Point**, known locally as **Point Edward**.

665 **Clara Shoal** is a detached drying bank. The fairway for Eleanor Passage lies between Clara Shoal and **Clara Point**, on the NE side of De Horsey Island. Silting is occurring near Clara Shoal and mariners are advised to obtain local knowledge before attempting this part of the passage.

The drying gravel mound charted just north of Clara Shoal dries 5.3 m and has grass on it.

Skeena River

The **Skeena River**, entered between Gust Point and Veitch Point ($54^{\circ}09'N$, $130^{\circ}03'W$), is the largest river on the coast of British Columbia north of the Fraser River. The shores at the entrance are densely wooded and the river is navigable by small craft for about 100 miles inland. Attempts have been made to dredge the river to permit large-scale log transport, but due to problems with currents and heavy siltation these attempts have been abandoned. With the exception of some log towing operations there is no waterborne cargo traffic on the Skeena River.

668 Settlements on the Skeena River include **Terrace** and **Hazelton**, about 54 and 112 miles, respectively, upstream. In the vicinity of Hazelton the river divides into three branches. The principal branch leads north to its source in the **Skeena Mountains**; the **Babine River** leads east and the **Bulkley River** SE. The lower courses of the Skeena and Bulkley Rivers



are paralleled by the Canadian National Railway and the main highway connecting Prince Rupert to Prince George.

669 **Charts**. — There are no charts of the Skeena River east of Skeena Banks (*129°56'W*).

670 **Tides**. — Tidal differences for the Skeena River, referenced on Prince Rupert, are given for Haysport (Index No. 9266), Khyex Point (Index No. 9275) and Kwinitsa Creek (Index No. 9285) in the Tide Tables, Volume 7.

Gillnet **fishing vessels** operate in the lower Skeena River and adjacent waters March to September each year. During the peak period of the salmon fishery, late June to early September, over half the fleet fish in the lower river and estuary.

672 **Ice**. — The upper part of the Skeena River is frozen over during winter; in severe winters, the whole river as far as Port Essington has been frozen over. The greater part of loose ice, which encumbers the estuary of the Skeena River in the cold season, comes from the Ecstall River.

673 **Caution**. — The drying and shoal banks in the Skeena River are constantly shifting. A sharp lookout should be kept for deadheads and other debris, particularly during spring tides and freshets.

Anchorage caution. — Mariners intending to anchor in the estuary of the Skeena River should ensure that their vessel is equipped with heavy ground tackle and be prepared to veer a good deal of cable. This is due to the nature of the bottom, mainly gravel. Do not anchor in the estuary other than temporarily from December through to mid April. Strong NE gales in winter interrupt communication with shore and, though not frozen over, there is a great deal of loose ice and quantities of heavy driftwood.

675 Between Gust Point $(54^{\circ}09'N, 130^{\circ}08'W)$ and Mowitch Point, 3.8 miles ENE, the drying bank fronting Boneyard Creek and extending 0.7 mile from the north shore of the Skeena River is known locally as **Boneyard Bar**.

676 **Sand waves**, with amplitudes up to 1.6 m, are encountered south and east of Mowitch Point.

677 **Haysport**, 0.8 mile NE of Mowitch Point, is the site of a former cannery now in ruins.

678 **Tyee Bank** is an extensive drying flat fronting the north shore of the Skeena River NE of Haysport. The **McNeil River** enters the Skeena River across this drying flat.

679 The south side of the Skeena River between Veitch Point and Port Essington, 3.3 miles east, is fronted by a broad drying flat known locally as **Cunningham Bar**.

680 **Port Essington** is the site of a former cannery with many old piles and wharves in ruins close offshore around the townsite.

681 **Anchorage** can be obtained in about 10 m close NW of Port Essington but the general caution regarding anchorage in the Skeena River, given earlier, also applies here. A heavy cross sea, caused by strong winds from seaward, can be encountered here; vessels are liable to foul their anchors at such times.

682 **Ecstall River**, known locally as **Hocsall River**, enters the Skeena River between Port Essington and **Carthew Point**.

683 **Skip Rock**, on the east end of a boulder-strewn drying gravel bar, dries 4.6 m. **Herman Rock**, 0.2 mile SE, dries 2 m.

684 **Ecstall Island**, close east of Port Essington, is known locally as **Village Island**. Drying areas extend 0.1 mile north of the island.

• 685 Ecstall Island **light** (679), on the north end of the island, is shown at an elevation of 5.2 m from a skeleton tower fitted with a white vertical slatwork daymark.

686 **Raspberry Islands**, on the north side of the entrance to Ecstall River, are on a drying flat between Carthew Point and **Raspberry Bluff**.

687 **Skeena Banks** are an extensive series of drying banks extending NE from Raspberry Bluff to within about 0.3 mile of the north shore of the Skeena River.

688 **Overhead cables** cross the Skeena River near the east end of Skeena Banks. Local knowledge is the only guide up the Skeena River from this point onward.

Chatham Sound and Approaches Harbour of Prince Rupert

General

Chart 3002

1 This chapter covers the Harbour of Prince Rupert, Chatham Sound and the passages leading into Chatham Sound from Hecate Strait and Dixon Entrance.

2 The **Inner Passage**, after leaving Malacca Passage, described in Chapter 2, follows the east side of Chatham Sound as far as Port Simpson then passes through Main Passage and NE toward Portland Inlet or NW toward Alaska.

The deep-draught routes through Brown Passage to Ridley Island are described later in this chapter.

4 Vessel Traffic Services (VTS). — The area covered in this chapter is in *Sector 2* of the *Prince Rupert Traffic Zone*. The assigned frequency is 156.575, Channel 71.

5 A brief description of this Vessel Traffic Services (VTS) System is given in Sailing Directions booklet *PAC 200* — *General Information, Pacific Coast*, full details are given in *Radio Aids to Marine Navigation (Pacific and Western Arctic).* 6 The Calling-in Points are

7 *Calling-in Point No. 15A*, called *Petrel Rock*, is a line from Digby Island to West Kinahan Island.

8 *Calling-in Point No. 15B*, called *Greentop Islet*, is a line from West Kinahan Island to a position near Greentop Islet.

9 *Calling-in Point No. 15C*, called *Holland Rock*, is a line from a position near Greentop Islet to Kitson Island.

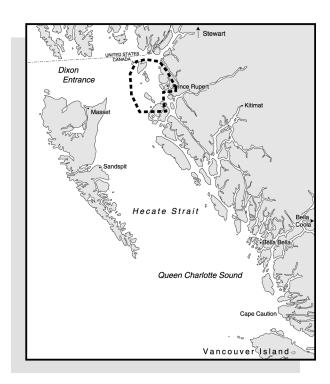
10 *Calling-in Point No. 16*, called *Lucy Islands*, is a line from Lucy Islands light (719) to Tugwell Island.

11 *Calling-in Point No. 17*, called *Pillsbury Point*, is a line joining Pillsbury and Tobey Points.

12 *Calling-in Point No. 18*, called *Edye Passage*, is a 3-mile arc centred on Table Point.

13 Calling-in Point No. 20A, called Butterworth Rocks, is a line from Jacinto Point light (732) to Butterworth Rocks light (751) thence to Seal Rocks light (748). Mariners shall report routeing to Prince Rupert Traffic if not using Brown Passage.

14 *Calling-in Point No. 20B*, called *Seal Rocks*, is a line joining Seal Rocks light (748) to Oval Point on Porcher Island and is a change line between *Sector 1* and *Sector 2* of the *Prince Rupert Traffic Zone*.



Chatham Sound

Chatham Sound (54°28'N, 130°32'W) is bounded 15 on its east side by Tsimpsean Peninsula, on its south side by Porcher Island and on its west side by Prescott Island, Stephens Island and Dundas Islands. Two groups of islands and several small islands, reefs and shoals lie along the centre of Chatham Sound, and reefs, shoals and islands are located along both sides of the sound.

The main approach channel to Chatham Sound from 16 Dixon Entrance or Hecate Strait is Brown Passage. South of Brown Passage the three channels connecting Chatham Sound to Hecate Strait are Bell Passage, Stephens Passage and Edye Passage. Stephens Passage is only suitable for small craft at HW.

17 Three channels north of Brown Passage pass through Dundas Islands. The passage between Melville and Dunira Islands is narrow, shallow and encumbered with reefs; it is not recommended. The narrow channel between Dunira Island and Baron Island is usable by small vessels but local knowledge is advised. A wreck, visible at HW, is at the NE end of the passage on rocks close-off Baron Island. Hudson Bay Passage, between Baron Island and Dundas Island, is suitable for small vessels.

The north entrance to Chatham Sound, between the 18 NE end of Dundas Island and the north extremity of Tsimpsean Peninsula, is separated into four passages by islands and reefs.

Tides. — Tidal predictions in Chatham Sound are 19 given for Prince Rupert (Index No. 9354) in the Tide Tables, Volume 7.

20 Tidal differences for the south side of Chatham Sound, referenced on Prince Rupert, are given for Welcome Harbour (Index No. 9305), Refuge Bay (Index No. 9306), Hunt Inlet (Index No. 9310), Humpback Bay (Index No. 9309) and Lawyer Islands (Index No. 9312) in the Tide Tables, Volume 7.

Tidal differences along the west side of 21 Chatham Sound, referenced on Prince Rupert, are given for Qlawdzeet Anchorage (Index No. 9315) and Moffatt Islands (Index No. 9325) in the Tide Tables, Volume 7.

22 Tidal streams. — In the north part of Chatham Sound, between Dundas Islands and the north part of Tsimpsean Peninsula, the flood sets north and the tidal streams do not exceed 1 kn. In the south part of Chatham Sound the flood tidal streams entering from Brown, Bell and Edye Passages, and the flood setting north from Malacca Passage produce, for the most part, an easterly set of about 2 kn. The ebb has the reverse effect.

Meteorological information for Prince Rupert and 23 frequency of fog information for Prince Rupert and Triple Islands are given in the Appendices.

23.1 A submarine cable (fibre optic) is laid in Chatham Sound leading west from Ridley Island, south of Bishop Island, to south of Georgia Rock, then NW between Digby Island and the Kinahan Islands, then north along the sound to Dixon Entrance, and then NW across Dixon Entrance into US Waters.

Aspect

Charts 3956, 3957, 3959, 3960, 3963

24 The mountains along the SE side of Chatham Sound, as far north as Mission Mountain, are described under the approach to Prince Rupert Harbour. Mount Griffin $(54^{\circ}32'N, 130^{\circ}25'W)$, rises to an elevation of 416 m and has a sharp summit. The ridge SE of Mount Griffin has several conspicuous peaks on it; among these peaks are Leading **Peak**, a well-defined peak with a steep fall on its south side, and Basil Lump. Mount McNeil (54°35'N, 130°15'W), on the NE side of Work Channel, has a conical shaped summit and is usually snow clad.

25 Approaching Edye Passage from Hecate Strait the Bell Range, on the NW end of Porcher Island, reaches elevations of 673 m and Spiller Range, on the NE side of the same island, reaches elevations of 727 m. Mount Stephens, at the SE end of Stephens Island, attains an elevation of 422 m and is conspicuous. Congreve Hill, 2.2 miles NW of Mount Stephens, is 159 m high and has a sharp summit. Several hills all about the same elevation are along the north side of Stephens Island. The highest of these hills is Qlawd Hill with an elevation of 335 m.

Melville Island (54°22'N, 130°45'W), on the north 26 side of Brown Passage, is densely wooded and rises gradually to a range of hills in the middle, the highest being Knee Hill.

Jackal Point is the extremity of a group of islands, 27 joined by drying ledges, extending west from Melville Island. Drying ledges and foul ground extend 0.5 mile SW from Jackal Point and several unnamed dangerous shoals lie within a 1.5 mile radius.

Dunira Island, north of Melville Island, is densely 28 wooded. Coast Mound, on the west side of the island, has an oval summit, conspicuous from NE and SW. Farwest Point is the west extremity.

29 Dundas Island, north of Hudson Bay Passage, has several conspicuous mountains; Mount Henry, with an elevation of 465 m is the highest. Mount Bonwick, on the SE side of the island, has an elevation of 402 m. Slab Hill, formerly known as Table Hill, at the NE end of the island, has a flat summit and is conspicuous.

3-3

Brown Passage and Approaches

Chart 3957

30 **Brown Passage** $(54^{\circ}20'N, 130^{\circ}50'W)$ is the main approach channel to Chatham Sound for large vessels coming from Dixon Entrance or Hecate Strait.

30.1 The **wreck** of the 24-m fishing vessel *Western Commander*, at a depth of about 80 m, lies 4.9 miles WSW of Connel Islands. Mariners are advised to exercise **caution** in the area.

31 **Pilotage**. — The pilot boarding station for Prince Rupert and other ports north, south or in the Queen Charlotte Islands is in Brown Passage in the vicinity of Triple Islands. Also 5.5 nautical miles to the east is a pilot transfer area by helicopters. For information on obtaining a Pilot *see* Sailing Directions booklet *PAC 200* — *General Information, Pacific Coast.*

32 **Tidal streams**. — In the west approach to Brown Passage the flood stream sets at about 2 kn onto Triple Islands and in the direction of the fairway up to these islands. Between Triple Islands and Hanmer Rocks the flood sets ESE and the ebb NW at up to 1½ kn. Farther SE the flood takes a more easterly direction and the ebb sets westerly onto the Tree Nob Group.

33 In the vicinity of Triple Islands the tidal streams are strong and irregular.

34 The tidal streams are greatly affected by prevailing winds.

Directions. — Because of the dangers in the approach to and within Brown Passage, and the probability that tidal streams will set a vessel toward these dangers, it is essential to be continually certain of your position before approaching or attempting to make a passage through Brown Passage. If good positioning is not possible it is advisable to keep an offing until conditions improve. It should be noted that Lucy Islands light is not visible in Brown Passage south of a bearing of 094°.

Deep-Draught Routes

36 Two **deep-draught routes** lead through Brown Passage and Chatham Sound to Ridley Island and Prince Rupert. These are referred to as the "Southern" and "Northern" routes. *See* the adjacent diagram.

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

The northern route leads south of Stenhouse Shoal and 0.8 mile south of Hanmer Rocks light, around the north and east sides of Lucy Islands, then SE to join the southern route west of Kinahan Islands.

39 *Directions for southern route.* — From a position SW of Stenhouse Shoal, bring Lucy Islands light ahead bearing 097°. This course leads between Stenhouse Shoal, marked by a light and whistle buoy with a Racon, and an 11 m shoal 2 miles SSE marked by a light and whistle buoy.

When Triple Islands light is abeam, distant about 1.25 miles, alter to a SE course to pass between a rock with 5.2 m over it lying 0.3 mile NE of Rushton Island and a rock with 15.8 m over it lying 0.8 mile farther NE; both rocks are marked by a light and bell buoy.

41 When the above described dangers are passed, alter course to bring the NE point of Rushton Island astern bearing 286° to make good a course of 106° which leads midway between 22 m depths on Alexandra Bank and on the bank extending from North Rachael Island. North Rachael Island is marked by a light, Alexandra Bank by a light and whistle buoy with a Racon.

42 When north of North Rachael Island light, adjust course to 108° on the south point of Kitson Island. This course leads between Greentop Islet light and Kinahan Islands to the south approaches to Ridley Island and Prince Rupert.

43 Directions for northern route. — Follow the directions for the southern route given above but continue to steer 097° on Lucy Islands light passing south of Hanmer Rocks, marked by a light with a Racon and a light and whistle buoy, and north of a rock with 16.5 m over it marked by a light and whistle buoy.

44 When SE of Hanmer Rocks, set courses as required to round the lights on the north and east sides of Lucy Islands at a prudent distance.

45 When east of Lucy Islands, steer SE courses to join the southern route about 2 miles west of Kinahan Islands, passing east of Alexandra Bank and SW of a bank with 27 m over it lying 2 miles NW of Kinahan Islands.

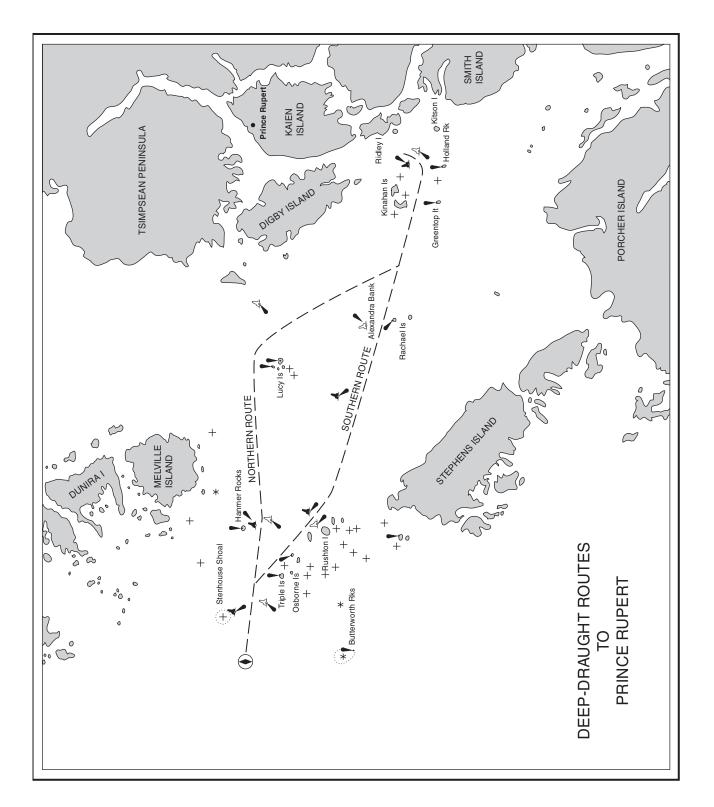
46 **Butterworth Rocks** $(54^{\circ}14'N, 130^{\circ}59'W)$ (*Chart 3800*), in the west approach to Brown and Bell Passages, consist of several drying rocks and a rock at the south end is 3.7 m high.

47 Butterworth Rocks **light** (751) is shown at an elevation of 16.1 m from a tripod tower fitted with a **Racon** ($- \cdot \cdot -$).

47.2 Wolf Clan port hand **light buoy** "EF5" (749.4) is moored SW of Butterworth Rocks.

48 **Kipcke Rock** (54°15′N, 130°55′W), 2.3 miles ENE of Butterworth Rocks light, dries 1.8 m. It is not advisable to pass between Kipcke Rock and the Tree Nob Group.

49 **Tree Nob Group** separates Brown Passage from Bell Passage to the south and consists of numerous islands, islets, drying reefs and rocks. Do not attempt to pass between the islands of this group without



the aid of local knowledge; the whole area is foul and tidal streams are strong.

50 **Triple Islands** $(54^{\circ}18'N, 130^{\circ}53'W)$, at the north extremity of Tree Nob Group, are three bare, white rocky islands; they have elevations of 6 to 12 m and form

a good landmark. Drying rocks, reefs and shoals surround these islands.

51 **Frequency of fog** information for Triple Islands is given in the Appendices.

52 Triple Islands **light** (752), on the NW island, is shown at an elevation of 28 m from a white tower 21.9 m high and operates during hours of darkness only.

53 **Stenhouse Shoal**, 3.3 miles NW of Triple Islands, in the west approach to Brown Passage, is a rocky head, awash, on the south end of a shoal bank. The shoal is generally marked by kelp and breaks continuously during strong winds from seaward.

54 Light buoys. — Stenhouse Shoal light and whistle buoy "D59" (751.1), close south of the shoal, is a port hand buoy fitted with a **Racon** (— • — •).

55 Brown Passage **light and whistle buoy** "D60" (751.2), 1.4 miles NW of Triple Islands, is a starboard hand buoy.

56 **Hanmer Rocks**, 2.8 miles NE of Triple Islands, consist of two separate groups of drying rocks and shoals, the shoalest head in each group dries 5.2 m.

57 Hanmer Rocks **light** (752.3), on the NW rock, is shown at an elevation of 10.9 m from a white tower fitted with a **Racon** (— —).

58 Hanmer Rocks **light and whistle buoy** "D57" (*753*), a port hand buoy, and Hanmer Rocks **light and whistle buoy** "D62" (*753.1*), a starboard hand buoy, mark the channel south of the rocks.

59 **Spoil ground**. — An ocean dumpsite, under permit through the *Ocean Dumping Control Act*, for old boom defence nets is about 2 miles ESE of Hanmer Rocks in $(54^{\circ}18'N, 130^{\circ}45'W)$.

Osborne Islands, 1 mile SE of Triple Islands, are surrounded by drying ledges. Numerous drying rocks and reefs extend from Osborne Islands to **Rushton Island** and beyond, forming the SW side of Brown Passage.

61 Osborne Island **light** (752.2), on the east island, is shown at an elevation of 10.2 m from a white tower.

62 **Light buoys.** — Rushton Island **light and bell buoy** "D72" (753.2) is a starboard hand buoy and **light and bell buoy** "D75" (753.3) is a port hand buoy. These buoys mark the channel NE of Rushton Island.

63 **Egeria Rock** (54°21'N, 130°52'W), 2.5 miles NW of Hanmer Rocks, has 0.2 m over it and breaks heavily in a westerly swell.

64 **Simpson Rock**, 3 miles east of Egeria Rock, lies near the outer end of foul ground, on which there are several islets, drying and below-water rocks, extending about 1 mile south from the SW end of Melville Island. A reef that dries 4.6 m lies 0.2 mile SE of Simpson Rock. Several unnamed shoals with less than 11 m over them lie within 1.5 miles of the south coast of Melville Island.

65 **Beaver Rock**, 2.8 miles east of Simpson Rock, has 0.3 m over it and **Cutter Rock**, 0.7 mile north, has 2.7 m over it; both rocks are marked by kelp.

Bell Passage and Approaches

Chart 3956

66 **Roland Rocks** $(54^{\circ}10'N, 130^{\circ}50'W)$ consist of several bare islands and drying and below-water rocks. A detached rocky area, with a least depth of 4.6 m, lies 1 mile WSW of the group. Pass well west of this area as the bottom is uneven.

67 **Archibald Islands**, 1.5 miles north of Roland Rocks, consist of a group of islands surrounded by drying ledges and reefs.

68 Detached shoals, the shallowest with 2.4 m over it, lie midway between Roland Rocks and Archibald Islands.

69 Archibald Islands **light** (750), on the NW island, is shown at an elevation of 8.6 m from a skeleton tower.

70 **Bell Passage** separates the north sides of Archibald Islands and Stephens Island from the south side of Tree Nob Group. The fairway is about 0.5 mile wide and deep. However, because of dangers in the vicinity, it is advisable to navigate this passage only when all landmarks are clearly visible.

Tidal streams through Bell Passage set east on the flood and west on the ebb at about 2 kn.

72 **Hooper Point**, 1.3 miles east of Archibald Islands, is the north extremity of Stephens Island. A conspicuous dome-shaped hill, 140 m high, is 0.8 mile south of Hooper Point.

73 Harris Rock, 0.8 mile east of Hooper Point, dries 7 m.

• 74 Harris Rock light (733) is shown at an elevation of 4.8 m from a skeleton tower.

Directions. — Approaching Bell Passage from Hecate Strait, keep Butterworth Rocks light structure ahead bearing 000° until Archibald Islands light bears 050° then alter course to 046°. Maintain 046° until Harris Rock light structure is open north of Hooper Point bearing 095° then alter course to 087° to pass about 0.3 mile off Hooper Point and about the same distance north of Harris Rock.

Chart 3909

76 **Qlawdzeet Anchorage** $(54^{\circ}13'N, 130^{\circ}46'W)$, entered between Hooper Point and Harris Rock, is a useful anchorage when seeking shelter from strong SE winds, prevalent in this area. It is open to NW winds, but these are usually light.

77 **Tides**. — Tidal differences for Qlawdzeet Anchorage (Index No. 9315), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

Avery Island and Dunn Island, forming the east side of Qlawdzeet Anchorage, are surrounded by drying ledges and rocks. Extensive drying rock ledges, with several islets on them, extend 0.3 mile from the south shore of Qlawdzeet Anchorage. Four dolphins are in a shallow basin south of Dunn Island, which has been used during the fishing season as a base for operations. This bay and the anchorage are known locally as **Squaderee**. **Trunk Island** and **Log Island**, with several drying reefs and shoals, lie along the west side of the anchorage.

79 **Anchorage** for vessels of moderate size can be obtained in about 22 m, mud and sand, with the NW extremity of Avery Island bearing 062°, and Hooper Point bearing 306° just open NE of Trunk Island.

Edye Passage and Approaches

Chart 3956

⁸⁰ The west approach to Edye Passage lies between **Philip Island** ($54^{\circ}09'N$, $130^{\circ}49'W$) and **Fan Point** ($53^{\circ}55'N$, $130^{\circ}44'W$) (*Chart 3987*). A chain of drying reefs, rocks and shoals extends across the approach, the only danger marked is Seal Rocks. The named dangers in the west approach are as follows.

81 **Gore-Langton Rock** $(54^{\circ}06'N, 130^{\circ}51'W)$, on a shoal ridge, has 2.7 m over it. **Evelyn Rocks**, 2 miles east of Gore-Langton Rock, consist of several rocky shoals close together with a least depth of 3.4 m.

82 **Warrior Rocks**, 1.8 miles south of Gore-Langton Rock, consist of two bare rocks, 2 and 5 m high, and several drying and below-water rocks; they lie near the NE end of an extensive bank which has numerous dangerous shoals on it. **Grenville Rock**, 2.5 miles from Warrior Rocks on the SW end of the bank, has 6.1 m over it.

82.1 Grenville Rock **light buoy** "EF2" (749.2), NW of Grenville Rock, is a starboard hand buoy.

83 **Wallace Rocks**, 3 miles SSE of Warrior Rocks, consist of three rocky heads with less than 2 m over them, and a 3.7 m shoal 0.4 mile south.

Seal Rocks, 1.2 miles SE of Wallace Rocks, consist of a rock 2.1 m high and two drying rocks on a drying reef.
Blackfish Clan port hand light buoy "EF1" (748.5) is moored west of Seal Rocks.

85 Seal Rocks light (748), on the highest rock, is shown at an elevation of 13.4 m from a square skeleton tower fitted with a Racon ($- \bullet - -$).

Chart 3987

Hall Rock $(53^{\circ}59'N, 130^{\circ}47'W)$, 1.5 miles south of Seal Rocks, has 34 feet (10.4 m) over it. Ste. Croix Rock, with 7.3 m over it, and a rock with 33 feet (10.1 m) over it, lie up to 1.5 miles SSW of Hall Rock.

87 **Oval Bank** extends 4 miles offshore between Fan and Oval Points.

88 Oval Bank West Cardinal **light buoy** "EOB" (747.5) is in 53°55'35.6"N, 130°54'24.5"W, about 6 miles WNW of Fan Point (*see Chart 3800*).

Edye Passage — SW Approach

Fan Island $(53^{\circ}54'N, 130^{\circ}44'W)$, joined to Fan Point by a drying reef, is prominent from NW or SE. Conspicuous white cliffs are on the coast about 1 mile ESE of Fan Island. The west coast of **Porcher Peninsula** is rocky and fringed with boulders and foul ground usually marked by kelp. A heavy and continuous swell sets on this coast, which should be approached with caution.

Oval Point is 1.9 miles NNE of Fan Point. **Bass Rock**, 0.3 mile west of Oval Point, is 30 feet (9.1 m) high, bare and connected to the point by a drying ridge of sand and boulders. **Oval Hill**, 0.6 mile SE of Oval Point, is 630 feet (192 m) high and appears oval from all directions.

92 **Oval Rock**, which dries 17 feet (5.2 m), and a group of drying and above- and below-water rocks lie up to 1.4 miles NW and north of Oval Point.

93 **Oval Bay** lies between Oval Point and Welcome Point, about 4 miles NE. The coast for 1.5 miles south of Welcome Point is fringed with drying rocks and shoals.

Anchorage can be obtained in Oval Bay in a position with Oval Hill bearing 190° and Seal Rocks light structure bearing 301°; depths are 16 to 18 fathoms (29 to 33 m), sand bottom.

95 Welcome Point $(54^{\circ}00'N, 130^{\circ}40'W)$ has foul ground, with numerous drying and below-water rocks, extending 0.3 mile west from it. These drying rocks and foul ground almost join Welcome Point to a chain of islands and drying ledges extending along the south side of Henry Island. Fog Islands consist of three islands at the west end of the above-mentioned chain.

Chart 3909

96 **Secret Cove** (54°00'N, 130°40'W), close NE of Welcome Point, can be entered by small craft through a narrow passage, encumbered with rocks, between the above-mentioned chain of islands and Henry Island. The cove can also be entered through a narrow, winding, channel close west of Welcome Point. Local knowledge is advised to safely navigate both channels. A shallow, narrow channel leads from the north end of Secret Cove into Welcome Harbour, described later in this chapter.

Chart 3956

97 **Hearndon Point** $(54^{\circ}02'N, 130^{\circ}40'W)$, the NW extremity of **Henry Island**, has drying reefs and islets extending 0.5 mile NW from it.

98 **William Island**, NW of Henry Island, has foul ground extending 0.7 mile from its west side and **Ibbetson Point** at its north extremity.

99 Chearnley Passage separates Henry Island from William Island.

100 Chearnley Passage light (749), on a small islet near the SE end of the passage, is shown at an elevation of 5.8 m from a skeleton tower.

101 **Tidal streams** flood north and ebb south through Chearnley Passage at 1 kn.

Edye Passage — NW Approach

102 Landmark. — Mount Stephens (54°08'N, 130°40'W) is conspicuous.

103 **China Islet** $(54^{\circ}09'N, 130^{\circ}50'W)$, connected to the SW side of Philip Island by drying ledges, is wooded. A rock that dries 5.2 m lies 0.4 mile NW of China Islet. The coast between China Islet and Skiakl Bay, 2 miles SE, is fringed with numerous drying reefs and rocks.

104 **Skiakl Bay**, entered west of **Skiakl Island**, is encumbered with drying ledges and rocks on all sides. The NW arm of the bay, and the arm entered west of **Ludlam Point**, are only suitable for small craft.

105 **Skiakl Point**, the south extremity of Skiakl Island, has conspicuous white cliffs.

106 **Skiakl Rock**, 0.6 mile SSE of Skiakl Point, has 6.1 m over it and is marked by kelp. **Angle Rock**, 1 mile east of Skiakl Rock, is 2 m high, bare and has drying and below-water rocks lying up to 0.3 mile off it.

107 **Butler Cove**, between the south side of Stephens Island and **Joyce Island**, is sheltered except from south or SW winds when a heavy swell sets into the cove. **Rod Island** lies close-off the south extremity of Joyce Island. A group of drying rocks lies close-off the SW side of Joyce Island in the approach to Butler Cove. **Dolly Island**, at the head of Butler Cove, is joined by drying ledges to Stephens Island and **Minnie Island**.

Anchorage for small craft can be obtained in the NE end of Butler Cove in 22 m, mud bottom. When entering Butler Cove give the drying rocks at the SW end of Joyce Island a good berth, then favour the Joyce Island shore to avoid the rock 0.3 m high near the middle of the cove. 109 **Stephens Passage**, separating Stephens Island from Prescott Island, dries 1.2 m in the narrowest part of the fairway. Local knowledge is advised for navigating this passage.

110 **Tidal streams** in Stephens Passage attain 4 kn.

111 **Prescott Island** has low, flat, marshy land at its north end from which several low hills rise; a range of hills with an elevation of 250 m occupies the south part of the island. **Parry Island** is joined to the NW side of Prescott Island by a drying flat.

112 **Prescott Passage**, separating Prescott Island from Arthur Island, has a least depth of 2.4 m and is only suitable for small craft. **Snuff Islet** lies at the west end of Prescott Passage on a drying ledge. An islet, 0.3 m high, lies 0.1 mile NW of Snuff Islet. A small island and some islets lie on drying ledges on the north side of the fairway, NNE of Snuff Islet.

Edye Passage

113 Edye Passage $(54^{\circ}03'N, 130^{\circ}37'W)$ is deep in the fairway, with reefs on both sides, and easily navigated at all stages of the tide. This passage affords a convenient route for entering the south portion of Chatham Sound from the north end of Hecate Strait.

114 **Tides**. — Tidal differences in Edye Passage, referenced on Prince Rupert, are given for Welcome Harbour (Index No. 9305) and Refuge Bay (Index No. 9306) in the Tide Tables, Volume 7.

Tidal streams flood east and ebb west through Edye Passage at 2 kn. The streams are probably stronger in the narrow part, abreast Pearce Point. There are heavy tide-rips at times over the bank extending south from the east end of Arthur Island.

Arthur Island lies on the north side of Edye Passage. View Point, the SW extremity of the island, has a steep-to drying ledge extending 0.2 mile south from it. A drying reef with above-water rocks on it lies 0.4 mile east of View Point. A wooded island, 0.8 mile east of View Point, is connected to the south side of Arthur Island by a drying ledge. Drying and below-water rocks, covered with kelp, extend 0.3 mile south of this island into Edye Passage.

117 **Morrell Point**, the SE extremity of Prescott Island, has drying reefs, extending 0.3 mile south, on which there are some white topped, bare, above-water rocks.

118 **Truscot Rock** $(54^{\circ}03'N, 130^{\circ}39'W)$, with 3.7 m over it, and numerous drying rocks extend north from the east end of Henry Island, and depths under 10 m lie up to 0.7 mile north of the island.

119 **Edwin Point**, 2 miles ESE of Truscot Rock, is the east entrance point to Welcome Harbour, which is described later in this chapter.

120 **Useless Point**, 1.5 miles ENE of Edwin Point, has a drying ledge, drying rocks and shoal water extending up to 0.4 mile off it.

121 Useless Point **light** (686), on a crib near the outer end of the drying reef west of the point, is shown at an elevation of 5.9 m from a white tower.

122 Useless Bay is filled with a drying sand flat over which Useless Creek flows.

123 **Goble Point** and **Pearce Point** are north of Useless Point. **Table Point** is the NE entrance point to Refuge Bay, described later in this chapter.

124 **Barrett Island**, 0.4 mile NE of Table Point, is on an extensive drying ledge extending 0.2 mile north from shore. **Clode Patch**, 0.3 mile west of Barrett Island, has 2.7 m over it and a rock with 5.2 m over it 0.1 mile WNW.

Directions. — Approaching Edye Passage from SW keep Seal Rocks light structure bearing 041° to pass west of Oval Bank. When Oval Hill bears 090° alter course to pass 0.5 mile SE of Seal Rocks. From Seal Rocks a route either west of William Island or through Chearnley Passage can be taken. After rounding Seal Rocks, if proceeding west of William Island, steer a course with the summit of Mount Stephens ahead, bearing about 026°. Maintain this course until View Point bears 105° then alter course to 112° to pass 0.4 mile south of View Point and about the same distance north of Edwin Point. When Morrell Point is abeam, bearing 022°, alter course to pass midway between Pearce Point and the bare white rocks south of Morrell Point.

126 If proceeding through Chearnley Passage, then, from a position 0.5 mile SE of Seal Rocks, steer to pass within 0.15 mile of the SE side of William Island and keep within 0.15 mile of the west shore of Chearnley Passage until the islet close north of Ibbetson Point is abeam. From a position abeam the above-mentioned islet alter course to bring the NW extremity of Arthur Island ahead, bearing 057°, and when in mid-channel alter course SE and steer to pass 0.4 mile south of View Point, thence as directed above.

Chart 3909

Welcome Harbour and Refuge Bay

127 Welcome Harbour $(54^{\circ}02'N, 130^{\circ}38'W)$ is entered from Edye Passage between the east side of Henry Island and Edwin Point. This harbour is suitable only for small craft and does not offer a welcome to the stranger. The entrance from Edye Passage is obstructed by numerous drying reefs and below-water rocks. Small craft can also enter Welcome Harbour from Oval Bay, by way of Secret Cove, previously described; this route is very shallow and intricate. **Dancey** Island is the largest island in Welcome Harbour.

 \searrow

129 **Mooring buoys** are in the bay east of Secret Cove and a **float** is on the islet in the bay to the south. 130 **Tides**. — Tidal differences for Welcome Harbour (Index No. 9305) and Refuge Bay (Index No. 9306), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

131 **Refuge Bay**, entered between Pearce Point and Table Point $(54^{\circ}04'N, 130^{\circ}32'W)$, has a sand flat extending 0.5 mile from its head. Both entrance points, and both sides of the bay, are fringed with drying ledges and foul ground. **Knox Island** lies near the outer edge of a drying ledge on the SW side of the bay. **Gun Island** is on the drying flat on the SE side of the bay.

132 Anchorage for vessels of moderate size can be obtained in the middle of Refuge Bay in 20 to 30 m, sand bottom. During SE gales strong squalls are experienced in this anchorage and with north winds a heavy swell sets in.

Chatham Sound — South Part

Chart 3957

133 The south part of **Chatham Sound**, for descriptive purposes, lies south of a line drawn from Tugwell Island $(54^{\circ}20'N, 130^{\circ}30'W)$ to **Deans Point** (*Chart 3959*), the SE extremity of Melville Island.

Lucy Islands (54°18'N, 130°37'W) consist of a group of wooded islands and drying reefs and rocks. A shoal spur with depths of less than 11 m extends 1.5 miles south from Lucy Islands.

135 **Lights**. — Lucy Islands **light** (719), on the NE point of the east island, is shown at an elevation of 21.6 m from a white tower.

 \mathbf{N} 136 Lucy Islands North **light** (719.2) is on the north island of the group.

 $\underbrace{\textbf{H}}_{\text{and ebb }160^{\circ}} 137 \qquad \textbf{Tidal streams NE of Lucy Islands flood } 330^{\circ}$

Alexandra Bank, 3.7 miles SSE of Lucy Islands, has a least depth of 4.3 m over it. Kelp generally grows on the bank but is frequently towed under by the tidal stream.

139 Alexandra Bank light and whistle buoy "DAX" (688.5) is a port bifurcation buoy fitted with a Racon ($- \bullet -$).

140 **Rachael Islands** (54°12'N, 130°33'W) consist of two wooded islands, **North Rachael Island** and **South Rachael Island**, and several islets, fringed by drying ledges and reefs.

141 **Lights**. — North Rachael Island **light** (688), on the north side of the north island, is shown at an elevation of 9.8 m from a white tower.

• SW tip of the south island.

143 Rachael Island South Cardinal **light and whistle buoy** "DSO" *(687.3)* is 0.6 mile south of the island. 144 **Pitt Shoal**, 1.5 miles east of South Rachael Island, has a least depth of 14 m.

145 **Colquhoun Shoal**, 2.7 miles SSE of South Rachael Island, has a depth of 9 m with irregular depths extending 2 miles ESE from it.

146 Colquhoun Shoal North Cardinal **light and whistle buoy** "DCO" *(687.1)* is close north of the shoal.

147 **Gull Rocks**, 1.2 miles south of Colquhoun Shoal, consist of a rock 5.2 m high and several drying and below-water rocks.

148Gull Rocks light (687) is on the highest rock.

149 **Ettrick Rock**, 1.4 miles SSE of Gull Rocks, dries 2.4 m and is steep-to. A 10.6 m shoal lies midway between Ettrick and Gull Rocks. Starboard bifurcation **buoy** "DA" is close NW of Ettrick Rock.

Havelock Rock, a drying rock, is on a detached bank1 mile SSE of Ettrick Rock.

151 Havelock Rock **light** (685.5) is shown at an elevation of 4.6 m from a white tower.

Chart 3956

152 **Riel Point** $(54^{\circ}12'N, 130^{\circ}45'W)$ is close south of Avery Island at the NE end of Stephens Island. The **east coast of Stephens Island** is relatively low lying, rising to hills a short distance inland. Drying ledges extend up to 0.2 mile from shore. **Congreve Point**, 4.5 miles SE of Riel Point, is 1.5 miles east of Congreve Hill, which has a sharp summit.

153 The east coast of Prescott Island has rocks and shoals close offshore.

154 **Creak Islands** (54°05'N, 130°29'W), off the north coast of **Porcher Island**, extend 0.9 mile WNW from **Creak Point**. Several shoals lie within 0.7 mile west and WNW of Creak Islands in the east approach to Edye Passage.

155 **Island Point**, 1.6 miles NE of Creak Point, has islands, drying reefs and shoal rocks extending up to 1.2 miles NW and north of it; these include **Alice Island** and **Brooks Rock**, which are marked by kelp.

Chart 3909

Hunt Inlet $(54^{\circ}04'N, 130^{\circ}27'W)$, with Havelock Rock and Brooks Rock in its approach, penetrates the north coast of Porcher Island. Drying ledges on both sides of the inlet should be given a good berth. Drying reefs lie off the east side of the inlet, about 0.5 mile north of the public wharf. **Hunts Inlet** (locality), about 0.7 mile from the entrance, is used as a base during the fishing season. Houses lie along the shore south of the public wharf.

157 **Tides**. — Tidal differences for Hunt Inlet (Index No. 9310), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

| | 158 | The public wharf, consisting of a pier and |
|-----------------------|---------|---|
| $\mathbf{\mathbf{Y}}$ | floats, | The public wharf , consisting of a pier and offers 64 m of berthing space. There is a depth |
| of 3 m | at the | outer end of the floats. |

Port of Prince Rupert

Charts 3957, 3958

159 The Port of Prince Rupert is administered by Prince Rupert Port Authority under the Canada Marine Act. The harbour is governed by the Port of Prince Rupert Practices and Procedures.

160 **Harbour limits** of the Port of Prince Rupert include: All the waters of Prince Rupert Harbour including Tuck Inlet, Morse Basin, Wainwright Basin, Porpoise Harbour and Venn Passage, and further including the waters of Chatham Sound lying north of $54^{\circ}08'36''N$ and east of $130^{\circ}26'47''W$. See charted harbour limits.

161 Vessel Traffic Services (VTS). — Mariners are reminded to make the anchorage and berthage reports, and to maintain an anchor watch, as required by the VTS system. A brief description of the Vessel Traffic Services (VTS) System is given in Sailing Directions booklet *PAC 200* — *General Information, Pacific Coast*; full details are given in *Radio Aids to Marine Navigation* (*Pacific and Western Arctic*).

162 **Arrival information**. — The owner of every deep-sea vessel and, if requested by the Port Authority, the owner of every other vessel shall, where possible, give notice to the Prince Rupert Port Authority of the current expected date and approximate time of arrival of the vessel at the port. Vessels with explosives onboard shall not enter, move within or depart from the port, except with permission of the Prince Rupert Port Authority.

163 Tugs and linesmen are available for berthing vessels. A boat is required to run lines at the coal terminal on Ridley Island.

164 Prince Rupert is a port of entry and has a resident Customs officer.

Pilotage is compulsory and the pilots generally board ships at Triple Islands. For information on obtaining a Pilot see Sailing Directions booklet PAC 200 — General Information, Pacific Coast.

166 **Tides**. — The mean and large tidal ranges at Prince Rupert are 4.9 and 7.4 m. Tidal predictions for Prince Rupert (Index No. 9354) and tidal differences, referenced on Prince Rupert, for Port Edward (Index No. 9342), Casey Cove (Index No. 9350), Seal Cove (Index No. 9360), Morse Basin (Index No. 9344) and Wainwright Basin (Index No. 9343) are given in the Tide Tables, Volume 7. Meteorological information and frequency of fog
 information for Prince Rupert are given in the Appendices.
 Regulations. — The Port of Prince Rupert Practices
 and Procedures apply within the harbour limits. Copies of the
 regulations can be obtained from

Prince Rupert Port Authority, 200-215 Cow Bay Rd., Prince Rupert, B.C. V8J 1A2 Telephone 250 627-8899 www.rupertport.com

169 The regulations govern vessels manoeuvring or otherwise underway, at anchor, berthing or alongside a berth in the Port of Prince Rupert. The regulations require that no vessel shall move in the port at a rate of speed that may endanger life or property or is in excess of any rate of speed authorized by the Port Authority.

170 The Port Authority may order vessels to move, use tugs, berth or anchor in locations that it designates.

171 Vessels are regulated with respect to bunkering, cargo-handling operations, and the equipment and lighting employed in these operations. Instructions for signalling, action in the event of accidents, cargo or gear lost overboard and safety requirements are included.

172 There are specific vessel regulations for the carriage and handling of explosives and dangerous goods, as well as rules to be observed in the prevention of fires.

173 **Ballast water**. — All vessels arriving in Prince Rupert with ballast on board will be required to comply with the *National Guidelines for Control of Ballast Water Discharge* prior to arriving in Canadian waters. *See* Sailing Directions booklet *PAC 200* — *General Information, Pacific Coast.*

174 **Speed**. — Mariners using the Port of Prince Rupert are required to reduce speed to minimize wash and wake. No Wake zones are enforced in the following areas

- (a) within 0.3 mile of the Prince Rupert shoreline;
- (b) within 0.3 mile of the Digby Island ferry dock and the Metlakatla floats in Venn Passage and
- (c) all of Porpoise Harbour.

Anchorages for vessels waiting for berths at Prince Rupert, in addition to those within the harbour limits, are designated as follows: Berths 2 to 7 in Prince Rupert Harbour, Berths 8, 9 and 10 in the approach to Marcus Passage, Berths 11 to 14 along the west shore of Digby Island, Berths 15, 16 and 17 on the east side of Rachael Islands, Berths 18 to 23 south of Lucy Islands and Berths 24 to 31 along the east shore of Prescott and Stephens Islands.

178 Masters are cautioned that these anchorages may not provide ideal holding ground during periods of inclement weather. Mariners are urged to exercise extreme caution at all times when anchored in these areas and keep a continuous radio watch on VHF 156.575, Channel 71, Prince Rupert Marine Communications and Traffic Services Centre.

Prince Rupert Harbour — South Approach

179 The **south approach to Prince Rupert Harbour** lies between **Kitson Island** (54°11'N, 130°19'W) and Digby Island, 4 miles NW.

Aspect. — Mount Stewart ($54^{\circ}14'N$, $130^{\circ}15'W$), on Tsimpsean Peninsula SE of Kaien Island, rises to an elevation in excess of 640 m. Mount Hays ($54^{\circ}17'N$, $130^{\circ}19'W$), in the centre of Kaien Island, rises to an elevation of 707 m. Mount Oldfield ($54^{\circ}18'N$, $130^{\circ}17'W$), toward the NE end of Kaien Island, has an elevation of about 549 m. Mission Mountain ($54^{\circ}22'N$, $130^{\circ}23'W$), on Tsimpsean Peninsula north of Kaien Island, rises from comparatively low land to an elevation of about 460 m. Mount Morse, about 2.5 miles ENE of Mission Mountain, rises to an elevation of 911 m. Digby and Ridley Islands are comparatively low lying.

181 A television tower $(54^{\circ}17'05''N, 130^{\circ}18'48''W)$, marked by air obstruction lights, is on Kaien Island near the summit of Mount Hays.

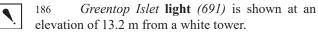
182 Conspicuous **white strobe lights** are shown from the tops of the loaders and stackers of Ridley Island coal terminal. The lights on the loaders have an elevation of 42 m.

Chart 3958

183 Holland Rock $(54^{\circ}10'N, 130^{\circ}22'W)$, Grace Rock, and Dor Rock lie on a shallow bank 1.4 to 2.5 miles west of Kitson Island. An automatic weather station is on Holland Rock

184 *Holland Rock* light (690), on the south extremity of the rock, is shown at an elevation of 9.1 m from a skeleton tower.

185 **Greentop Islet**, 1.8 miles west of Holland Rock, is a grey, rocky islet, 6 m high, on a drying ledge. The islet is fringed with shoals and its summit is covered with grass.



Kinahan Islands (54°12'N, 130°24'W) lie on the north side of the main approach route to Prince Rupert. The islands include West Kinahan Island, East Kinahan Island, South Kinahan Island and Little Kinahan Island. Drying ledges, reefs and shoals extend from the west, SW and south sides of West Kinahan Island. Marion Rock, 0.2 mile NW of West Kinahan Island, dries 0.3 m. Ellinor Rock, 0.4 mile east of the SE point of East Kinahan Island, has 0.9 m over it and is marked by south cardinal buoy DH.

188 East Kinahan Island light (699), on the NE extremity of the island, is shown at an elevation of 8.1 m from a white tower.

3-11

189 *Ridley Island light and bell buoy D27 (698.5)*, at the SE end of a shoal bank extending about 0.8 miles SE of Ellinor Rock, is a **port hand buoy** with a **RACON** — — • (G).

190**Tidal streams** south of Kinahan Islands flood100° at about ½ kn and ebb 265° at about 1½ kn.

Petrel Rock, 1 mile north of West Kinahan Island, has 4.6 m over it and lies in the middle of an extensive bank. *Petrel Rock light and bell buoy D39 (700)*, south of the rock, is a port hand buoy.

Snider Islet, 2.5 miles NNW of Petrel Rock, is connected to **Digby Island** by drying ledges. **Snider Rock**, which dries 4.6 m, together with several other drying rocks lie 0.2 mile SW. **Marine farm** facilities lie close west of these drying rocks.

195 Prince Rupert Aeronautical Beacon light (720) is on Digby Island, about 1.4 miles north of Snider Islet.

196 **Radio towers**, with red air obstruction **lights**, are about 0.4 mile SSE of the aeronautical light.

197 Prince Rupert **radiobeacon** is on the SW coast of Digby Island about 0.7 mile ESE of Snider Islet.

197.1 A **submarine cable** (power) is laid from the shore near the Prince Rupert radiobeacon extending 0.3 mile to an underwater platform at a depth of 24 m.

198 **Martini Island**, 1.5 miles SE of Snider Rock, lies on a drying ledge extending from the west side of Digby Island. **Tremayne Bay**, SE of Martini Island, lies between **Moore Point** and **Fraser Point**. Several below-water and drying rocks and shoals lie in the approach to and within Tremayne Bay.

199 **Chassepot Rock** 2 m high on a drying ledge and a reef that dries 5.2 m lie between Fraser Point and Petrel Rock.

Lima Point, the south extremity of Digby Island, has drying ledges and islets extending south from it. A wooded islet 9 m high lies near the south end of these drying ledges.

201 **Kestrel Rock**, marked by **port hand buoy** *D41*, **Falcon Rock** and **Georgia Rock** lie 0.6 to 1 mile SE of Lima Point.

202 *Georgia Rock light and bell buoy D43 (701)*, east of the rock, is a **port hand buoy**.

Chart 3955

Ridley Island (54°13'N, 130°19'W), on the east side of the approach to Prince Rupert Harbour, forms the west side of Porpoise Harbour. **Coast Island**, 0.3 mile west of Ridley Island, is surrounded by drying ledges. **Bacon Rock**, 0.3 mile north, dries 2.1 m and is marked by *Bacon Rock light buoy D40* (701.2), a **starboard hand buoy**.

204 *Ridley Terminals, Ridley Island Propane Export Terminal, Prince Rupert Grain,* and the *Ridley Island Cargo Ramp* are on the NW part of Ridley Island.

205 Major port facilities on Ridley Island are presented in a south to north sequence on the adjacent table. For latest depths and port information contact the *Port of Prince Rupert*.



| Berth | Wharf Length (m) | Least Depth (m) | Elevation (m) | Remarks |
|--|---------------------|--------------------|---------------|--|
| Ridley Terminals. | 150 | 20.2 | 3.5 | Coal and petroleum coke in bulk. Four berthing dolphins 150 m apart; four mooring dolphins 370 m apart. Handle ships to maximum dimensions 250,000 dwt; 20m draught; 325 m length; 50 m beam. Wharf has two sonar speed of approach indicators. Maximum approach speed 8 cm/sec. Two shiploaders up to 9,000 tonnes/hr. Linesmen and tugs of 3600 HP. 1.4 million tonnes storage. Shore gangway. No fresh water Operator: Ridley Terminals Inc |
| Ridley Island Propane Export Terminal | As above | As above | As above | Liquefied Propane Gas (LPG). Four berthing dolphins 150 m apart; four mooring dolphins 370 m apart Handle ships to maximum dimensions 100,000 dwt; 20 m draught; 325 m length; 50 m beam. Wharf has two sonar speed of approach indicators. Maximum approach speed 8 cm/sec. Linesmen and tugs of 3600 HP. Shore gangway. No fresh water. Operator: AltaGas Inc |
| Prince Rupert Grain Limited | 150 | 14.2 | 3.9 | Wheat, barley, canola and other grains. Three berthing dolphins 150 m apart; four mooring dolphins 370 m apart. Mooring buoys have been positioned to take head and stern lines of vessels over 280 m. Handle ships to maximum dimensions 145,000 dwt; 14 m draught, 280 m length; 40 m beam. Three shiploaders at 4,000 tonnes/hr. 202,000 tonnes storage. Shore gangway. Fresh water and power (600v/30 amp and 120 v/15 amp). Operator: Prince Rupert Grain Ltd. |
| Ridley Island Cargo Ramp | - | 4 | 6.2 | Inshore of Prince Rupert Grain. The Prince Rupert Port Authority licenses the ramp to other users as needed. Further information can be obtained from the Prince Rupert Port Authority. Operator: Port of Prince Rupert |

Major Port Facilities — Prince Rupert - Ridley Island

206 Privately operated **lights** are shown from the SW and NW corners of the Ridley Terminals wharf. White strobe **lights** are shown from the tops of the shiploaders and the stacker/reclaimers.

207 **Tidal streams** set parallel to or slightly offshore from the Ridley Terminals wharf face, reaching maximums of ½ kn on the flood and ¾ kn on the ebb. HW slack lasts from 1 hour before to 1 hour after HW Prince Rupert, and LW slack from 1 hour before to 2 hours after LW Prince Rupert.

208 Private **mooring buoys** are south and north of the grain terminal.

208.1 A **submarine cable** (fibre optic), marked by a "No Anchoring" sign ashore, leads west from Ridley Island, south of Bishop Island, into Chatham Sound.

209 A **submarine pipeline** (sewage outfall) extends 0.2 mile offshore close north of the grain terminal.

Porpoise Harbour and Approach

210 **Flora Bank**, known locally as **Kitson Bank**, is an extensive drying bank on the south side of the approach to Porpoise Harbour. **Agnew Bank** extends 0.6 mile west from Flora Bank and has two drying reefs on it.

211 *Agnew Bank light and bell buoy D24 (692)*, west of the bank, is a **starboard hand buoy**.

Buoyed channel. — The entrance fairway leading to Porpoise Channel lies between Agnew Bank and a detached shoal area to the north. This fairway has a least depth of 7.2 m and is marked by *Porpoise Harbour* light, port hand buoy *D35*, starboard hand buoys *D26* and *D30* and *Porpoise Harbour Entrance* range.

213 **NW approach**. — The entrance to Porpoise Channel can also be approached from NW between the detached shoal area mentioned above and a shoal area to NE which has a rock awash and drying rocks on it and Porpoise Harbour light structure at its SE end.

Leading line. — The SW extremity of Martini Island in line with the south extremity of Digby Island *(see Chart 3958)*, bearing 314°, leads through the NW approach to Porpoise Channel.

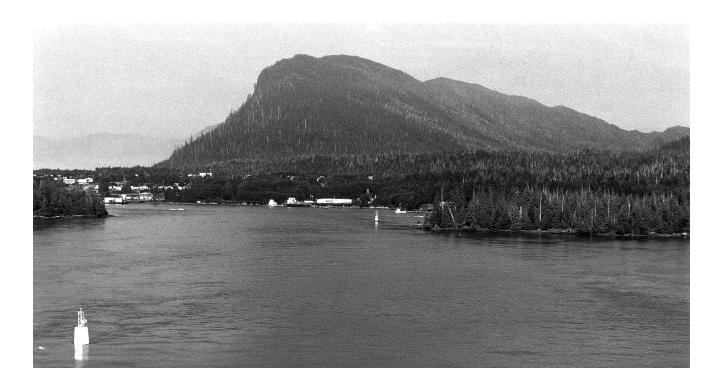
215 **Lights**. — *Porpoise Harbour* **light** (693), on the north side of the entrance to Porpoise Channel, is shown at an elevation of 7.1 m from a white cylindrical tower with a green band on top.

216 Porpoise Harbour Entrance range lights (694, 695), close-off the NW part of Lelu Island, in line bearing 073° lead north of Agnew Bank. The front light, on a drying ledge, is shown at an elevation of 3.7 m from a concrete base surmounted by an aluminum structure fitted with a range daymark. The rear light is shown at an elevation of 7.7 m from a skeleton tower with a similar daymark.

3 - 13

PORPOISE CHANNEL (1990)





217 **Porpoise Channel** separates Lelu Island from Ridley Island; the fairway is about 0.1 mile wide.

Channel attain 2 kn. At the NE end of Porpoise Channel attain 2 kn. At the NE end of Porpoise Channel a very strong set north, during the falling tide, comes from the channel separating Lelu Island from Tsimpsean Peninsula. Great vigilance is necessary while passing through Porpoise Channel.

219 **Entry restrictions**. — Entry to Porpoise Harbour is generally restricted to HW slack during daylight hours, however, on some occasions vessels may be piloted in at LW slack.

220 **Sound signals**. — When entering Porpoise Channel mariners should, on nearing Porpoise Channel Entrance light, signal their approach by giving one long blast of the whistle. On leaving Porpoise Harbour mariners should before making the turn into Porpoise Channel signal their approach by giving one long blast of the whistle.

221 Lights. — Beacon range. — Porpoise Channel Entrance light (696), on a drying rock on the south side of the channel about 0.2 mile NW of the Entrance Range lights, is shown at an elevation of 7.2 m from a white cylindrical tower with a red band on top.

222 Porpoise Channel West light (697), on the NW side of the channel on a drying ledge extending from Ridley Island, is shown at an elevation of 4.6 m from a mast and has a **port hand daymark**.

223 Porpoise Channel East light (698), on a drying rock off the north point of Lelu Island, is shown at an elevation of 7 m and is fitted with a range daymark. A **daybeacon** fitted with a range daymark is on the east shore of Porpoise Harbour, 0.3 mile NE of the light. The light and daybeacon in line, bearing 039¹/₂°, lead through Porpoise Channel.

Gay Island, at the NE end of Porpoise Channel, is joined to Ridley Island by causeways.

Porpoise Harbour between Ridley Island and Tsimpsean Peninsula has the marine facilities of Port Edward on its east shore. Depths within the harbour are uneven and caution is necessary.

226 **No Wake** is enforced in Porpoise Harbour.

227 **Buoys.** — **Port hand buoy** *D33* and **starboard hand buoy** *D32* mark a constriction in the navigable channel about 0.5 mile north of Gay Island.

Booming grounds existed along the Ridley Island shore about 0.8 mile north of Gay Island, the drying flats at the north end of the harbour, and the west coast of Watson Island. Several dolphins lie within the discontinued booming grounds.

229 **Submarine pipelines and cable**. — Submarine pipelines (sewer outfalls) extend into Porpoise Harbour from 1 mile north of the public wharf and from the *Porpoise Harbour Marina*; they are marked by signs onshore. Another pipeline extends from the narrow isthmus at the south end of Watson Island. On the shore end of this pipeline a sign reads "*Pipeline Outfall* — *No Anchoring*".

230 An abandoned **submarine pipeline** crosses Porpoise Harbour from the north end of the ruined wharf on **Watson Island** to Ridley Island.

231 A **submarine cable** (telephone), marked by signs ashore, crosses the harbour from the NE end of Ridley Island to Watson Island.

232 A **submarine pipeline** (gas) crosses the harbour from the NW end of Watson Island.

A **railway bridge** connects the north end of Watson Island to Kaien Island. The vertical clearance is 0.5 m.

Zanardi Rapids connects Porpoise Harbour to Wainwright Basin, described later in this chapter.

235 **Tidal streams** through Zanardi Rapids are violent during large tides. Slack water occurs between 10 and 40 minutes after HW and between 30 minutes and 2 hours after LW at Prince Rupert. LW slack is most delayed during very low tides.

236 An **overhead cable** (power), with a vertical clearance of 7.6 m, crosses Zanardi Rapids about 0.3 mile east of the railway bridge.

Anchorage is obtainable at the head of Porpoise Harbour, clear of the submarine pipelines, in 13 to 16 m; the bottom is uneven and caution is necessary. Tidal streams from Zanardi Rapids can also be troublesome.

238 **Port Edward** is on the east shore of Porpoise Harbour. It has a post office (V0V 1G0), laundromat and general store. There is a boat launching ramp. The main marine facilities are in Prince Rupert.

239 Marina facilities are listed in the Appendices.

240 **Wharves**. — All wharves are on the east side of Porpoise Harbour; commencing from the south end they are as follows.

241 *Cassiar Fish Company* **float**, about 0.2 mile NE of Porpoise Channel East light, is used for net drying.

242 *Aero Trading Ltd.* wharf, with floats extending north and south from the wharf face and a storage shed, is 0.1 mile north of Cassiar Fish Company float.

243 The **public wharf** with a **float**, and a launching **ramp**, are 0.4 mile north of Porpoise Channel East light. The float has 160 m of berthing space. A 3 tonne crane is on the wharf.

244 *Porpoise Harbour Marina* **public wharves** and **floats**, operated by the *Port Edward Harbour Authority*, about 1 mile north of Porpoise Channel East light, provides 400 m of berthing space for vessels up to 60 m. The buildings are for net repair and storage. *Moore's Boatworks* provides vessel repairs.



245 *Pembina Propane Export Terminal* is on Watson Island on the site of the former pulp and paper mill. The north end of the wharf is in ruins.

245.1 **Caution**. — There is debris, from the decommissioned pulp mill, in the water NNW of the Pembina LPG Terminal on Watson Island.

247 **Communications**. — Port Edward is on the Canadian National Railway line into the interior. Regular bus service operates to and from Prince Rupert.

Chart 3958

Prince Rupert Harbour

248 **Prince Rupert Harbour** $(54^{\circ}17'N, 130^{\circ}22'W)$ between Digby Island, Kaien Island and Tsimpsean Peninsula, is a portion of the Port of Prince Rupert, defined earlier in this chapter. The main entrance is from south, but it can also be entered from NW through Venn Passage.

249 Water aerodrome. — Prince Rupert Harbour is a water aerodrome known as Seal Cove. Aircraft generally land or take off at the NE end of the harbour opposite Seal Cove. 250 Ferry. — Regular ferry service, operated by the City of Prince Rupert, crosses Prince Rupert Harbour between the city of Prince Rupert and Digby Island. Charted ferry routes shown on the chart are general indications of the route followed by the ferry. Ferries can be encountered anywhere within the vicinity of the route shown.

Buoyage. — The upstream direction for buoyage purposes in Prince Rupert Harbour is approaching from seaward that is proceeding from south to north. However, it should be noted that McIntosh Rock daybeacon, which is in Prince Rupert Harbour, is at the east extremity of the Venn Passage buoyage system and is a part of that system. Venn Passage upstream direction is approaching from seaward that is proceeding from west to east.

252 **Tidal streams** in the channel abreast Casey Point begin to ebb 1 hour after HW; the maximum rate is 2 to 3 kn.

No Wake is enforced when within 0.3 mile of the Prince Rupert shoreline.

A bight in the SW part of the channel between Lima Point and **Frederick Point**, 1.3 miles NNE, fronts **Delusion Bay** and has numerous drying rocks and reefs and some islands in it. **Spire Island**, **Metford Island** and **Tuck Island**, south of **Miller Point** and Frederick Point, are surrounded by drying reefs. A private ODAS light **buoy** (*PRPA Research*) is approximately 0.2 mile SW of Tuck Island. **Spire Ledge** extending east from Spire Island dries 1.4 m.

255 Spire Ledge light and bell buoy D47 (702), east of the ledge, is a **port hand buoy**.

256 *Frederick Point* light (703.5), 0.2 mile NE of the point, is at the edge of a drying ledge with

foul ground and is shown at an elevation of 10 m from a white cylindrical tower with a green band on top.

Bishop Island, on the east side of the entrance, is on an extensive drying ledge extending from the SW extremity of Kaien Island. *Bishop Island light buoy D42 (701.5)*, a **starboard hand buoy**, marks a rock awash and several drying rocks extending 0.15 mile west of Bishop Island. **Barrett Rock** lies 0.45 mile NW of Bishop Island.

258 *Barrett Rock* light (703), on the rock, is shown at an elevation of 6.7 m from a white square tower with a red band on top.

259 A **submarine cable** (power) is laid from Barrett Rock to Kaien Island.

259.1 *Kaien Island Sector* **light** (703.3), 0.7 mile north of Barrett Rock, is shown from a square skeleton tower on top of a three pile dolphin.

260 **Casey Point**, 2 miles north of Barrett Rock, is the west extremity of Kaien Island.

261 *Casey Point* **light** (704), 0.1 mile SW of the point, is shown at an elevation of 7.8 m from a white square tower with a red band on top.

262 *Phillips Point Sector* light (703.7), on the drying rocks off the point, is shown at an elevation of 6.8 m from a white square tower. **Philips Point**, **Emmerson Point** and **Charles Point** are on the west shore of the harbour. Between Frederick and Charles Points the west shore is fringed with drying rocks and ledges.

263 **Casey Cove** is entered between Charles Point and **Parizeau Point**. The ruins of a wharf, some old buildings and wrecks are on the south side of the cove. A **submarine cable** crosses Casey Cove.

A **radio tower** with red air obstruction **lights** is on the north side of Casey Cove SW of Parizeau Point.

265 *Parizeau Point* light (705), 0.1 mile NE of the point, is shown at an elevation of 4.4 m from a dolphin.

266 A submarine cable crosses the entrance to Prince Rupert Harbour from Philips Point to Kaien Island. A submarine cable area, marked by a cable sign on Charles Point, is laid between Charles and Casey Points. An abandoned submarine cable area crosses the entrance between Parizeau Point and Fairview Terminal. A submarine cable (fiber optic) crosses from Dodge Cove to the Prince Rupert BC Ferry Terminal.

267 **Dodge Cove** is entered between **Elizabeth Point** and **Dodge Island** through a narrow channel with drying flats on each side and a least depth of 0.9 m.

Light buoys. — *Dodge Cove light buoy D50 (705.1)*, on the north side of the entrance channel, is a **starboard hand buoy**.

269 *Dodge Island light buoy D53 (706.3)*, 0.3 mile NE of Dodge Island, is a **port hand buoy**.

FAIRVIEW TERMINAL (2021)



270 Dodge Cove range lights (706.1, 706.12), in line bearing 253°, lead through the entrance of Dodge Cove. The front light is shown at an elevation of 3 m and the rear light 7 m; both lights are on dolphins fitted with range daymarks.

271 **Digby Island** settlement is on the west shore of Dodge Cove. The **public wharf** consists of five **floats**, secured end to end, each 24 m long; these floats are attached to a trestle approach that crosses the foreshore. The depth alongside the floats is 3.7 m. The **Dodge Cove Boatyard**, NW of these floats, has a marine ways with a capacity of 73 tonnes. It does boat construction and repairs. The **float** on the east side of Dodge Cove is used for access to the radio towers. 272 *Fairview Terminal* is on the Kaien Island shore about 0.5 mile north of Casey Point. Details of the terminal are given in the Major Port Facilities table later in this chapter. A **floating breakwater** commences a short distance north of the wharf and extends 0.3 mile north; it protects *Fairview Harbour* floats and *Diep Sea Products* wharves.

272.1 Construction for the Fairview Terminals expansion is in progress along the coastline approximately between Casey Point and 700 m to the south.

273 **Lights**. — Privately operated **lights** are at the north and south end of Fairview Terminal.

274 Oldfield Terminal **light**, at the end of the catwalk, is privately operated.

| Berth | Wharf Length (m) | Least Depth (m) | Remarks |
|----------------------------------|---------------------|--------------------|---|
| Fairview Container Terminal | 800 | 16.6 | Containers. 4 Super Post Panamax Cranes, 3 Malacca Max Cranes, 1,800 tonne cranes, 17 reachstackers to support container yard and on-dock double stack rail operations, 34 terminal tractors. Handle ships to 16 m draught, 400 m length. Operator: DP World Prince Rupert Inc. |
| Westview Wood Pellet Terminal | 309 | 11.8 | Wood Pellet loading. Five berthing dolphins 309 m apart. Handle ships to maximum dimensions 77,500 dwt; 10 m draught; 245 m length; 32 m beam. Shiploader at 2,000 tonnes/hr. 50,000 tonnes storage. Operator: Pinnacle Renewable Energy Inc. |
| Northland Cruise Terminal | 325 | 21.2 | Cruise ship terminal. Eight mooring dolphins with a floating dock mid-ship, two shore gangways. Handle ships to maximum dimensions 78,400 dwt, 15 m draught, 313 m length. Operator: Port of Prince Rupert |

Major Port Facilities — Prince Rupert

275 *Oldfield breakwater* **light** (706.2), at the north end of the floating breakwater, is fitted with a starboard hand daymark.

276 *Fairview Bifurcation light* **buoy** *DE* (705.8), west of the floating breakwater, is a **starboard bifurcation buoy** that marks a rock, with 4.3 m over it.

Ferry landings. — The Digby Island Ferry landing is about 0.1 mile SE of Oldfield breakwater light.

278 The *Alaska Marine Highway System* ferry and *BC Ferries* terminals are about 0.15 mile NE of Oldfield breakwater light.

279 Lights. — Alaska Ferry South and North lights (709, 710) are shown from dolphins at the outer end of the ferry landing.

280 *BC Ferry South* and *North* **lights** (710.1, 710.2) are shown from the outer ends of the BC Ferries terminal. A **fog signal** is operated by ferry personnel when required for ferry movements only.

281 *CN Wharf* light (710.3) is shown from the outer end of the barge landing.

282 The above lights and fog signal are privately operated.

283 **Submarine pipelines** (sewer outfalls) extend from the shore at the public floats in Fairview Harbour and NE of Rushbrook Harbour.

Tobey Point, on the west side of Prince Rupert Harbour, is 0.5 mile north of Dodge Island. Foul ground fronts the coast between Dodge Island and Tobey Point. A conspicuous **tower** is west of Tobey Point. **McIntosh Rock**, 0.3 mile NE of Tobey Point, dries 2.1 m.

284.1 *McIntosh Rock* **light** (*711.5*), on the **rock**, is shown at an elevation of 7.7 m from a white cylindrical tower.

Russell Arm is entered between de Stein Point and Russell Point. Wolfe Island (54°19'N, 130°22'W), south of de Stein Point, has depths under 20 m projecting 0.2 mile south from it. **Hill Island** and **Burrowes Island** lie on a drying ledge extending from the west side of Russell Arm. There are drying flats at the head of the arm; a dam at the north end of these flats separates Russell Arm from **Salt Lake**.

286 **Melville Arm**, 0.5 mile NE of Russell Arm, entered between **Detention Island** and **Douglas Point** consists mainly of a drying flat. **McNichol Creek** enters the east side of the arm.

287 Two private **mooring buoys** lie off the north side of Prince Rupert Harbour between the entrances of Russell and Melville Arms.

Bacon Cove, 0.7 mile ENE of Douglas Point, is a small indentation with drying flats at its head used as a **booming ground**. Two conspicuous concrete pillars lie 0.2 and 0.4 mile NE of **Bacon Point**.

289 **Vigilant Island** is 0.4 mile east of Bacon Cove. A drying rock, close south of the middle of the island, is steep-to on its south side. **Booming grounds** line the shore from Vigilant Island to Schreiber Point.

Anchorages. — Anchor berths 2 to 7 in Prince Rupert Harbour are shown on the chart. The bottom is mainly silt and clay and holding is not good. Temporary anchorages lie along the east coasts of Prescott and Stephens Islands in the SW part of Chatham Sound and in the north approach to Marcus Passage (*Chart 3956*).

291 **Caution**. — Prince Rupert Harbour is subject to violent gusts of wind from the mountain slopes in the vicinity during SE gales, which are prevalent during autumn and winter months. When these weather conditions are expected all necessary precautions to guard against dragging anchor should be taken. Vessels at anchor must have engines at standby and a second anchor ready to let go in winds of 20 kn or more and maintain a continuous radio

FAIRVIEW HARBOUR (2021)



ALASKA AND B.C. FERRIES TERMINALS (2021)



watch on 156.575 mHz (Channel 71), Prince Rupert Marine Communications and Traffic Services Centre.

Prince Rupert

Prince Rupert (city) is on the NW side of Kaien Island along the SE side of Prince Rupert Harbour. It is the terminus of the Canadian National Railway transcontinental system and the centre for extensive mining, lumbering and fishing industries. A modern hospital, with a Poison Control Centre and heliport, doctors, dentists, clinics and pharmacies are available. The city is equipped with all modern municipal facilities.

294 **Customs**. — Prince Rupert is a port of entry. Canada Customs have introduced a selective boarding system and the ships agents usually carry out vessel clearances in Prince Rupert.

Administration. — The port is administered by *Prince Rupert Port Authority* with offices at 200-215 Cow Bay Road — telephone 250 627-8899. After hours the Harbour Master can be reached on VHF Channel 68.

WESTVIEW WOOD PELLET TERMINAL (2021)



NORTHLAND CRUISE TERMINAL AND COW BAY MARINA (2021)



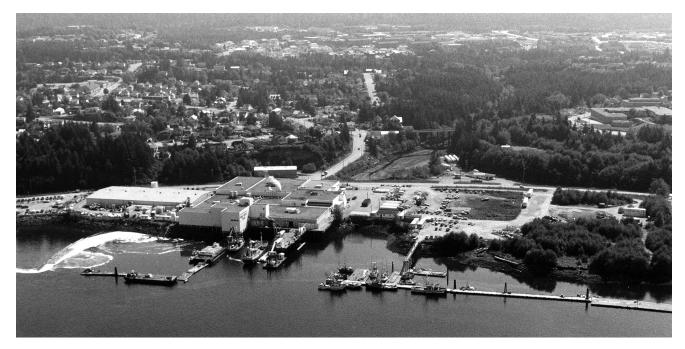
296.1 **Marina** facilities are listed in the Appendices.

Major port facilities in Prince Rupert are presented in a south to north sequence on the adjacent table. For latest depths and port information contact the *Port of Prince Rupert*.
A small craft basin, known locally as *Fairview Harbour*, is NE of Fairview Terminal behind the floating breakwater described earlier.

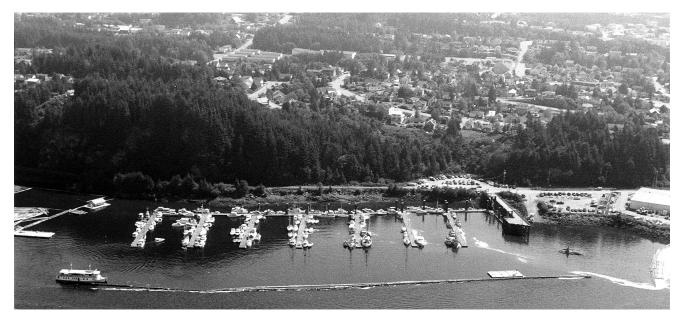
Fairview Harbour public floats, operated by the Port Edward Harbour Authority, in the basin, have 1,160 m of berthing space. The floats are generally for the fishing fleet but will accommodate pleasure craft when space is available.
 Diep Sea Products wharves, SAAM Towage, and the Pacific Pilotage Authority are also behind the breakwater. The Digby Island ferry landing is at the north end of Fairview Harbour.

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CANADIAN FISHING COMPANY (1990)



RUSHBROOK HARBOUR (1990)



302 Canadian Coast Guard Lifeboat Station Prince Rupert and the Royal Canadian Marine Search and Rescue (RCM-SAR) Unit 64 are in Fairview Harbour.

303 **Ferry landings** for the Alaska Marine Highway System and BC Ferries Corporation are close north of Fairview Harbour.

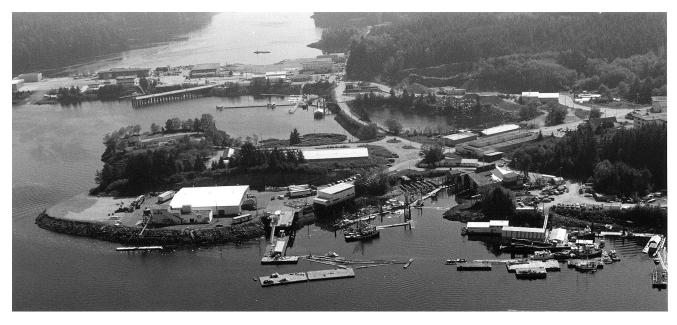
304 The *Canadian National* barge loading ramp and mooring dolphins are close north of Pillsbury Point.

305 A **barge loading ramp** 0.3 mile NNE of Pillsbury Point, is in ruins.

306 Westview Wood Pellet Terminal, shown in the Major Port Facilities earlier in this chapter, is 0.5 mile NNE of Pillsbury Point. Private **mooring buoys** are SW and NE of the terminal.

306.1 *Ocean Dock*, 0.4 mile NE of *Westview Wood Pellet Terminal*, is in ruins.

HAYS AND SEAL COVES (1990)



306.2A float, 0.3 mile NE of Ocean Dock, is 30 m in lengthand is used for customs clearance of fishing vessels and yachts.307Northland Cruise Terminal, 0.6 mile NE of

Ocean Dock, is shown in Major Port Facilities table earlier in this chapter. Private lights are shown from dolphins at the outer ends of the dock and on the floating dock.

307.1 *Metlakatla Ferry* dock is close SW of *Northland Cruise Terminal*.

308 *Cow Bay Marina*, operated by the *Port of Prince Rupert*, close SW of **Cow Bay**, is behind a **floating breakwater** and has 51 slips that can accommodate vessels up to 21 m. A private light is on the NE corner of the breakwater. 309 *Cow Bay* **public wharf**, operated by the *Port Edward Harbour Authority*, behind the **floating breakwater** described

earlier, has 170 m of berthing space for small craft. 310 The *Prince Rupert Rowing and Yacht Club* floats,

protected by a **floating breakwater**, are on the east side of Cow Bay. These floats do not require a yacht club reciprocal.

312 *Northwest Fuels (Petro Canada)* wharf and floats have diesel fuel, gasoline, lubricants, water, showers, washrooms, and a small hoist. Garbage disposal and sewage pumpout facilities are available.

313 *Tymac Launch Service (Tidal Transport and Trading)* **floats** are at the NE end of Cow Bay.

314 *Canadian Fishing Company* **floats** are 0.3 mile NE of the Northwest Fuels wharf.

315 *Rushbrook Harbour* **public floats**, operated by the *Port Edward Harbour Authority*, have 1,320 m of berthing space, and is protected by two **floating breakwate**rs. The area

between the floats and the breakwaters has been dredged to 2.1 m. The north and main entrance to the floats is marked by a port hand **daybeacon** on the north breakwater. A **dry-ing rock** in the west end of the protected area is marked by a green and white pole, fitted with a port hand **daybeacon** and calibrated to show the depth in feet over the rock. There is a derrick and a boat launching **ramp** available.

Booming grounds, with private **mooring buoys**, line the shore from *Rushbrooke Harbour* to Hays Cove.

Hays Cove is at the north end of Kaien Island. The *Canadian Fishing Company* **wharf**, protected by a **floating breakwater**, is at the SW entrance point to Hays Cove. *McLeans Shipyard* is in the cove.

318 **Ritchie Point**, at the north extremity of Kaien Island, has **wharves** and **floats** attached to a recent fill area.

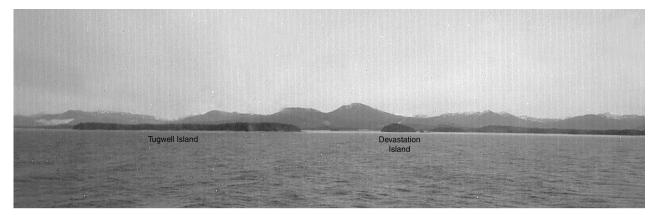
Bunkering. — Gasoline, diesel fuel, stove oil and lubricating oils are obtainable at the floats of the various oil companies. Diesel fuel can be delivered to Fairview Terminal by truck or to a vessel at anchor by barge. Deep-sea vessels should arrange for bunkers in advance.

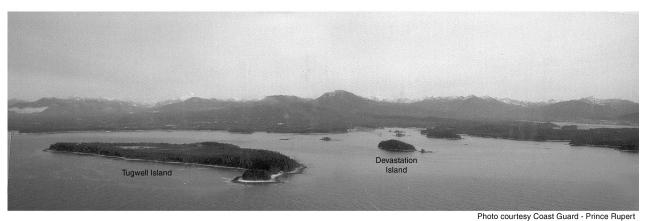
321 **Supplies** of fresh provisions and deck and engine stores are available. Fresh water is laid on to most wharves and floats.

322 Services available. — Tugs are available from *SAAM Towage* and *Wainwright Marine Service Ltd*. Linesmen are available. Shore gangways are available but the ship's gangway can be utilized at all berths except *Ridley Terminals*, *Ridley Island Propane Export Terminal*, *Prince Rupert Grain*,

3-21

METLAKATLA BAY (1984)





and *Westview Wood Pellet Terminal*. There are no consulates in the city; most are located in Vancouver.

323 **Repairs.**—Salvage.—*McLeans Shipyard*, in Hays Cove, offer repairs to wood, steel and fibreglass vessels. There are marine railways capable of handling craft up to 227 tonnes and 46 m in length. Repairs to machinery and equipment can be effected and there are fully equipped machine shops.

324 **Communications**. — The Prince Rupert Marine Communications and Traffic Services Centre (VAJ), in Seal Cove, provides ship-to-shore radio and marine telephone service *see Radio Aids to Marine Navigation (Pacific and Western Arctic)*. A highway connects Prince Rupert to the city of Prince George, 725 km inland; from Prince George, highways lead south to Vancouver (784 km), east to the interior and north to Alaska. The Canadian National Railway provides service to the interior. Prince Rupert Airport, on the west side of Digby Island, is served by bus and ferry services from the city and provides daily air service to major centres. There is a water aerodrome in Prince Rupert Harbour. B.C. Ferry Corporation maintains a regular car and passenger service between Port Hardy, on Vancouver Island, and Prince Rupert; they also operate a car and passenger ferry between Prince Rupert and Skidegate in the Queen Charlotte Islands. The Alaska Marine Highway Ferries make regular scheduled calls at Prince Rupert. Scheduled intercity bus service is available. The municipality provides a local bus service.

Chart 3957

Metlakatla Bay and Venn Passage

Tugwell Island (54°20'N, 130°30'W), on the east side of Chatham Sound, has **Doolan Point** as its east extremity. The west side of the island is fronted by a drying ledge with numerous drying rocks lying up to 0.6 mile offshore. **Dawes Point** is the SW extremity of the island. **Dawes Rocks** 0.5 mile SW of Dawes Point, are two rocks that dry 0.9 and 2.1 m.

326 Enfield Rock, 0.9 mile SW of Dawes Point, has 4.4 m over it.

327 *Enfield Rock light and bell buoy D76 (719.5)*, SW of the rock, is a **starboard hand buoy**.

Tugwell Reef, 0.4 mile south of Tugwell Island, is nearly connected to it by a drying spit.

Tugwell Reef light and bell buoy D61 (721), SE of the reef, is a **port hand buoy**.

Alford Reefs, 0.7 mile south of Tugwell Reef, consist of a group of drying rocks and rocks awash. **Starboard hand buoy** *D58* is close NW of the reefs.

Henry Point, 2.2 miles SE of Dawes Point, on the west coast of Digby Island, is fronted by drying ledges and numerous drying rocks and reefs. Cridge Island, 0.4 mile SW of Henry Point, is surrounded by a broad drying ledge. Little Cridge Island is 0.2 mile west of Cridge Island.

332 Kerr Rocks, 0.7 mile south of Henry Point, Quartermaster Rock, 0.2 mile WNW of Little Cridge Island, and Midge Rock, 0.5 mile NNE, are drying rocks.

333 **Metlakatla Bay**, east of Tugwell Island, is entered between Tugwell Reef and Alford Reefs. The bay can also be entered from the north via Duncan Bay and a channel across a shallow ridge east of Tugwell Island marked by **port hand buoys** *D81* and *D83*.

Chart 3955

334 **Straith Point** (54°19'N, 130°28'W) is 1.3 miles ESE of Tugwell Reef. **Cutch Rock** with 1.7 m over it, and another rock with 1.9 m over it are 0.4 mile west. **Scattered Reefs**, a group of drying rocks and reefs, extend 0.3 mile north and NE of Straith Point. **Marine Farm** facilities lie west of these rocks. **Armour Rock** drying 0.9 m, a shoal rock with 1.0 m over it 0.1 mile SW, and **Knight Island** 1 m high, lie up to 0.6 mile north of Straith Point.

Devastation Island, in the middle of Metlakatla Bay, has a shoal area with a drying reef on it extending 0.4 mile east from its north end.

336 *Devastation Island* **light** (721.6), on the NW side of the island, is shown at an elevation of 5.3 m from a white cylindrical tower with a red band on top.

337 **Venn Passage**, known locally as **Metlakatla Passage**, connects Metlakatla Bay to Prince Rupert Harbour. The passage should be used only by small vessels and local knowledge is advised.

Buoyage. — The upstream direction for buoyage purposes in Venn Passage is when approaching Prince Rupert Harbour from seaward, that is proceeding toward the east. It should be noted that McIntosh Rock daybeacon, which is in Prince Rupert Harbour, is the easternmost marker in this system.

339 **Tidal streams** in Venn Passage, between Dundas Point and Verney Island, attain 3 kn on the flood and ebb; the stream turns about 1 hour before HW.

A **speed limit** of 5 kn is enforced in Venn Passage when within 0.3 mile of the ferry dock and the Metlakatla floats. 341 **Observation Point** $(54^{\circ}20'N, 130^{\circ}28'W)$ is the NW entrance point to Venn Passage. A drying ridge, locally known as **Tugwell Bar**, extends 0.8 mile westward from Observation Point and has **Carr Island** on its south part. **Port hand buoy** *D85* marks the south extremity of Tugwell Bar.

342 **Pike Island** and **Shrub Island** are on an extensive drying flat extending 0.6 mile from the NW coast of Digby Island. A **float**, 18.5 m long, at the end of a trestle approach extends from the SW extremity of Pike Island.

343 **Kelp Reef**, on the north side of the fairway about 0.2 mile south of Observation Point, has several drying boulders on it. A rock that dries 0.4 m lies 0.1 mile east of Kelp Reef.

344 Shrub Island light (722), on a drying rock 0.15 mile north of the island, marks the north end of the drying flat, and is shown at an elevation of 7.5 m from a white cylindrical tower with a red band on top.

345 *Kelp Reef light buoy D63 (722.5)*, south of the reef, is a **port hand buoy**.

346 **Port hand buoy** *D65* marks the drying rock east of Kelp Reef.

Gribbell Islet, 0.5 mile east of Shrub Island light, together with **Isabel Islet**, 0.1 mile NE of it, lie on a detached drying sand bank on the south side of the fairway. Drying rocks lie close-off the north edge of this sand bank. A rock with 0.2 m over it, marked by **port bifurcation buoy** *DJ*, is in the middle of the fairway 0.1 mile NW of Isabel Islet.

347.1 A private ODAS light **buoy** is approximately 0.2 mile NW of Gribbell Islet.

348 **Metlakatla** is the community for the Indian Reserve on the north shore of Venn Passage close NW of **Mission Point**.

349 **Mission Point** has a **pier** on it with a "No Wake" sign. Reduce speed when passing the pier.

A barge ramp with a pier on its SW side is 0.45 mile NE of the public wharf. A float, 84 m long, with a 15 m ferry float at its NE end, extends SW from the barge ramp. Note. — Rockfill lies along the seaward face of the pier, only the SW side is usable.

351 A **submarine cable** (power) crosses Venn Passage from Mission Point to SW of **Auriol Point**, the north extremity of Digby Island.

352 A **submarine pipeline** (sewer outfall) extends 0.1 mile SE from Mission Point.

153 *Metlakatla Sector* **light** (718), 0.6 mile east of Mission Point on the north end of a small island, is shown at an elevation of 2.7 m from a skeleton tower fitted with an orange and black vertically striped daymark.

Anchorage for small craft can be obtained NNE of Carolina Islands; this bay has extensive drying ledges on all shorelines. *Metlakatla Entrance light* *buoy D67 (718.5)*, positioned NE of the Carolina Islands, is a **port hand buoy**. Three **wrecks** are on the flats north of the islands. A fourth **wreck**, with 2.2 m of water over it, lies between the flats and the dock NE of Mission Point. **Scott Inlet** and **Bencke Lagoon** are on the east side of this bay.

Ritchie Island, Arthur Rock and **Verney Island** lie on the NE side of the fairway between Metlakatla Sector light and **Dundas Point**, about 0.9 mile SSE. A rock with 1.6 m over it lies on the SW side of the fairway about 0.2 mile east of Auriol Point. **Starboard hand buoy** *D66* is 0.1 mile NW of this rock.

Drying flats extending 0.1 mile east of Dundas Point are marked by **starboard hand buoy** *D68*. **Boundary Cove**, south of Dundas Point, has extensive drying flats and dolphins in it.

Roberson Point is the south extremity of a small peninsula extending south from Tsimpsean Peninsula.

1358 Lights. — Dundas Point Sector light (717), NW of the point, is shown at an elevation of 4.9 m from a skeleton tower fitted with an orange and black vertically striped daymark.

NW of the point on the east side of the fairway, is shown at an elevation of 2.8 m from a white square tower fitted with an orange and black vertically striped daymark.

360 **Water aerodrome**. — Venn Passage between Dundas and Grindstone Points is a water aerodrome called Digby Island.

Shkgeaum Bay, 0.7 mile south of Dundas Point, is filled with drying flats.

362 Shkgeaum Bay range lights (715, 715.1), on the east side near the head of the bay, in line bearing $171\frac{1}{2}^{\circ}$ lead between the drying flats east of Dundas Point. The front light is shown at an elevation of 3.9 m and the rear light at an elevation of 8.4 m; both lights are shown from a mast fitted with a range daymark.

363 Note. — A rock with 1.9 m over it lies on the above range, 0.15 mile SE of Dundas Point.

364 **Port hand buoy** *D73* is 0.2 mile NW of Du Vernet Point.

365 A ferry wharf on Du Vernet Point consists of a rock causeway, dolphins, a ramp and a float extending NW from the ramp. The ferry crosses Prince Rupert Harbour and is the main transportation between the city of Prince Rupert and the airport on Digby Island. Reduce speed when passing the ferry wharf.

The ruins of the former ferry wharf are close west.
367 Du Vernet Point light (714), on a drying ledge 0.1 mile east of the point, is shown at an elevation of 3.4 m from a white cylindrical tower with a red band on top.
368 Anian Island, Wilgiapshi Island and Garden Island are on an extensive drying flat extending south and east

from Roberson Point. The bay lying east and north of this drying flat has a **Marine Farm** in the entrance and **Pillsbury Cove**, which dries, on its north side. Several isolated drying reefs and rocks extend 0.2 mile SSE from Wilgiapshi Island.

N 369 Venn Passage light (713), on a drying rock on the north side of the fairway 0.2 mile SSE of Wilgiapshi Island, is shown at an elevation of 6.7 m from a white cylindrical tower with a green band on top.

370 **Crippen Cove** has two small **floats** at the HW line south of Venn Passage light.

The east entrance to Venn Passage lies between **Grindstone Point** and Wolfe Island, about 0.7 mile NNE. Drying ledges extend from both entrance points. **Grindstone Island** is on the drying ledge close east of Grindstone Point and a drying reef is 0.1 mile NE of the point. A rock awash is close north of the drying reef.

Solution Solution Solution

Charts 3958, 3964

Fern Passage and Morse Basin

Fern Passage, entered between Ritchie Point, previously described, and Pethick Point $(54^{\circ}20'N, 130^{\circ}16'W)$, leads south through Butze Rapids into Morse Basin. It is part of the Port of Prince Rupert. The navigable channel is less than 90 m wide in places and at Butze Rapids it is less than 30 m wide and should only be used by small craft.

Tidal streams in the narrow parts of Fern Passage run with considerable strength and create eddies. At the north end of Fern Passage, in the vicinity of David Point, slack water occurs 45 minutes after HW and 1 h 30 min after LW at Prince Rupert.

375 Seal Cove light (711), on a rock 0.1 mile west of Pethick Point, is shown at an elevation of 4.9 m from a white tower.

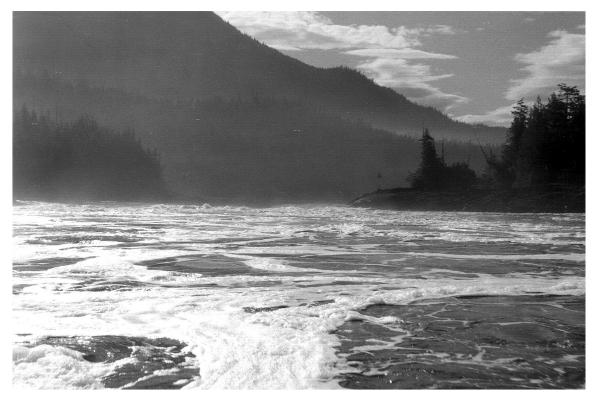
A B.C. Ministry of Forest **pier** and **float** are in the cove 0.25 mile SW of the light.

Seal Cove, 0.2 mile SE of Ritchie Point, has the Coast Guard depot and **wharf** on its south side. A seaplane base with **floats** and offices of several airlines are at the head of the cove. A rock that dries 0.6 m is close north of the seaplane floats.

David Point, 0.2 mile SSE of Pethick Point, has a bare islet, drying rocks and shoal depths lying up to 0.1 mile WNW of it.

A seaplane launching ramp and heliport are SW of David Point. A drying reef is marked by a **daybeacon** fitted with a starboard hand daymark.

3-25



BUTZE RAPIDS FROM FERN PASSAGE (1988)

380 **Sourdough Bay**, 0.6 mile SE of Ritchie Point, has wharves and floats in ruins. Shoal rocks lie off the public wharf and in the entrance to the bay.

381 **Submarine cables** and **submarine pipelines** (water) cross Fern Passage between 0.6 and 1.2 miles SE of Pethick Point.

382 **Shawatlan Lake** drains into the east side of Fern Passage, 0.9 mile SE of Pethick Point, over drying tidal flats. An **overhead cable**, with a vertical clearance of 12 m, crosses the tidal flats.

The bay on the west shore, between the submarine pipelines, has a **rock causeway** across it and barges may be moored alongside.

Booming grounds are on the east shore 0.55 mile SE of the causeway.

Chart 3958

The bay $(54^{\circ}18'N, 130^{\circ}16'W)$ is the site of a large log sorting area and **booming ground**. Considerable fill has been placed along the shoreline. An A-frame is on the west shore and a **rock breakwater** is in the south part of the bay.

386 A **submarine pipeline** extends into the passage close north of the bay.

387 **Butze Rapids** (54°18'N, 130°15'W) is formed by several islets, drying reefs and rocks and rocks awash. The

rapids are dangerous and, at times, spectacular; it is only suitable for small craft and should be navigated only at HW slack. Local knowledge is advised.

388 **Tidal streams** flow in and out of Morse Basin through Butze Rapids and the flow is violent during larger tides. HW slack occurs 30 to 45 minutes after HW, and LW slack occurs 1 to 2 hours after LW at Prince Rupert. LW slack is most delayed during very low tides.

A port hand **daybeacon** is on a drying reef at the NE end of the fairway leading into Butze Rapids. A starboard hand **daybeacon** is on a drying rock ledge on the west side of the fairway about 260 m SSE of the above-mentioned daybeacon. Butze Point is south of Butze Rapids.

Charts 3958, 3955

391 **Morse Basin** (54°16'N, 130°15'W) can only be entered by small craft, either through Butze Rapids or from Porpoise Harbour by way of Zanardi Rapids, Wainwright Basin and Galloway Rapids.

Miller Bay, formerly known as **Hospital Cove**, is 2 miles south of Butze Point. The former hospital, near the head of the bay, is used as a hatchery (1988). An **overhead cable** (power), vertical clearance unknown, crosses the head of the bay.

Chart 3955

393 **Denise Inlet** (54°16′N, 130°12′W) is entered from the SE end of Morse Basin.

Kloiya Bay, entered south of the entrance to Denise Inlet, has a rock that dries 2.1 m in the middle of its entrance. The **Kloiya River** flows into the head of the bay over an extensive drying mud flat. Several drying rocks lie up to 0.2 mile off the drying flats. An **overhead cable** (power), vertical clearance unknown, crosses the mud flats along the west side of the bay.

Chart 3958

395 **Galloway Rapids** $(54^{\circ}15'N, 130^{\circ}15'W)$ leads to Wainwright Basin from the SW end of Morse Basin. Islands, drying rocks and a rock awash lie in the east and west approaches to the rapids.

A highway bridge, with a vertical clearance of 6.7 m, crosses Galloway Rapids.

Overhead cables, with a vertical clearance of 14 m, cross Galloway Rapids close east of the highway bridge.

398 **Tidal streams** in Galloway Rapids reach maximum flood and ebb velocities of 5 and 4 kn, respectively, during spring tides.

Wainwright Basin is only usable by small craft. A log dump and **booming grounds** are on the south shore of the basin. A **submarine pipeline** (sewer outfall) extends into the basin from the north shore. Zanardi Rapids is described earlier in this chapter.

Chart 3964

Prince Rupert Harbour — NE Part

400 Schreiber Point $(54^{\circ}21'N, 130^{\circ}17'W)$ has a drying rocky ledge extending 91 m south of it. Naden Islets, 2.8 miles NNE, are connected to the west shore by a drying reef. Between Schreiber Point and Naden Islets the west shore of the harbour is fronted by islets, drying banks and belowwater rocks extending up to 0.1 mile offshore. A wreck is 0.1 mile SW of Naden Islets.

401 **Booming grounds** and sorting areas line the shores of the harbour north of Schreiber Point.

402 A private **mooring buoy** is 0.6 mile NNE of Schreiber Point.

404 **Osborn Cove**, 0.7 mile SE of Naden Islets, is entered east of **Beatty Point** and has a **wreck** off the drying flats fronting **Scissors Creek**. A holding area for log debris, enclosed by a **floating breakwater** and a **log boom**, is at the north entrance to Osborn Cove. 405 **Laurier Cove**, with **Silver Creek** flowing into its head, is south of **Pepin Point**. The cove is completely filled with a drying mud flat with numerous dolphins and piles on it.

406 **Tuck Narrows**, east of **Tuck Point**, is about 91 m wide. A drying rock ledge extends about 91 m north from the north side of Tuck Point.

406.1 **Lights.** — Pepin Point **light** (710.5) is on the end of the point at the entrance to Tuck Narrows.

406.2 Tuck Inlet Narrows **light** (710.6) is on the north side of Tuck Point.

406.3 Tuck Inlet North **light** (710.7) is on the north side at the exit of Tuck Narrows.

407 **Tidal streams** in Tuck Narrows attain 6 kn. The times of slack water are the same as those for HW and LW at Prince Rupert; the stream runs out of Tuck Inlet shortly after HW and into it shortly after LW, with very little slack water.

408 **Tuck Inlet** has high mountains on both sides and a thickly wooded valley at the NW end through which a small stream flows.

409

Tidal streams in Tuck Inlet are weak.

410 **Pattullo Point** is 1.5 miles NW of Tuck Point. **Stork Rock** lies near mid-channel 0.7 mile farther NNW. A large pile of old logs is about 0.1 mile west of Pattullo Point.

 $411 \qquad \text{A ferry and barge landing$ **float** $is at the head of Tuck Inlet.}$

Hudson Bay Passage

Chart 3959

412 **Hudson Bay Passage** $(54^{\circ}28'N, 130^{\circ}54'W)$, along the SE side of **Dundas Island**, is encumbered with numerous islands, reefs and shoals. The fairway narrows to 0.2 mile between Dundas Island and Nares Islets and is suitable for small vessels. The passage between Nares Islets and Baron Island is not recommended.

413 **Tides**. — Tidal differences for Hudson Bay Passage (Index No. 9327), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

414 **Tidal streams**. — The flood tidal stream sets NE and the ebb SW through Hudson Bay Passage. In the SW entrance the flood runs at about ½ kn and the ebb at 1 to 1½ kn. In the NE entrance both streams run at 1 kn. Abreast the north end of Nares Islets, where the channel is narrow, the rate of the stream is increased.

415 **Connel Islands** $(54^{\circ}25'N, 130^{\circ}55'W)$, in the SW approach to Hudson Bay Passage, consist of a group of small islands and drying reefs. Drying rocks and reefs lie within

EDITH HARBOUR ENTRANCE (1988)



1 mile SE, SW and NW of the islands. **Taylor Rock**, 1 mile SW of Connel Islands, dries 3 m.

416 A chain of unnamed islands lies between Connel Islands and **Baron Island**, which is thickly wooded.

417 **Prince Leboo Island**, SW of the south extremity of Dundas Island, is connected to Dundas Island by a drying ridge on which there are several islands. Drying and below-water rocks extend 0.8 mile west and south of Prince Leboo Island. **Chearnley Islet** is 0.45 mile south of Prince Leboo Island.

418 Edith Harbour, entered 1.8 miles NE of Chearnley Islet, offers good shelter. The upper part of the harbour is best accessed close-off the west side of the 14 m high islet. Anchorage for small vessels is obtainable in Edith Harbour.

419 Dundas Island **light** (730.6), on the south entrance point to Edith Harbour, is shown at an elevation of 10.5 m from a skeleton tower.

420 **Gore-Langton Point**, 3 miles NE of Edith Harbour, forms the east entrance point to a bay encumbered with drying and below-water rocks. A rock that dries 0.6 m lies 0.9 mile ENE of Gore-Langton Point on the SE side of the fairway.

421 **Nares Islets** consist of three groups of wooded islands on the SE side of the fairway; they are surrounded by shoals and drying and below-water rocks. The north island of the north group appears conical in shape from north and south. A rock that dries 0.6 m is 0.9 mile NNE of the north island and about 0.2 mile off the coast of Dundas Island.

422 **Anchorage** in 10 to 30 m can be obtained on the bank extending east and NE from the north group of Nares Islets but there are a few shoals on the bank. Large vessels can find anchorage farther NE, outside the 30 m line.

Chatham Sound — North Part

423 The north part of **Chatham Sound**, for descriptive purposes, lies north of a line drawn from Tugwell Island $(54^{\circ}20'N, 130^{\circ}30'W)$ to Deans Point, the SE extremity of Melville Island.

Moffatt Islands to Holliday Island

424 **Moffatt Islands** $(54^{\circ}27'N, 130^{\circ}43'W)$, on the west side of Chatham Sound, are a chain of wooded islands, islets and drying reefs. A narrow channel west of the chain is navigable by small vessels but local knowledge is advised. Islets, drying reefs and below-water rocks, among which are **Hammond Rocks**, lie up to 0.6 mile south and SE of the south island of the chain.

425 **Tides**. — Tidal differences for Moffatt Islands (Index No. 9325), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

426 **Anchorage** can be obtained in about 30 m between Moffatt Islands and Melville Island, about 1 mile within the south entrance of the above-mentioned channel. Shelter in this anchorage is good, but local knowledge is advised. Approaching from south, keep about 0.3 mile off Melville Island, and note the rock with 7.3 m over it lying 0.4 mile ESE of the NE extremity of Melville Island.

427 **Tidal streams** in the above-mentioned anchorage are weak.

428 **Coghlan Rock**, 1 mile NNE of the south Moffatt Island, is awash and marked by kelp.

429 **Clearing mark**. — Rachael Islands bearing 168°, open east of Lucy Islands *(Chart 3957)*, leads east of Hammond and Coghlan Rocks.

430 **Randall Island** (54°30'N, 130°46'W) is 0.5 mile NNW of the north Moffatt Island and **Ducie Island** lies 0.5 mile farther NNW. Bare islets, drying reefs and shoals surround Ducie Island. The passage west of Randall Island is obstructed by a chain of drying and below-water rocks and shoals. **Clam Inlet**, on the NE side of Baron Island, is entered west of the above-mentioned chain. The passages close west and north of Randall Island are only suitable for small craft and local knowledge is advised.

431 **Whitesand Island**, 0.6 mile NE of Randall Island, lies on a drying reef. Shoals extend 0.9 mile north from the island.

****.

432 Whitesand Island **light** (730.5) is shown at an elevation of 6.7 m from a skeleton tower.

Charts 3959, 3960

433 **Green Island** $(54^{\circ}34'N, 130^{\circ}42'W)$ is a grassy island 11 m high with two hummocks connected by a low shingle beach. Foul ground extends 0.3 mile north from the island.

434 Green Island **light** (730) is shown at an elevation of 19.2 m from a white tower, 10.7 m high. The light operates only during hours of darkness and is fitted with an emergency light.

435 **Grey Islet**, 0.8 mile NNE of Green Island, lies on the east edge of foul ground on which there are numerous drying rocks. An automated weather station is on this islet (1988). **Bristol Rock**, 0.7 mile NW of Grey Islet, has 3 m over it.

436 **Holliday Passage** separates Green Island, Grey Islet and Bristol Rock from Dundas Island; it is frequently used by coastal vessels.

437 **Connis Rocks**, 2.7 miles east of Green Island, consist of a bare islet, 2 m high, on the south end of a rock that dries 7.3 m on a steep-to drying shoal.

438 **Oriflamme Passage** leads between Green Island and Grey Islet on its west side from Connis Rocks on its east side.

Chart 3960

439 **Holliday Island** $(54^{\circ}37'N, 130^{\circ}45'W)$, close-off the NE end of Dundas Island, lies at the SE end of a chain of drying and below-water rocks. Two islets on a drying ledge lie close west of Holliday Island.

Holliday Island **light** (731) is shown at an elevation of 6.5 m from a skeleton tower.

441 The waters north and west of Dundas Island are described in Sailing Directions booklet *PAC 206 — Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters and Queen Charlotte Islands.*

Chart 3959

Tugwell Island to Tree Bluff

442 **Chapman Point** $(54^{\circ}20'N, 130^{\circ}30'W)$ is the north extremity of Tugwell Island. Drying flats and shoal water with drying rocks extend up to 0.5 mile off Chapman Point.

443 **Duncan Bay** is entered between Chapman Point and **Ryan Point**, 1.6 miles NNE. Drying ledges fringe the bay and drying and below-water rocks, including **Hecate Rock**, lie off the shores and near the middle of the bay.

444 **Ryan Point Reef light** (723), 0.6 mile SW of Ryan Point, is shown at an elevation of 9 m, from a white cylindrical tower on a 4 pile steel dolphin.

445 Starboard hand **buoy** "D80" marks the edge of the drying bank east of Chapman Point and the entrance to a buoyed channel leading south to Metlakatla Bay.

446 **Anchorage** can be obtained in 12 to 14 m, mud bottom, in Duncan Bay.

447 **Hodgson Reefs**, 1.5 miles NW of Ryan Point, consist of several drying reefs and below-water rocks. **Swamp Island**, west of Hodgson Reefs, is covered with grass. Drying rocks lie west of the island and below-water rocks are in the passage between Hodgson Reefs and Swamp Island.

448 Hodgson Reefs **light and whistle buoy** "D84" (724), west of the reefs, is a starboard hand buoy.

449 **Moore Shoal**, with 13.4 m over it, is 2 miles west of the south end of Hodgson Reefs.

Charts 3957, 3959

450 **Clearing marks.** — The following clearing marks used in rounding Hodgson Reefs are only suitable for vessels whose draught will allow them to easily clear Moore Shoal. The west extremity of Kinahan Islands bearing 152°, and just open of the south extremity of Tugwell Island, leads SW of Hodgson Reefs. Passing west of Hodgson Reefs do not let the east end of Lucy Island bear more than 196° until South Island, in Big Bay, is in line with Mount Griffin, south of Port Simpson, bearing 032°.

Charts 3959, 3963

451 **Slippery Rock** (54°24'N, 130°30'W) is 1 mile NE of Hodgson Reefs. A reef that dries 0.3 m, 0.65 mile west, is covered with kelp.

452 Slippery Rock **light** (725) is shown at an elevation of 6.7 m from a white tower.

453 **Tree Bluff**, 1.9 miles north of Slippery Rock, is low, wooded and fronted by drying flats and with drying and below-water rocks extending 0.8 mile from shore.

Tree Bluff **light and bell buoy** "D86" (726), west of the rocks extending from the bluff, is a starboard hand buoy.

Chart 3963

Big Bay

Big Bay ($54^{\circ}28'N$, $130^{\circ}28'W$), between Trenham Point and South Island, can be entered either south or north of Ripple Bank and Escape Reefs which lie in the middle of the entrance. Several dangers lie within the bay, but prominent landmarks provide leading lines to clear them. The shores are low and wooded, with the exception of Shattock Hill, on the north shore, which rises abruptly from Shattock Point to an elevation of 91 m.

Ripple Bank, with a least depth of 4.6 m, lies on the south side of North Passage. **Escape Reefs** are two rocky heads. The west reef, 0.3 mile south of Ripple Bank, has a depth of 1.8 m and the east reef, 0.4 mile east, has 0.9 m over it.

457 **Hogan Ledge**, on the south side of **South Passage**, is 0.6 mile west of Trenham Point and dries 3 m. **Entry**

Rock, with 5.8 m over it, is 0.9 mile north of Trenham Point. Below-water rocks lie between Entry Rock and **Reeks Point**. The fairway through South Passage leads between Entry Rock and Escape Reefs.

458 **North Passage**, which leads north of Ripple Bank, has below-water rocks extending SW and SE of South Island and **Haycock Island** on its north side. **Leading Shoal**, with 8.8 m over it, is 0.5 mile south of Haycock Island.

459 **Burnt Cliff Island**, 0.2 mile NNE of South Island, has reddish brown cliffs at its north end. **Cultivation Point**, the NE extremity of Burnt Cliff Island, is low. South and Burnt Cliff Islands are connected to the mainland by a drying flat between **Belletti Point** and **Pearl Point**.

460 **Whitecliff Island**, 1.1 miles SE of South Island, has white cliffs on its west side. A reef that dries 6.4 m lies between Whitecliff Island and Shattock Point.

461 **Anchor Shoal**, with 8.5 m over it, is 0.6 mile SSW of Whitecliff Island.

462 **Swallow Island**, with **One Foot Rock** close SW, lies 0.8 mile SE of Shattock Point.

463 **Curlew Rock**, 0.5 mile SW of Swallow Island, dries 7.3 m. A reef that dries 1.5 m, 0.1 mile north of Curlew Rock, has shoal water extending 0.1 mile north of it. The fairway between this drying reef and One Foot Rock is about 0.1 mile wide with a depth of 6.7 m.

464 **Salmon Bight**, at the head of Big Bay, between **West Base Point** and **East Base Point** is filled with a drying sand and mud flat extending about 0.7 mile from shore; small vessels can be beached here. Several streams flow into Salmon Bight.

465 A **dolphin**, 0.3 mile SE of Swallow Island, marks the SE side of the entrance to a narrow channel, with a reported depth of 0.3 m that leads NNE across the drying flats to Georgetown Mills.

466 **Georgetown Mills** has a sawmill and a **pier** that dries at LW. A waterfall on **Georgetown Creek**, 0.3 mile NE of the pier, is 6 m high and a dam is close NE of the waterfall.

467 Other named features in Big Bay are Reeks Point.
 468 Anchorages. — Big Bay affords good protection in all winds with little swell. The three recommended anchorages are as follows.

469 Haycock Island in line with the NE extremity of South Island, bearing 324°, and Whitecliff Island in line with Mount Griffin, bearing 013°; the depth in this **anchorage** is about 20 m, mud bottom.

470 Nearer to Swallow Island, **anchorage** can be obtained with Shattock Point in line with Mount Griffin, bearing about 006°, and One Foot Rock in line with a distant sharp peak, bearing 107°; the depth here is about 13 m.

471 Confined **anchorage** can be obtained south of Swallow Island with the SW extremity of that island in line with Mount Griffin, bearing 000°, and **Simpson Point**, bearing about 259°, open north of Curlew Rock; the depth here is about 9 m.

472 **Directions**. — Approaching Big Bay from south, keep South Island in line with Mount Griffin, bearing 032°; this bearing leads NW of Hodgson Reefs and the shoal water extending west from Tree Bluff.

473 Entering Big Bay by way of South Passage, keep the above-mentioned marks in line until the summit of Shattock Hill is in line with **Basil Lump** ($54^{\circ}29'44''N$, $130^{\circ}20'30''W$), bearing 068°, then steer with these marks in line; this bearing leads between Escape Reefs and Entry Rock. Care must be taken not to open Basil Lump north of Shattock Hill. When Haycock Island is in line with the NE extremity of South Island, bearing 324° , alter course SE and steer with these marks in line astern; this will lead to the outer anchorage.

474 Approaching North Passage from south, then, before the leading marks for South Passage come into line, steer with the north extremity of Burnt Cliff Island in line with Mount Griffin bearing 042°; this bearing leads NW of Ripple Bank. When Swallow Island is open its own breadth north of a distant sharp peak, and the peak is bearing 106°, alter course to this bearing; it will lead north of Ripple Bank, Escape Reefs and Anchor Shoal and south of the foul ground extending SW from South Island and about 0.1 mile south of Leading Shoal. If intending to proceed to the anchorage south of 475 Swallow Island, then, the SW side of Whitecliff Island in line astern with the SW extremity of Burnt Cliff Island, bearing 318°, leads between the dangers in the passage between One Foot Rock and Curlew Rock. One Foot Rock is a good guide when entering near HW.

Cunningham Passage

476 **Cunningham Passage** $(54^{\circ}32'N, 130^{\circ}27'W)$, north of Burnt Cliff Island, separates Finlayson Island from Tsimpsean Peninsula and Harbour Reefs. Although deep in the fairway, the passage is unsuitable for large vessels as the navigable channel is only about 0.1 mile wide between Pender and Centre Rocks.

477 **Tidal streams** in Cunningham Passage attain about 1 kn but are probably somewhat accelerated in the narrow parts; the flood sets south and the ebb north.

478 **Caution**. — Shoals in the entrance to and within Cunningham Passage are steep-to and kelp may not always be visible on them; soundings will give little warning.

479 **Finlayson Island** is flat-topped and densely wooded, and attains an elevation of about 61 m. **Fortune Point** and the SW side of Finlayson Island have cliffs 18 to 24 m high. Drying ledges, drying rocks and reefs extend up to 0.2 mile from the south and west sides of the island.

480 **Sparrowhawk Rock**, with 1.5 m over it, lies in the south entrance to Cunningham Passage and in the fairway leading to Pearl Harbour. It is a pinnacle rock marked by starboard bifurcation **buoy** "DK". Kelp generally grows on the rock during summer and autumn months.

481 **Dodd Rock** is at the south extremity of a drying ledge extending 0.2 mile south from Fortune Point. Shoal depths extend 0.1 mile SW of Dodd Rock.

482 **Pearl Harbour**, NE of Burnt Cliff Island, is protected from the west by drying ledges and **Mist Island**. The preferred entrance is between the ledge that extends north from Mist Island and **Flat Top Islands**, which consist of three islands on a common drying reef; the NE island has a green mound at its NE end. The channel between Flat Top Islands and Tsimpsean Peninsula has **Datum Rock**, which dries 3.7 m, in the south entrance. Local knowledge is advised for the channel.

483 **Boat Passage** leads into Pearl Harbour south of Mist Island. Local knowledge is advised.

484 Good **anchorage** can be obtained near the middle of Pearl Harbour in 20 m, mud. In this anchorage the NE extremity of the NE Flat Top Island bears 017° and the north extremity of Mist Island bears 274°.

485 **Otter Anchorage**, at the south end of Cunningham Passage, affords **anchorage** about 0.2 mile north of the NE end of Flat Top Islands in 33 m, mud. 486 **Pender Rock**, 0.4 mile east of Fortune Point, has 4.9 m over it and lies on the east side of the fairway. **Centre Rock**, 0.2 mile NNW of Pender Rock, lies nearly in the middle of the fairway and has 6.7 m over it. A 2.1 m shoal extends 0.15 mile east from **Duncan Point**.

487 **Redcliff Point**, east of Centre Rock, has red-brown cliffs conspicuous only under certain light conditions. **Hook Point** and **Sarah Point** are north of Redcliff Point. **Gordon Point**, the north extremity of Finlayson Island, is low with drying ledges and shoals extending 0.2 mile north from it.

488 **Directions**. — Approaching the south entrance to Cunningham Passage, keep Fortune Point in line with Redcliff Point and Mount Griffin, bearing 073°, until the green mound on the NE Flat Top Island is in line with **Leading Peak**, bearing 100°. Leading Peak (54°30'22''N, 130°22'36''W), which is not charted, is a well-defined peak with a steep fall on its south side. Alter course to keep these marks in line bearing 100° until Belletti Point is in line with Shattock Point, bearing 150°, or the whole of Mist Island is open west of Burnt Cliff Island; at this point the vessel will be NE of Sparrowhawk Rock and course can be altered north into Cunningham Passage.

489 Bring the east extremity of the SW Flat Top Island in line with the west extremity of Burnt Cliff Island, bearing 194° astern, and proceed at a moderate speed when approaching and passing between Pender and Centre Rocks. When Fortune Point bears 270°, edge over to the east shore until abreast Redcliff Point, then alter course to regain mid-channel. The west extremities of the SW Flat Top Island and Burnt Cliff Island in line astern, bearing 192°, leads nearly in mid-channel until abreast Sarah Point.

490 **Caution**. — It should be borne in mind that the peaks forming the rear objects of the marks given are often obscured by clouds.

Port Simpson and Approaches

491 **Port Simpson** harbour, at the north end of Cunningham Passage, is fronted by Harbour Reefs and Birnie Island; it is one of the most spacious harbours on the north part of the British Columbia coast. The harbour is well-sheltered from all but west winds and is easy of access, having no strong tidal streams. The main entrance is by way of Inskip Passage. Dodd Passage, to the south, and Rushbrook Passage, to the north, are only suitable for small vessels.

492 **Tides**. — Tidal differences for Port Simpson (Index No. 9390), referenced on Prince Rupert, are given in the Tide Tables, Volume 7.

493 **Water aerodrome**. — The waters of Port Simpson fronting the community Lax Kw'alaams are a water aerodrome.

494 **Birnie Island** $(54^{\circ}36'N, 130^{\circ}28'W)$ is densely wooded. **Knox Point**, the south extremity, has a drying ledge extending south with a rock 1.2 m high at the outer end.

495 Birnie Island **light** (728), on the rock south of Knox Point, is shown at an elevation of 8.5 m from a skeleton tower.

496 **Harbour Reefs**, 0.8 mile south of Knox Point, consist of two groups of drying reefs separated by a narrow, shallow passage. These reefs afford some protection to the harbour from heavy seas caused by strong west winds. A rock with 1.5 m over it, at the north extremity of Harbour Reefs, is marked by starboard hand **buoy** "D90".

497 **Inskip Passage**, between Harbour Reefs and Knox Point, is the main entrance to Port Simpson.

498 **Rose Island**, formerly **Village Island**, SE of Harbour Reefs, is connected at its south end to Tsimpsean Peninsula by a trestle bridge and a causeway. Drying ledges surround the island and extend NW from it into Dodd Passage. **One Tree Islet**, on the drying ledge NW of Rose Island, has a few stunted trees on it.

499 One Tree Islet **light** (726.2) is on the north side of the islet.

500 **Hankin Reefs**, west of Rose Island, consist of a group of drying and below-water rocks. The rock with 3 m over it at the SW end of the reef is reported (1985) to be shoaler than charted. **LAX KW'ALAAMS** (1988)



501 **Clearing marks**. — Sarah Point in line with the west extremity of the centre island of the Flat Top Islands, bearing 183°, leads about 0.1 mile west of Hankin Reefs.

502 **Dodd Passage** leads north of Hankin Reefs and One Tree Islet and separates them from Harbour Reefs. This passage is only suitable for small vessels and local knowledge is advised.

503 The fairway through Dodd Passage is marked by starboard hand buoy "D88", port hand **buoy** "D89" and starboard bifurcation **light buoy** "DF" (726.1).

Rushbrook Passage, between **Picnic Point**, the NE extremity of Birnie Island, and **Flewin Point** and **Grassy Point**, both on Tsimpsean Peninsula, is encumbered with drying reefs and below-water rocks. It is only suitable for small vessels and local knowledge is advised.

505 Between Grassy Point and Stumaun Bay, the NE shore of the port is fringed with a rocky beach backed by steep high land. The south shore, east of the community, is not so steep. **Stumaun Bay**, at the head of the harbour, has an extensive drying flat at its head. The south shore is an active logging area (1998) with log dumps, a large **booming ground** and **mooring buoys**.

Anchorages, designated 1, 2 and 3, are used by large vessels awaiting berths at Prince Rupert. Masters are cautioned that these anchorages may not provide ideal holding ground during periods of inclement weather. Mariners are urged to exercise extreme caution at all times when anchored in these areas and keep a continuous radio watch on 156.575 mHz, Channel 71, Prince Rupert Marine Communications and Traffic Services Centre.

507 **Anchorage** can be obtained off the community of Lax Kw'alaams with Gordon Point (Finlayson Island) bearing 270° and **Bath Point** bearing about 115°; the depth in this anchorage is 26 m. Small vessels can obtain anchorage closer inshore.

508 **Compass adjustment bearings**. — Two useful bearings of distant objects for swinging ship to ascertain the error of the compass are obtainable from the above-mentioned anchorage as follows.

509 The knob at the north end of Slab Hill, on Dundas Island, bears 283° at a distance of 12 miles.

510 The summit of Mount Lazaro in line with Pointer Rocks bears 300°; it is 37 miles distant on the south end of Duke Island.

Lax Kw'alaams, the community in Port Simpson, close SE of Rose Island, was established as a trading post by the Hudson's Bay Company in 1834. Little remains of the original building and the walls and bastions of the fort have been demolished. Two churches, several stores and a post office (V0V 1H0) are in the community. A resident doctor and nurses and medical service are available year round. Daily passenger ferry service operates to Prince Rupert.

512 A **rock causeway** extends 305 m north from the community across the drying flats. At the south end and on the west side of the causeway, close north of the trestle bridge, an area has been filled and a fuel tank is erected on this fill. A fish plant is on the north end of the causeway. A **rock breakwater** extends 152 m east from the north end of the causeway.

513 Port Simpson breakwater **light** (726.7) is on the east end of the breakwater.

Lax Kw'alaams port hand **light buoy** "D91" (727), about 0.1 mile NNE of the breakwater light, marks the outer edge of a shoal ledge.

515 A **seaplane float** is at the SW end of the public wharf.

516 An **L-shaped wharf**, at the north end of the causeway, extends 37 m north. A **float** 24 m long is attached alongside the west end of the wharf.

517 The **Port Simpson Harbour Authority boat basin** south of the breakwater has depths of about 2.1 to 2.4 m with shallower depths east and south of the floats. Three **floats**, each about 91 m long, have a common connection to the causeway. Fresh water is available. A storage shed and launching ramp are on the filled area south of the float.

518 Some dolphins lie off the east side of Rose Island. 519 **Supplies**. — A marine service station operates during the fishing season; gasoline, diesel fuel, stove oil, fresh water, fresh meat and groceries are obtainable, and there is a cafe.

Chatham Sound — NE Part

520 Connis Rocks (54°35'N, 130°38'W) have been described with Oriflamme Passage.

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521 **Pointer Rocks**, 3.5 miles NE of Connis Rocks, consist of two large drying reefs. An above-water head, on the south drying reef, has an elevation of 0.9 m and the north reef dries 6.7 m.

522 Pointer Rocks **light** (729), on the highest part of the south reef, is shown at an elevation of 7.8 m from a white tower.

523 **Main Passage**, between Connis Rocks and Pointer Rocks, is wider and deeper than Oriflamme or Holliday Passages.

Parkin Islets ($54^{\circ}38'N$, $130^{\circ}28'W$), 2.7 miles NE of Pointer Rocks, consist of three islets in the SW approach to Dudevoir Passage. The two south islets are wooded, conspicuous and on a common drying reef; the north islet is a jagged rock 6 m high.

525 **Barrat Shoal**, 0.8 mile NW of Parkin Islets, has 19.2 m over it.

526 **Maskelyne Island** is 0.6 mile NE of Parkin Islets. Its west coast, except for a small bay, is steep-to and cliffy.

527 **Dudevoir Passage** separates Maskelyne Island from Tsimpsean Peninsula. The passage is very narrow with a least depth of 0.9 m and only suitable for small craft. A drying spit, about midway through the passage, projects north from the south shore; it is reported to be subject to change.

528 The waters north and east of Maskelyne Island are described in Sailing Directions booklet *PAC 206 — Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters and Queen Charlotte Islands.*

Queen Charlotte Sound, East Shore and Channels Leading to the Inner Passage

General

Chart 3744

1 This chapter covers the east side of Queen Charlotte Sound between the SW extremity of Calvert Island ($51^{\circ}30'N$, $128^{\circ}05'W$) and Cape Mark at the west extremity of the Bardswell Group ($52^{\circ}11'N$, $128^{\circ}35'W$), 45 miles NNW.

Queen Charlotte Sound

Charts 3605, 3744

2 **Queen Charlotte Sound** is the body of water south of Hecate Strait lying between the north end of Vancouver Island and a line joining the south point of Price Island $(52^{\circ}16'N, 128^{\circ}41'W)$ and Cape St. James, the south extremity of Queen Charlotte Islands.

2.1 Three individual Marine Protected Areas (MPAs) have been established under the *Oceans Act* on February 2017 in Hecate Strait and Queen Charlotte Sound. The intention of the Northern, Central and Southern MPAs is to protect the Glass Sponge Reefs existing in the area.

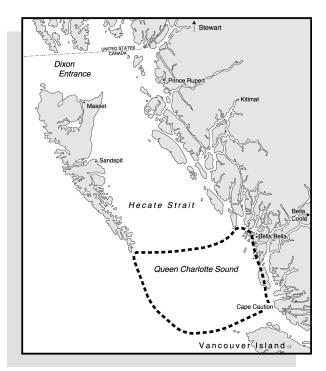
2.2 The Northern and Central Reef Marine Protected Areas are located in Hecate Strait. The Southern one is located in Queen Charlotte Sound. For further information on the MPAs please visit http://www.dfo-mpo.gc.ca/oceans/ mpa-zpm/index-eng.html.

Seabed. — Cook Bank (50°56'N, 128°31'W), on the south side of Queen Charlotte Sound, has depths less than 91 m extending up to 20 miles from Scott Islands. A relatively deep trough north of Cook Bank has an arm branching SE into Queen Charlotte Strait, an arm along the north side of Sea Otter Group, and an arm branching north toward Queens Sound and Milbanke Sound.

Chart 3744

4 A bank, with less than 50 fathoms (91 m) over it, lies in the centre of Queen Charlotte Sound north and west of the above-mentioned trough. Least depths over this bank are 17 fathoms (31 m) and lie at its east end ($51^{\circ}40'N$, $128^{\circ}40'W$).

5 A deep trough, SE of the Queen Charlotte Islands, leads NE from the shelf edge into Queen Charlotte Sound with



a branch leading east toward Milbanke and Laredo Sounds and a branch leading north into Hecate Strait. A bank with depths of less than 100 fathoms (183 m), formed between these two branches, has a least depth of 57 fathoms (104 m) at its north end ($52^{\circ}17'N$, $129^{\circ}56'W$).

6 The continental slope and shelf edge fronting Queen Charlotte Sound is indented by several canyons. The shelf edge lies at a depth of about 200 fathoms (366 m).

 $\square 7 \qquad \text{Sea Otter West ODAS light buoy "46204"} \\ (582.5) \text{ is in } 51^{\circ}22'06''N, 128^{\circ}44'54''W \text{ about } 20 \text{ miles} \\ \text{west of the Sea Otter Group.}$

Vessel Traffic Services (vts). — The area covered in this chapter is in *Sector 1* of the *Prince Rupert Traffic Zone* and the assigned frequency is 156.55 MHz, Channel 11.

A brief description of this Vessel Traffic Services (VTS)
 System is given in Sailing Directions booklet *PAC 200* —
 General Information, Pacific Coast; full details are given in
 Radio Aids to Marine Navigation (Pacific and Western Arctic). The Calling-in Points are

11 *Calling-in Point No. 35*, called *Triangle Island*, is a line extending 220° from Triangle Island to the limit of the Territorial Sea; it is for changing from *Prince Rupert Traffic Zone South* to *Prince Rupert Traffic Zone North*.

12 *Calling-in Point No. 1A*, called *Cape Caution/Cape Sutil*, is a line joining Cape Caution light (578) to Mexicana Point thence to Cape Sutil, and is the change line between the *Vancouver Traffic Zone* and the *Prince Rupert Traffic Zone*.

13 *Calling-in Point No. 28*, called *McInnes Island/Cape St. James*, is a line joining McInnes Island light (*619*) and Cape St. James light (*770*).

14 *Calling-in Point No. 29*, called *Cape Mark/McInnes Island*, is a line joining Cape Mark light (616) and McInnes Island light (619).

15 **Tides**. — Tidal differences in Queen Charlotte Sound for Egg Island (Index No. 8805), referenced on Wadhams (Index No. 8840), tidal differences for Gosling Island (Index No. 8906) and Goose Island (Index No. 8909), referenced on Bella Bella (Index No. 8976), and tidal differences for Cape St. James (Index No. 9502), referenced on Hunger Harbour (Index No. 9570), are given in the Tide Tables, Volume 7.

16 Tidal differences for Cape Scott (Index No. 8790), referenced on Tofino (Index No. 8615), are given in the Tide Tables, Volume 6.

Tidal streams and currents at the south end of Queen Charlotte Sound (50°59'N, 129°17'W) are rotary, turning clockwise, with the maximum (2 kn) occurring 4 hours before HW at Prince Rupert, setting 025°. The minimum rate occurs at HW at Prince Rupert and sets 190°.
 About 16 hours after the passage of a storm through the sound and where the wind veers from SE to SW to NW the maximum currents will occur about 3.5 hours after HW

at Prince Rupert, and can remain out of phase for three or four days. The initial change of phase is usually accompanied by a surge of current about ¹/₂ kn greater than usual. This change in the phase of the current is caused by a wind driven inertial current of period 15.4 hours and a starting velocity of 30 cms/sec. (³/₄ kn). This current slowly decays over a three- to four-day period.

19 Information from tidal stream observations in 1984 in Queen Charlotte Sound is given below.

About 16 miles NW of Cape Scott maximum flood sets 045° at 2 kn, last of flood 125° at 1 kn, maximum ebb 235° at $1\frac{3}{4}$ kn and last of ebb 300° at 1 kn. Last of flood here is at HW Bella Bella, last of ebb at LW Bella Bella.

Twenty-eight miles west of Calvert Island first of flood sets 305° at 1 kn, maximum flood 030° at 2 kn, last of flood 125° at 1¹/₄ kn and maximum ebb 210° at 1¹/₄ kn. First of flood here is at LW Bella Bella, last of flood at HW Bella Bella.

About 4 miles west of Currie Islet $(51^{\circ}51'N, 128^{\circ}28'W)$ maximum flood sets 340° at 1 kn, last of flood 030° at $\frac{1}{2}$ kn, first of ebb 105° at $\frac{1}{2}$ kn, maximum ebb 170° at $\frac{3}{4}$ kn and last of ebb 230° at $\frac{1}{2}$ kn. First of flood here is LW Bella Bella, last of flood at HW Bella Bella.

23 Forty-two miles west of Currie Islet maximum flood sets 010° at 1¼ kn, last of flood 090° at 1 kn, maximum ebb 210° at 1¾ kn and last of ebb 290° at 1 kn. First of flood here is LW Bella Bella, last of flood at HW Bella Bella.

24 **Meteorological information** for Egg Island and McInnes Island and **frequency of fog information** for Cape Scott, Cape St. James and McInnes Island are given in the Appendices.

Caution. — A strong outflow from Hecate Strait can occur during large tidal ranges combined with rapid equalization of a large difference in barometric pressure between the coastal area and the head of the inlets. Unusual currents of 2 to 3 kn setting south were reported in 1968.

27 **Hakai Recreational Area** encompasses the north portion of Calvert Island, the south portion of Hunter Island, Queens Sound and the Goose Group including all the bays, islands, inlets and passages. This is an undeveloped park with only primitive campsites and no garbage facilities; a floating park headquarters is moored in Pruth Bay from May to September.

Blackney Island to Surf Islands

Chart 3727

28 **Blackney Island** (51°30'N, 128°06'W) is wooded and connected to Calvert Island by a sand and gravel drying ridge. The bays north and south of the drying ridge are foul. The west side of Blackney Island is fringed with above- and below-water rocks.

The west coast of Calvert Island is low and featureless, rising to mountains in the interior of the island.
Fitz Roy Reef, 1.2 miles NW of Blackney Island,

has less than 6 feet (2 m) over it. Shoals, some of which break in heavy weather, extend 1 mile SW from Fitz Roy Reef.

31 **Carrington Reef**, 1 mile north of Blackney Island, extends 0.3 mile from the west side of Calvert Island and consists of a group of drying and below-water rocks. Several drying rocks lie close offshore up to 1.8 miles north of Carrington Reef.

Chart 3935

32 **Bolivar Islet** $(51^{\circ}34'N, 128^{\circ}07'W)$ lies on a sandy beach. **Dublin Point** is 2 miles NNW.

33 A prominent **microwave tower**, on the 183-m high hill, and two wind driven generators are 3 miles NE of Dublin Point.

34 **Surf Islands** $(51^{\circ}40'N, 128^{\circ}09'W)$ are 3.8 miles north of Dublin Point. The coast for 2.5 miles south of the islands is fronted by islets and above- and below-water rocks. A rock that dries 4.1 m is about 0.1 mile north of the NE Surf Island.

Hakai Passage and Approaches

35 **Hakai Passage** (51°43'N, 128°05'W) leads east from Queen Charlotte Sound into Fitz Hugh Sound. Several dangers lie in the west approach and numerous islets and dangers are on both sides of the fairway.

36 **Tides**. — Tidal differences in Hakai Passage, referenced on Wadhams, are given for Adams Harbour (Index No. 8865), in the Tide Tables, Volume 7.

Tidal streams in Hakai Passage attain 4 kn at springs, with strong eddies along the shores, on both the flood and ebb. The flood stream sets east past Adams Harbour thence NE through the fairway.

Hakai Passage — South Side

South Pointers Rocks $(51^{\circ}40'N, 128^{\circ}11'W)$ are a group of drying, above- and below-water rocks, the south and highest being black with an elevation of 1 m. These rocks are the outermost danger on the south side of the west entrance to Hakai Passage.

39 A chain of islands, the named ones consisting of Flat Islands, Lower Islands, Starfish Island and Odlum Island, lies 0.8 mile NE of Surf Islands. Odlum Point is the NE extremity of this chain of islands. Drying ledges extend a short distance east and a rock that dries 2.7 m lies south of this point.

40 Odlum Island **light** (588), SW of the point, is shown at an elevation of 21.5 m from a skeleton tower. 41 **Starfish Ledge**, 0.3 mile west of Odlum Island, dries 2 m; the sea usually breaks over this ledge.

42 **Mainguy Rock**, 0.5 mile NE of Odlum Point, dries 0.3 m and is steep-to. **Port Reef**, 0.2 mile SSE of Mainguy Rock, dries 4.2 m. **Foster Rocks** are 0.7 mile east of Mainguy Rock.

43 **Barney Point**, 1.2 miles ENE of Foster Rocks, is the NW extremity of **Hecate Island**. The large bay on the east side of Barney Point has islets near its head inside which small craft might find shelter. A rock that dries 1.4 m lies on the west side of the entrance to this bay. A fishing camp with a float is on the island at the head of the bay during summer months.

44 **Caution**. — Numerous sport fishing boats will be encountered from June to September in the vicinity of Odlum Point, Foster Rocks and Barney Point.

45 The remainder of the NW coast of Hecate Island as far as Goldstream Harbour is free of dangers beyond 0.1 mile from shore. Goldstream Harbour is described in Chapter 1.

Adams Harbour

Adams Harbour, on the south side and near the west end of Hakai Passage, lies between the chain of islands consisting of Flat, Lower, Starfish and Odlum Islands and the peninsula that forms the NW part of Calvert Island. It is known locally as **Welcome Harbour**. Though confined, this harbour affords shelter for small vessels from all but strong west winds, which send a swell into the harbour. Local knowledge is advised for entering the harbour. Floating fishing camps are in the harbour during summer months (1990).

47 **Tides**. — Tidal differences for Adams Harbour (Index No. 8865), referenced on Wadhams, are given in the Tide Tables, Volume 7.

48 **Donald Island**, 0.2 mile east of Odlum Island, lies in the north entrance to Adams Harbour. A rock that dries 1.2 m, another with 3.2 m over it and some shoals are on the east side of the fairway between Odlum and Donald Islands

The passage on the east side of Donald Island is deep and about 0.1 mile wide. A rock islet, 5 m high, is on the east side of the fairway. A rock with 1.8 m over it is about 0.1 mile SSW of Donald Island.

Leading Island, 0.3 mile SW of Donald Island, is 49 m high. A group of above- and below-water rocks is about 0.1 mile north and below-water and drying rocks are south of Leading Island. A conspicuous, fine sand beach fronting Sandspit Point is 0.3 mile SE of Leading Island.

4-3

Choked Passage, extending south from Adams 51 Harbour, is encumbered with rocks and shoals.

Anchorage for small vessels is obtainable SE 52 \mathbf{T} of Leading Island in about 12 m. Exposed anchorage for vessels up to 61 m long can be obtained at the south end of Choked Passage, about 0.1 mile north of an unnamed point (51°40'N, 128°08'W) on Calvert Island; depths are 12 to 18 m.

53 Directions. — Adams Harbour is only suitable for small vessels and caution is necessary, especially when the tidal stream is running at strength. Approaching from the west, round Odlum Point at a safe distance to avoid the foul ground extending east and south from it, then favour the Odlum Island shore until the shoals west of Donald Island are cleared. Then steer to pass 0.1 mile north and east of the rocks lying north of Leading Island, taking care to avoid the rock with 1.8 m over it, and proceed to an anchorage SE of Leading Island.

The harbour can also be entered east of Donald 54 Island, passing between the rock with 1.8 m over it and the island about 0.1 mile east of it.

Hakai Passage — North Side

North Pointers Rocks (51°44'N, 128°10'W), on the 55 north side of the west entrance to Hakai Passage, consist of a group of bare islets and rocks. A shoal, with a least depth of 10.9 m and steep-to on its west side, is 0.7 mile west of the highest islet. A rock with 0.4 m over it lies about 0.4 mile NNW of the same islet; it is steep-to on all but its east side. Another group of islets, drying and below-water 56 rocks extend up to 1.3 miles SW and south from the south end of Stirling Island.

Breaker Group, 3 miles east of 57 North Pointers Rocks, consists of a group of islands and above- and below-water rocks. The smaller islands are bare. Breaker Ledge, on the south edge of the Breaker Group, dries 4.5 m.

The south side of Stirling Island is indented by a 58 bay with a drying reef in its centre. A bare rock islet, 6 m high, lies 0.2 mile SE of the east entrance point to this bay; drying reefs extend west from the islet.

Planet Group lies NE of foul ground extending NE 59 from Breaker Group, and consists of Mercury Islet, Mars Islet and Jupiter Island.

Turnbull Inlet, NE of the Planet Group, pene-60 trates the SW side of Nalau Island. A drying reef extends 0.2 mile SSW from the north entrance point of the inlet and a rock with 3.4 m over it lies off the south entrance point. An unnamed inlet, 0.8 mile south of Turnbull Inlet, has its entrance encumbered with drying and below-water rocks. A floating fish camp is at the head of the inlet during summer months.

A reef that dries 1.7 m and a rock with 7.1 m over it 61 lie 0.3 mile SW of Bayly Point (described in Chapter 1) the SE point of Nalau Island.

Edward and Ward Channels

Charts 3935, 3936

Edward Channel $(51^{\circ}45'N, 128^{\circ}05'W)$, Ĵ 62 between Stirling Island and Underhill Island, is restricted to less than 0.1 mile wide by islets and rocks in its south entrance and islands abreast the entrance to Lewall Inlet. Local knowledge is advised. Sheltered anchorage for small craft can be found in the small cove at the NE end of Edward Channel.

Tides. — Tidal differences for Edwards Channel 63 referenced on Wadhams, are given for Nammu (Index No. 8870) in the Tide Tables, Volume 7.

Lewall Inlet. on the west side of Edward 64 £ Channel, is shallow and less than 91 m wide at its narrowest part. The inlet affords well-sheltered anchorage for small craft.

Ward Channel, between Underhill and Nalau 65 Islands, is less than 91 m wide but has a good depth in the fairway. Drying rocks lie close-off the east shore of the channel.

Kwakshua Channel

Chart 3935

Kwakshua Channel (51°42'N, 128°05'W) leads 66 south and east from Hakai Passage into Fitz Hugh Sound.

A private ODAS light buoy is in the east entrance 66.1 of Kwakshua Channel.

Rattenbury Island, in the north entrance to 67 Kwakshua Channel, has below-water and drying rocks lying close-off its south shore.

The passage on the SE side of Rattenbury Island is 68 contracted to about 91 m by a wooded island on the south side of the fairway. Below-water rocks lie near mid-channel, up to 0.4 mile NNE of the wooded island.

69 The passage on the SW side of Rattenbury Island has two unnamed islets and Boas Islet in its south end. Shoal water is between the islands. Drying rocks extend 0.1 mile offshore from the north end of Calvert Island and a rock with 5.6 m over it lies 0.15 mile NNW of Boas Islet. A shoal with a depth of 2.3 m is 0.2 mile SE of Boas Islet.

An islet, 23 m high, is 0.6 mile south of Rattenbury 70 Island and 0.2 mile off the Hecate Island shore. The passage between the islet and Hecate Island has a rock 1 m high in it. Floating fishing camps are in the bay east of this islet, during summer months (1990).

Meay Islet, 1.2 miles south of Rattenbury Island, 71 is at the north end of a group of islets and rocks lying in

PRUTH BAY — WEST ARM (1987)



KEITH ANCHORAGE (1987)



mid-channel. On the east side of the channel, abreast the above-mentioned group of islets, are two islands with a small treed islet between them.

72 Whittaker Point is the SW extremity of Hecate Island. A private ODAS light buoy is approximately 0.4 mile south of Whittaker Point.

73 A **microwave tower**, 183 m high, and two conspicuous wind driven generators are 1.2 miles SSW of Whittaker Point.

Pruth Bay $(51^{\circ}39'N, 128^{\circ}07'W)$, a popular small craft **anchorage**, has three arms at its head. A rock with 2.7 m over it is close-off the north shore just inside the entrance to the bay. The south arm has small islets and drying rocks extending 0.2 mile east from its west entrance point.

76 A sports fishing lodge with a **dinghy float** is at the west end of Pruth Bay. The **lights** on the float are privately operated. A **floating park headquarters** is moored in Pruth Bay from May to September. A trail near the lodge leads to a sand beach, known locally as **West Beach**, on the west side of Calvert Island.

77 **Marina** facilities are listed in the Appendices.

78 **Keith Anchorage** has an abandoned house and cabin on the NE shore of the point that separates the two arms of the anchorage.

79 **Anchorage** can be obtained midway between the entrance points of Keith Anchorage in 20 m. This anchorage is reported to be unsafe in SE gales because of heavy squalls that funnel down the valleys at its head.

80 A small cove, 0.2 mile east of Keith Anchorage, has a wooded islet in its entrance. A rock with 3.8 m over it lies in the passage south of the islet. **Anchorage**, with good holding, is obtainable in this cove.

81 Seasonal barges and **floats** may be moored in the cove at the mouth of **Big Spring Creek**.

82 From Whittaker Point to Fitz Hugh Sound (described in Chapter 1) the fairway is deep and free of dangers to within 0.1 mile from either shore.

Nalau Passage

Charts 3935, 3936

83 **Nalau Passage** (51°47′N, 128°02′W) connects Kildidt Sound to Fitz Hugh Sound and Edward and Ward Channels lead south to Hakai Passage.

The west entrance to Nalau Passage has several islets and drying and below-water rocks extending up to 0.8 mile off the NW shore of Stirling Island. The outer rock is 1 m high. On the north side of the entrance, drying and below-water

4-5

rocks extend up to 0.5 mile off the SW extremity of Hunter Island. Drying and below-water rocks lie close-off the shores in the west portion between Stirling and Hunter Islands.

85 **Tidal streams** attain 3 kn in the narrows between Hunter and Stirling Islands.

86 **Mustang Bay** (51°49'N, 128°03'W) is at the east end and on the north side of Nalau Passage. A number of islands, drying reefs and rocks extend 1 mile south from the entrance of Mustang Bay.

87 **Target Bay** lies 0.3 mile east of Mustang Bay. Several shoals are within 0.5 mile south of the entrance to the bay and a drying reef lies in the centre of the bay.

88 **Hergest Point**, east of Target Bay, is the NE entrance point of Nalau Passage. A wooded island, 0.5 mile south of Hergest Point, has drying and below-water rocks close west of it; a rock 2 m high lies off its north shore. The recommended track for entering Nalau Passage is the passage north of the 2-m rock mentioned above.

Tomahawk Island, 0.9 mile south of Hergest Point, has a rock with 0.5 m over it close north of it. A good passage leads between the north end of Tomahawk Island and the island north of it but take care to avoid the above-mentioned rock. Two rocks, one with 0.2 m over it the other dries 0.1 m (awash), are about 0.2 mile NNW of Daedalus Point, previously described. The passage between the two largest islets close south of Tomahawk Island is obstructed by boomsticks (1987).

Kildidt Sound

Charts 3727, 3935, 3937

90 **Kildidt Sound** (51°50'N, 128°09'W) penetrates the SW side of Hunter Island, leading through Kildidt Narrows into Kildidt Inlet. The sound is too deep for anchorage and is exposed to SW winds; however, small craft can find shelter in Bremner Bay or in some of the numerous bays at the head of the sound. The land on both sides of the sound is relatively low; the mountains on Hunter Island line its east coast.

Chart 3935

91 The approach to Kildidt Sound from Queen Charlotte Sound is between Stirling Island, on the north side of Hakai Passage, and Blenheim Island, about 4.5 miles NW. Alternative approaches are from Fitz Hugh Sound by way of Nalau Passage, previously described, or from Queens Sound by way of Spider Channel or Fulton Passage, thence through Brydon Channel into Kildidt Sound. Spitfire Channel is an alternative approach for small craft. These alternative approaches are intricate and local knowledge is advised. 92 **Airacobra Rock** (51°46'N, 128°13'W) is bare. A shoal with a least depth of 1.7 m extends 1.2 miles SSW of Airacobra Rock.

Blenheim Island, 1.7 miles NW of Airacobra Rock, is wooded with high white cliffs. A rock with 0.8 m over it is 0.7 mile south of Blenheim Island. Two rocks, 1 and 3 m high, and a drying rock lie 0.4 mile NW and a rock with 4.6 m over it is 0.2 mile north of the island. Two bare islets joined by a drying ledge are 0.5 mile NE of Blenheim Island.

Charts 3935, 3937

Breadner Group $(51^{\circ}48'N, 128^{\circ}14'W)$ is the group of islands and rocks on the west side of Kildidt Sound, south of Spider and Hurricane Islands. **Kidney Island**, **Ronald Island**, **Triplet Islands** and **Manley Island** form the east portion of this group. Kidney Island, 1.5 miles ENE of Blenheim Island, is joined to the islets on its east side by drying ledges. A rock with 1.9 m over it and several shoals lie up to 0.5 mile SSW of Kidney Island.

95 **Serpent Group**, 0.9 mile east of Kidney Island, consists of three main islands and numerous smaller ones in the entrance to Kildidt Sound. Drying and below-water rocks lie within 0.2 mile of the NE and SW sides of Serpent Group, and depths under 10 m lie up to 0.4 mile SW.

Leckie Bay, at the SW end of Hunter Island, is too deep and exposed to have any value as an anchorage. The shores of the bay are fringed with rocks and have several indentations. A group of small wooded islands and drying rocks extend 0.5 mile south from the west entrance point of the bay; they are separated from Hunter Island by a deep, narrow passage. A reef, in the middle of the entrance to Leckie Bay, dries 2.7 m at its north end and is steep-to on its east side.

Chart 3937

97 **Camel Island** $(51^{\circ}49'N, 128^{\circ}08'W)$ and **Clare Island**, with **Rupert Island** east of the latter, are separated from each other and from Hunter Island by narrow boat passages. The passage between Clare and Rupert Islands dries. The west sides of Camel and Clare Islands are steep-to.

Watt Bay is entered between Clare Island and **Seafire Island**, about 1 mile north; its entrance is encumbered by three islands and a rock awash. A deep, clear channel into the bay is between Clare Island and the two islands north of it. An islet, 25 m high, almost in the middle of the bay, has a shoal 0.1 mile ENE of it. Several islets and rocks are close-off the south and east shores of Watt Bay.

99 **Bremner Bay**, in the NE part of Watt Bay, affords good sheltered **anchorage** for small vessels in 16 to 25 m. The entrance is narrow and lies between a rock with 0.8 m over it close north of the south entrance point and two islets on the north side. Local knowledge is advised.

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100 **Mosquito Islets**, on the west side of the fairway between Clare Island and the Kittyhawk Group, consist of a chain of islets and drying rocks. **Lancaster Reef**, 0.2 mile south of Mosquito Islets, consists of two rocks with 1.7 and 2 m over them. A reef with three heads and a least depth of less than 2 m lies close west of Mosquito Islets.

101 **Kittyhawk Group**, west of Mosquito Islets, is a group of islands north of Manley Island.

102 **Brydon Channel**, between the Kittyhawk Group and **Hurricane Island**, is a tortuous passage encumbered with islets, drying reefs and below-water rocks; it connects Kildidt Sound with Spider Anchorage, described later in this chapter.

103 Spitfire Channel entered east of Hurricane Island is described later in this chapter.

104 **Goodlad Bay** ($51^{\circ}53'N$, $128^{\circ}09'W$) is at the NW end of Kildidt Sound. An islet, about 0.3 mile inside the entrance and in the centre of the bay, has a rock awash close south of it. A rock 2 m high and 0.1 mile offshore is 0.2 mile ESE of the east entrance point of Goodlad Bay and a rock with 6.6 m over it lies 0.1 mile south of the east entrance point. **Anchorage** for small craft can be obtained in 7 to 20 m in the SW part of Goodlad Bay; swinging room is limited.

Charts 3937, 3936

106 **Stewart Inlet** $(51^{\circ}53'N, 128^{\circ}08'W)$ has a minimum navigable width of 91 m. Several islets and rocks lie on both sides of the fairway. A rock with 5.7 m over it lies in the approach about 0.3 mile NW of the largest island of the Pattinson Group.

107 **Pattinson Group**, on the SW side of the entrance to Kildidt Narrows, consists of one large and several smaller islands. A rock, 0.1 mile east of the group, dries 5.1 m and is steep-to on its west side.

108 **Kildidt Narrows**, with islets and rocks in the south approach, has a least depth of 6.5 m in the fairway but is only suitable for small craft at HW slack. Tidal streams are strong and drying and below-water rocks are on both sides of the fairway. Local knowledge is advised.

Tidal streams in Kildidt Narrows can attain 12 kn at spring tides with eddies and turbulence on both the flood and the ebb. High water slack occurs approximately 1.5 hour after high water at Bella Bella. The time difference for low water slack varies



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with the height of the tide. For a low water of 0.4 m, the turn to flood occurs 2 hours or more after low water at Bella Bella; for a low water of 2.5 m, the turn to flood occurs approximately 1 hour after low water at Bella Bella.

110 **Kildidt Inlet** extends north from Kildidt Narrows and branches into two arms in the vicinity of **Gnat Islets**.

111 **Kildidt Lagoon** extending NW from Gnat Islets is the wider and deeper of the two arms of Kildidt Inlet. **Canso Island** is north of Gnat Islets and the **Hart Group** lies near the head of the lagoon.

112 **Merritt Lagoon**, the east arm of Kildidt Inlet, has a narrow, tortuous entrance channel.

Queens Sound

Chart 3937

113 **Queens Sound** is entered from south between the Breadner Group ($51^{\circ}48'N$, $128^{\circ}14'W$) and Gosling Rocks, 8 miles WNW. From the west, it is entered from Golby Passage, which lies between Goose Group and McMullin Group. The east side and the head of the sound are encumbered by a maze of islands through which navigable channels lead to Hunter Channel and Raymond Passage. Fulton Passage, north of Breadner Group, leads to Spider Anchorage and then Brydon Channel leads into Kildidt Sound. Spider Channel, 2 miles north of Fulton Passage, leads east through Spitfire Channel into Kildidt Sound. Islands on the east and west sides of Queens Sound are relatively low and featureless. **Mount Merritt** ($51^{\circ}59'N$, $128^{\circ}02'W$), north of Kildidt Lagoon, is the highest land in the vicinity.

114 **Tides**. — Tidal differences in Queens Sound, referenced on Bella Bella, are given for Gosling Island (Index No. 8906), Goose Island (Index No. 8909) and Spider Island (Index No. 8912) in the Tide Tables, Volume 7.

Tidal streams attain 2 to 3 kn about 2 miles NW of Purple Bluff $(51^{\circ}56'N, 128^{\circ}18'W)$. Strong tide-rips are encountered over and around Gosling Rocks and in the vicinity of Superstition Ledge $(51^{\circ}53'N, 128^{\circ}15'W)$.

Goose Group

116 **Goose Group** $(51^{\circ}55'N, 128^{\circ}27'W)$ consist of Goose, Swan, Duck, Gosling and Gull Islands, all connected by drying ledges, and Gosling Rocks, which lie south of the main group. Drying and below-water rocks fringe the west and north coasts of Goose Group.

117 **Tides**. — Tidal differences for Gosling Island (Index No. 8906), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

118Gosling Rocks, extending 3.2 miles SSW fromGosling Island, consist of a number of bare islets, up to 10 m

high, and numerous drying and below-water rocks. **Currie Islet** is near the south extremity of Gosling Rocks.

119 Currie Islet (Gosling Rocks) **light** (589) is shown at an elevation of 15.7 m from a skeleton tower.

120 A shoal area, on which there are several rocks with 2.5 to 9.4 m over them, is 1.5 miles SSW of **Duck Island**. **Swan Island** lies 0.4 mile north of Duck Island.

121 **Vivian Rock**, 1.3 miles west of Duck Island, dries 4.8 m and an 8.7-m shoal is 0.2 mile north of the rock.

122 Goose Island Anchorage is on the east side of Goose Group between Goose and Gosling Islands. Snipe Island and Gull Island lie on the south side of the anchorage. Drying rocks and rocks with less than 2 m over them extend 0.3 mile SE, east and NE from Gull Island.

Anchorage can be obtained about 0.3 mile north of Gull Island in 13 to 27 m.

124 **Goose Island** has prominent white cliffs near its NE end.

Golby Passage and McMullin Group

125 **Golby Passage** $(52^{\circ}01'N, 128^{\circ}25'W)$ separates Goose Group from McMullin Group and leads into the head of Queens Sound. Although the fairway is deep, it should only be navigated in clear weather, during daylight hours, because of unmarked dangers in the vicinity.

126 **Tides**. — Tidal differences for Goose Island (Index No. 8909), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

127 **Bourke Rock**, with 5.2 m over it, is 1.5 miles NW of the NW extremity of Goose Island. Seas occasionally break over this rock.

128 **Weyburn Rock**, 1.2 miles east of Bourke Rock, has 2.2 m over it. Numerous below-water rocks lie between Goose Island and Weyburn Rock.

129 **McMullin Group**, on the north side of Golby Passage, consists of two main islands and numerous islets, drying rocks, rocks awash and below-water rocks, extending up to 0.5 mile south of the islands.

130 **Tingley Rock**, 1.8 miles west of the west edge of McMullin Group, dries 3.1 m and the sea nearly always breaks on it. Two rocks with less than 2 m over them are 1.3 miles ESE of Tingley Rock, and a 10.5-m shoal lies midway between them.

131 **Peveril Rock**, 1.5 miles NE of the north extremity of Goose Island, is 2 m high. A detached rock with 0.8 m over it is 0.6 mile WSW of Peveril Rock, on the NE side of the fairway through Golby Passage.

Fulton Passage and Spider Anchorage

132 Triquet Island (51°48'N, 128°15'W), Typhoon Island, Edna Islands, Anne Islands and the Lyte Group,

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with numerous islets and rocks between them, form the west portion of the Breadner Group.

Fulton Passage, entered north of Typhoon Island, leads east from Queen Charlotte Sound into Spider Anchorage. The fairway through Fulton Passage is about 137 m wide, and deep. The Spider Island shore is indented by several bays and several islets, drying and below-water rocks lie close-off it. A reef with two drying heads is on the south side of the fairway, about 0.2 mile east of the north end of Typhoon Island. A 5.1- m shoal is close east of this reef and a rock with 6.6 m over it lies near mid-channel on the south side of the fairway.
Spider Anchorage has uneven depths ranging from

10.7 to 59 m. A rock, 0.2 mile NNE of the north end of Anne Islands, is 1 m high. Brydon Channel, previously described, leads east from Spider Anchorage into Kildidt Sound.

135 **Tides**. — Tidal differences for Spider Island (Index No. 8912), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

Anchorage can be obtained about 0.3 mile west of the south extremity of Hurricane Island in 59 m. Small vessels can obtain anchorage about 0.1 mile NNE of the north extremity of Manley Island in 10 to 30 m or between Edna Island and Anne Islands in 10 to 33 m.

Spider and Spitfire Channels

137 **Spider Island** (51°51'N, 128°15'W) is a large wooded island with high, bold, white cliffs at its NW end. **Breadner Point**, its west extremity, is a remarkable cliffy point.

138 Spider Channel **light** (588.7), on an islet close-off the NW end of Spider Island, is shown at an elevation of 18.8 m from a skeleton tower.

139 **Spider Channel**, entered north of Spider Island, leads between Spider and Spitfire Islands into Spider Anchorage. A drying rock and shoals lie across the entrance. A rock, 2 m high, is 0.1 mile off the NE point of Spider Island. **Stopper Group**, at the south end of Spider Channel, obstructs the channel leading into Spider Anchorage. Local knowledge is advised because of the numerous obstructions in the Stopper Group and the shoals in the north entrance. 140 **Spitfire Channel**, which separates **Spitfire Island** and Hurricane Island from Hunter Island, is a very narrow boat passage leading from Spider Channel into Kildidt Sound. It has a least depth of 1.9 m at its narrowest part. The east end is encumbered with islets, drying and below-water rocks. Local knowledge is advised.

141 **Swordfish Bay** ($51^{\circ}53'N$, $128^{\circ}14'W$), north of Spider Channel, has a shoal spit extending 0.1 mile south from its north entrance point. A rock that dries 2.5 m is at the south end of the shoal spit. The bay has three shallow arms but the outer part has depths up to 12.6 m.

West Approaches to Hunter Channel

142 The three main west approach channels to Hunter Channel are Cultus Sound, Lillooet Passage and Safe Passage.

143 **Superstition Point** $(51^{\circ}53'N, 128^{\circ}15'W)$ is the NW extremity of a group of islets that are connected to Hunter Island by a narrow drying ledge. **Superstition Ledge**, 0.2 mile SSW of Superstition Point, consists of a group of drying and below-water rocks. The sea breaks heavily at times on this ledge and there are strong **tide-rips** in the vicinity.

144 **McNaughton Group** and **Simonds Group** lie northward of Superstition Point. **Granville Islands** lie in the south part of the channel that separates the McNaughton and Simonds Groups. The north part of this channel is obstructed by numerous islets, drying and below-water rocks.

145 **Purple Bluff**, the west extremity of the largest island in the Simonds Group, has high, bold cliffs which, in some lights, take on a purple tint.

Guy Island, the north islet of the Simonds Group, is surrounded by drying and below-water rocks. The westernmost danger off the Simonds Group is a drying reef lying 0.5 mile west of Guy Island.

Cultus Sound

147 **Cultus Sound** (51°54'N, 128°14'W), on the east side of Queens Sound, is bounded on the north and west by the McNaughton Group and on the south and east by Hunter Island. Entered 1 mile north of Superstition Point it leads NE, then north, through Sans Peur Passage into the south part of Hunter Channel. 148 **Goolden Islands** are in a bight on the south side of the sound, 1 mile within the entrance.

Anchorage can be obtained in an emergency about 0.2 mile north of Goolden Islands in 48 m. Emergency anchorage can also be obtained 0.2 mile NE of the same islands in 16 to 26 m. Swell is encountered in these anchorages.

150 **Lane Rock**, 0.9 mile NE of Goolden Islands, has 1.5 m over it. The rock lies in the centre of the fairway through Cultus Sound and is steep-to on its east side.

Kinsman Lagoon is narrow, shallow and encumbered with drying and below-water rocks. **Tidal streams** reach 8 to 10 kn in the narrows.

152 **Sans Peur Passage** is less than 0.1 mile wide at its narrowest part. Shoals with 5.3 and 4.3 m over them lie near mid-channel at the south entrance. The north end of the passage widens, deepens, and joins the south end of Hunter Channel.

Lillooet and Safe Passages

153 **Prince Group** $(52^{\circ}00'N, 128^{\circ}15'W)$ is a chain of islands across the south entrance to Hunter Channel. **Robert Island** is the south island of the group.

154 **Beard Islands**, 0.6 mile west of Robert Island, mark the north side of the west entrance of Lillooet Passage.

Lillooet Passage, close south of Beard Islands and Robert Island, is a deep but narrow passage and affords the shortest route from Queens Sound into Hunter Channel. Because of many dangers in its vicinity, it is only recommended for use during daylight hours and with visibility sufficient to identify all landmarks.

Dangers. — A rock, 4 m high and steep-to on its south side, lies on the north side of Lillooet Passage between Beard Islands and Robert Island. A reef of drying and below-water rocks is on the south side of Lillooet Passage, 0.3 mile south of Beard Islands; the highest rock dries 1.8 m. A rock, on the south side of the passage, about 0.4 mile WSW of Robert Island, is 5 m high and a rock that dries 2.6 m is close south of it. A rock awash is close south of Robert Island. A chain of drying rocks lies on the south side of the fairway, about 0.2 mile south of Robert Island; the north rock dries 2.7 m.

157 Admiral Group lies 0.4 mile NW of Prince Group; Brodeur Island, Jones Island and Nelles Island are the named islands of the group.

158 **Safe Passage** leads between Prince and Admiral Groups and affords an alternative route, by rounding Prince

Group, to enter Hunter Channel to the SE, as well as a route to Raymond Passage to the north. It is advised to navigate this passage only during daylight hours with clear visibility.

159 **David Ledge** extends 0.2 mile NW from the north island of Prince Group. An island 70 m high, 0.4 mile ENE of the north end of Prince Group, has islets and drying rocks close west of it.

160 **Henry Rock** is in mid-channel east of the Prince Group. A drying rock and a rock awash are close NW and south, respectively, of Henry Rock.

161 A rock that dries 1.7 m is 0.3 mile ENE of the north end of Robert Island.

Directions. — If approaching Hunter Channel from south by way of Lillooet Passage or Safe Passage keep at least 1 mile west of Simonds Group. After identifying Beard Islands, and if intending to enter by way of Lillooet Passage, steer for the south point of Robert Island bearing 101°, passing a little more than 0.1 mile south of Beard Islands and midway between the 4 and 5 m high rocks that lie on the north and south sides of the fairway. Round the south side of Robert Island, passing midway between the rock awash off Robert Island and the 2.7 m drying rock on the south side of the fairway opposite it, then steer to enter Hunter Channel midway between Stubbs Point and Latta Island.

163 Safe Passage should be approached with the SE extremity of Jones Island in line with the 61-m high islet, 0.2 mile NE of it, bearing 034°. When within 0.5 mile of Jones Island steer to pass slightly more than 0.1 mile SE of Jones Island and the 61-m high islet. David Ledge should be rounded at a prudent distance then set a course to pass midway between Henry Rock and Dodwell Island and then around the SW side of Dodwell Island into Hunter Channel.

Hunter Channel

Charts 3937, 3938

164 **Hunter Channel** (52°00'N, 128°11'W), between the NW side of Hunter Island and **Campbell Island**, connects Queens Sound to Lama Passage. The approach routes from Queens Sound, described earlier, are by way of Cultus Sound, Lillooet Passage or Safe Passage. The fairway is deep throughout and there are no dangers more than 0.2 mile offshore.

Chart 3937

165 **Latta Island** $(51^{\circ}59'N, 128^{\circ}13'W)$ lies in the south entrance of Hunter Channel. A reef extends 0.2 mile NNE from the NE side of the island; it dries 2.2 m at the north end. A group of islets extends about 0.6 mile south from the south

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side of Latta Island; the narrow passage to the SW of these islets is usable by small craft.

166 **Dodwell Island** lies 0.4 mile north of Latta Island. **Stubbs Point** is its south extremity. The channel north and east of Dodwell Island is encumbered with islands and drying and below-water rocks.

Anchorage for small craft, out of the main tidal stream, can be obtained in the cove on the south side of Dodwell Island, west of Stubbs Point.

168 **Soulsby Point**, 1.5 miles NE of Stubbs Point, has a drying spit, close NE, extending 0.1 mile offshore. Two islets, 1.6 miles north of Soulsby Point, have drying rocks and a rock with 6.2 m over it north of them.

Chart 3938

169 Between the above-mentioned islets and **Bay Island** ($52^{\circ}04'N$, $128^{\circ}10'W$) an inlet extends 2.5 miles NNW terminating in a landlocked lagoon. The inlet is only suitable for small craft.

170 **Hart Island**, **End Island** and **Want Island** fringe the NW coast of Hunter Island. A rock with 1.6 m over it is about 0.2 mile north of Want Island with a drying rock between.

171 **Mouse Island** (*52°04'N*, *128°07'W*) lies 0.7 mile NE of Want Island. **Beak Point**, 0.5 mile ENE of Mouse Island, is the NW extremity of Hunter Island.

Bob Bay, entered SE of Mouse Island, has **Spire Point** on the east side of its entrance. **Anchorage** about 0.2 mile from the head of Bob Bay is well sheltered though swinging room is limited; depths are about 33 m.

173 Lama Passage is described in Chapter 1.

Charts 3937, 3938

South Approaches to Raymond Passage

The north end of Queens Sound ($52^{\circ}00'N$, $128^{\circ}21'W$) is filled with numerous islands through which four routes lead north to the south end of Raymond Passage. Local knowledge is advised for Tide Rip Passage ($52^{\circ}01'N$, $128^{\circ}18'W$) and the passage between Athabaskan and Iroquois Islands. Codfish Passage ($52^{\circ}04'N$, $128^{\circ}20'W$), the most direct route, and Safe Passage ($52^{\circ}01'N$, $128^{\circ}16'W$) are the preferred routes.

175 **Tribal Group** (52°02'N, 128°19'W) consists of **Athabaskan Island, Iroquois Island, Huron Island, Haida Islands** and several smaller islands.

176 **Tide Rip Passage** separates Admiral Group from the SE side of Athabaskan Island and local knowledge is advised. A chain of drying and below-water rocks extends 0.4 mile south from the south end of Athabaskan Island; the south rock of this chain dries 1.2 m.

177 **Murray Shoals**, 0.9 mile south of Athabaskan Island, lie in the south approach to Tide Rip Passage and the passage leading north between Athabaskan and Iroquois Islands. The shoals consist of several detached shoal heads with depths of 16.2 to 3.7 m over them.

178 **Beech Islet** lies in the centre of the fairway at the north end of Tide Rip Passage. A rock, 3 m high, is 0.6 mile north of Beech Islet and 0.2 mile off the east shore of Athabaskan Island.

179 **Pullen Island** ($52^{\circ}03'N$, $128^{\circ}17'W$) has above-water, drying and below-water rocks extending 0.1 mile south and east from it. **Shot Island**, 0.3 mile south of Pullen Island, has drying rocks off its north and NW sides.

Chart 3938

180 **Brown Narrows** $(52^{\circ}04'N, 128^{\circ}18'W)$ separates **Creery Islands**, on the west side, from **Piddington Island** on the east side. A chain of above-water, drying and below-water rocks extends along the west side of Brown Narrows between the two main Creery Islands. **Farmer Point** is on the SW side of Piddington Island.

Charts 3937, 3938

181 **Danger Point** $(52^{\circ}01'N, 128^{\circ}20'W)$, at the SW extremity of the Tribal Group. Drying reefs, 0.6 mile east of Danger Point, extend 0.4 mile south from Iroquois Island with an islet 2 m high at the south end.

182 The passage leading north between Athabaskan and Iroquois Islands, at its south end, and between Creery Islands and Miles Island, near its north end, is straight and about 46 m wide. Local knowledge is advised because of Murray Shoals and other dangers off the south entrance, and drying and below-water rocks on both sides of the fairway.

183 **Guano Rocks** $(52^{\circ}03'N, 128^{\circ}22'W)$, on the west side of the south approach to Codfish Passage, consist of an islet 7 m high and several drying and below-water rocks. Two

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detached drying rocks are 0.3 mile SSW of the islet. A rock 4 m high and below-water rocks with 4.5 and 2.4 m over them lie close west of the Haida Islands.

Chart 3938

184 **Tuft Islands** $(52^{\circ}04'N, 128^{\circ}22'W)$ commence 1.2 miles north of Guano Rocks and extend west then NW as a chain through the shoal-filled waters between McMullin Group and Stryker Island. **Seen Island** is near the west end of this chain.

185 **Codfish Passage**, entered from the south between Guano Rocks and Huron Island, leads NE between **Miles Island** and **Alleyne Island** into Raymond Passage. Drying and below-water rocks extend north from Miles Island and the island close east. This is the most direct route from Queens Sound into Raymond Passage and in clear weather presents no difficulties.

186 **Stryker Island** is on the west side of the entrance to Raymond Passage.

187 **Tides**. — Tidal differences for Stryker Island (Index No. 8917), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

188 **Kingscote Point**, at the NW end of Piddington Island, has drying and below-water rocks extending about 0.2 mile north from it.

189 **Peter Bay**, on the north side of Piddington Island, has **Gow Island** and two unnamed islands in its entrance. The passage NE of Gow Island is only about 300 feet (91 m) wide but provides the easiest access; a rock that dries 2 feet (0.6 m) lies in this passage, close-off the NE shore.

190 The channel east of Piddington Island is encumbered with islands and rocks at its south end. **Redford Point** is on Campbell Island abreast the east extremity of Piddington Island.

Anchorage for small vessels can be obtained in the south part of Peter Bay in 18 fathoms (33 m). When entering Peter Bay, round the north end of Gow Island and keep close to the NE shore of that island until clear of the drying rock.

192 The inlet east of Redford Point is obstructed by an islet and a drying rock 0.7 mile SE of the point. A narrow passage with a depth of 16 feet (5.0 m) is SW of this islet. The narrows 0.4 mile SE has a drying rock and a limiting depth of 8 feet (2.5 m).

193 **Hochstader Basin** is entered 0.5 mile NE of Gow Island through a channel encumbered with numerous islands, drying and below-water rocks. Local knowledge is advised.

194 **Directions**. — The two preferred routes for approaching Raymond Passage from Queens Sound are via Codfish Passage or Safe Passage.

To enter via Codfish Passage make for a position about 0.5 mile east of Peveril Rock $(52^{\circ}01'N, 128^{\circ}23'W)$ and then bring the NW extremity of Miles Island ahead, bearing 026°, which course will lead between Guano Rocks and the dangers NW of Huron Island. When the highest of the Guano Rocks is abeam, alter course to pass midway between Alleyne and Miles Islands, after which a mid-channel course can be followed in Raymond Passage.

196 Entering Raymond Passage via Safe Passage and Brown Narrows follow the first part of the directions for Safe Passage, given earlier in this chapter. The NE side of the Admiral Group should then be rounded at a distance of slightly more than 0.1 mile, then set a course to pass midway between Pullen Island and the NE shore of Athabaskan Island. When Pullen Island is abeam alter course to pass about 0.1 mile east of the 3 m high rock at the south end of Brown Narrows then favour the west shore of Brown Narrows. When clear of the north end of Creery Islands, follow a mid-channel course into Raymond Passage.

Raymond Passage

197 **Raymond Passage** between Campbell Island and **Horsfall Island** connects Queens Sound to Seaforth Channel. The south approach is by way of Codfish Passage or Safe Passage.

DeWolf Island $(52^{\circ}07'N, 128^{\circ}18'W)$ is on the east side of the south entrance to Raymond Passage. **Matilda Island** is close east. The boat passage between DeWolf and Matilda Islands is free of dangers. The boat passage between Matilda and Campbell Islands has a rock 1 foot (0.3 m) high in its north entrance.

199 **Clarie Island**, 0.5 mile west of Matilda Island, has a shoal ledge, on which there are rocks with less than 6 feet (2 m) over them, extending 0.1 mile south from it.

Kingsley Point, 0.4 mile NW of DeWolf Island, is the east extremity of an island close south of Horsfall Island. Cundall Bay, 2 miles NE of Kingsley Point, is too deep for anchorage. A reef on which there are above-water and drying rocks extends 0.2 mile east from the south entrance point of the bay.

202 **Poole Islet** is 0.8 mile north of Cundall Bay.

203 **Norman Morison Bay**, at the north end of Raymond Passage, is entered south of **Kintail Point**. Its south and east shores are fringed with islets and drying rocks.

Anchorage, sheltered from SE winds, can be obtained in 15 to 17 fathoms (27 to 50 m) about 0.3 mile off the south shore of the outer part of Norman Morison Bay; in this anchorage Kintail Point in line with the west extremity of Christiansen Point bears 008°. Small RAIT NARROWS LOOKING SW (1987)



vessels can find anchorage closer to the head of Norman Morison Bay.

205 **Hose Point**, 0.7 mile WNW of Kintail Point, is the east extremity of Horsfall Island at the junction of Raymond Passage and Seaforth Channel.

206 Seaforth Channel is described in Chapter 1.

Joassa Channel

207 **Joassa Channel** $(52^{\circ}10'N, 128^{\circ}19'W)$, between Horsfall Island on the east and Stryker, Potts and Dufferin Islands on the west, leads from the south end of Raymond Passage via Boddy Narrow, at the south end, and Rait Narrows at the north end, into Dundivan Inlet. It is only suitable for small craft. Local knowledge is advised.

208 **Tides**. — Tidal differences for Joassa Channel (Index No. 8922), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

Boddy Narrows, at the south end of Joassa Channel, has **Isabel Point** on its east side. The fairway as far north as **Reba Point** is deep and free of dangers. Between Reba Point and **Quinoot Point**, 0.8 mile north, a group of drying rocks lies on the east side of the fairway. A shoal with a least depth of 31 feet (9.3 m) lies in mid-channel 0.8 mile NE of Quinoot Point. The channel narrows 1.5 miles NE of Quinoot Point and is encumbered with numerous drying and below-water rocks at its north end.

Rait Narrows, at the north end of Joassa Channel, is only 150 feet (46 m) wide and has a least depth of 20 feet (6 m). It leads into the south end of Dundivan Inlet, which is described in Chapter 1.

Gale Passage, Louise Channel and South Approaches

211 The south approaches to Gale Passage and Louise Channel are between Cape Mark $(52^{\circ}09'N, 128^{\circ}32'W)$ (described in Chapter 2), and the McMullin Group, about 7 miles SE.

212 **Hope Rocks**, 0.8 mile south of Cape Mark, have a least depth of 0.6 m over them.

213 **Rempstone Rocks**, 2 miles SSE of Cape Mark, consist of a group of above-water, drying and below-water rocks covering an area about 1 mile in extent. A deep channel about 0.5 mile wide separates the north side of Rempstone Rocks from Hope Rocks.

Limit Island is 1 mile east of Rempstone Rocks. Small islets and drying reefs extend 0.3 mile SW and a rock that dries 2.1 m lies close-off the north side of the island. **Godfrey Rock**, about 1 mile north of Limit Island, has less than 6 feet (2 m) over it. Drying and below-water rocks extend 0.4 mile NE of it. Edwards Point, 0.8 mile north of Godfrey Rock, is the south extremity of Athlone Island. Numerous islets, rocks and reefs extend south of Athlone Island between Hope Rocks and Princess Alice Island.

215 **Waskesiu Passage** $(52^{\circ}09'N, 128^{\circ}25'W)$ separates **Princess Alice Island** from Athlone Island. It is only about 200 feet (61 m) wide with a least depth of 8.1 m. A shoal bar across the west approach to the passage has a least depth of 4.3 m.

216 **Marshall Reef** $(52^{\circ}04'N, 128^{\circ}29'W)$, 3.2 miles south of Limit Island, consists of a drying rock and a below-water rock with a rock with 0.1 m over it 0.1 mile south. Below-water rocks are 0.4 and 0.6 mile north of Marshall Reef.

Fingal Island is about 1.5 miles NE of Marshall Reef. Fingal Ledges extend 1 mile SW from Fingal Island

and consist of above-water, drying and below-water rocks. The passage between Fingal Ledges and McMullin Group is obstructed by a shoal area in which there are drying and below water rocks.

218 **Agnew Islet**, 2 miles NE of Fingal Island, is surrounded by a drying ledge. Numerous islets, drying reefs and below-water rocks lie between Agnew Islet and the west side of Stryker Island and the south end of Potts Island.

Louise Channel separates the NW side of Stryker Island from Potts Island and is entered from the south through the islets and drying reefs east of Agnew Islet. It is a narrow small craft channel that dries near the middle. The north entrance is encumbered with drying and below-water rocks. Hibbard Point $(52^{\circ}06'N, 128^{\circ}26'W)$, 1.4 miles WNW of Agnew Islet, is the south extremity of

Houghton Islands. Fingal Point is the south extremity of Princess Alice Island.

221 **Thompson Bay** is entered between Agnew Islet and Hibbard Point. Houghton Islands are comparatively steep-to on their east shore but the east shore of Princess Alice Island should be given a wide berth to clear drying reefs that lie up to 0.5 mile offshore. 222 **Tides**. — Tidal differences for Thompson Bay (Index No. 8998), referenced on Bella Bella, are given in the Tide Tables, Volume 7.

223 **Cree Point**, the south extremity of Dufferin Island, has shoals extending 0.6 mile south from it. The passage between Cree Point and the islets west of it is encumbered with drying and below-water rocks. The passage west of the islets is deep but a rock with less than 6 feet (2 m) over it and shoal water are on the east side of the fairway. Islets, above-water and drying rocks extend 0.2 mile east from the NE end of Princess Alice Island. **The Back Door**, a local name for the passage between Potts and Dufferin Islands, is encumbered with rocks and kelp at its NE end. It is reported that **anchorage** is obtainable in the basin 0.9 mile NE of Cree Point.

Gale Passage separates Dufferin Island from Athlone Island and leads from the north end of Thompson Bay to Seaforth Channel. The passage is encumbered with islets, rocks and drying ledges and only suitable for small craft. Local knowledge is advised to navigate Gale Passage safely. **Tidal rapids** are formed about 1.8 miles from the south entrance and again at about the same distance from the north entrance where the fairway dries.

225 Seaforth Channel is described in Chapter 1.

Sail Plan

Adapted from Transport Canada Publication TP 511E.

Fill out a sail plan for every boating trip you take and file it with a responsible person. Upon arrival at your destination, be sure to close (or deactivate) the sail plan. Forgetting to do so can result in an unwarranted search for you.

| Sail Plan | |
|---|-----------------------------|
| Owner Information | |
| Name: | |
| Address: | |
| Telephone Number: | _ Emergency Contact Number: |
| Boat Information | |
| Boat Name: | _ Licence or |
| | Registration Number: |
| | Length:Type: |
| | Deck:Cabin: |
| Engine Type: | Distinguishing Features: |
| Communications | |
| | HF:VHF:MF: lumber: |
| Safety Equipment on Board | |
| Lifejackets and PFD's <i>(include number</i>): _ Liferafts (include type and colour): | |
| Flares (include number and type): Other Safety Equipment: | |
| Trip Details — Update These Det | ails Every Trip |
| Date of Departure: | _ Time of Departure: |
| | Heading To: |
| Proposed Route: | _ Estimated Date and |
| | Time of Arrival: |
| | Number of People on Board: |
| Search and Rescue Telephone N | umber: |

The responsible person should contact the nearest Joint Rescue Coordination Centre (JRCC) or Maritime Rescue Sub-Centre (MRSC) if the vessel becomes overdue.

Act smart and call early in case of emergency. The sooner you call, the sooner help will arrive.

JRCC Victoria (British Columbia and Yukon) 1-800-567-5111

+1-250-413-8933 (Satellite, Local or out of area) # 727 (Cellular) +1-250-413-8932 (fax) jrccvictoria@sarnet.dnd.ca (Email)

JRCC Trenton (Great Lakes and Arctic) 1-800-267-7270

+1-613-965-3870 (Satellite, Local or Out of Area) +1-613-965-7279 (fax) jrcctrenton@sarnet.dnd.ca (Email)

MRSC Québec (Quebec Region) 1-800-463-4393

+1-418-648-3599 (Satellite, Local or out of area) +1-418-648-3614 (fax) <u>mrscqbc@dfo-mpo.gc.ca</u> (Email)

JRCC Halifax (Maritimes Region) 1-800-565-1582

+1-902-427-8200 (Satellite, Local or out of area) +1-902-427-2114 (fax) jrcchalifax@sarnet.dnd.ca (Email)

MRSC St. John's (Newfoundland and Labrador Region) 1-800-563-2444 +1-709-772-5151 (Satellite, Local or out of area) +1-709-772-2224 (fax) mrscsj@sarnet.dnd.ca (Email)

MCTS Sail Plan Service

Marine Communications and Traffic Services Centres provide a sail plan processing and alerting service. Mariners are encouraged to file Sail Plans with a responsible person. In circumstances where this is not possible, Sail Plans may be filed with any MCTS Centre by telephone or marine radio only. Should a vessel on a Sail Plan fail to arrive at its destination as expected, procedures will be initiated which may escalate to a full search and rescue effort. Participation in this program is voluntary. *See Canadian Radio Aids to Marine Navigation*.

APPENDICES

| e | | | Approaches | Dock | Fuel Pump | Berthing for visit | epairs Hull/Eng ower | oist (tonnes) | larine Railway | aundry, Toilets | Barbage Dispos | Sewage Pumpo | Accommodation | leals Restaura | Car Park | aunching Ram | Groceries | Vater/Ice | aphtha/Propar | erosene/Lubric | ait/Tackle | larine Hardwar | uthorized Char | |
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DISTANCES: INSIDE PASSAGE — PRINCE RUPERT TO CAPE CAUTION VIA GRENVILLE, PRINCESS ROYAL AND SEAFORTH CHANNELS, LAMA PASSAGE, FITZ HUGH SOUND

| Prince I | Rupert | | | | | | | | | | | | | |
|----------|--------|--------|---------|-------|--------|-------|---------|--------|----------|----------|-----------|---------|--------|--|
| 72 | Sainty | Point | | | | | | | | | | | | |
| 100 | 28 | Buteda | le | | | | | | | | | | | |
| 121 | 49 | 67 | Kitimat | | | | | | | | | | | |
| 158 | 58 | 65 | 57 | Kemar | 10 | | | | | | | | | |
| 135 | 63 | 35 | 102 | 104 | Boat B | luff | | | | | | | | |
| 161 | 89 | 61 | 126 | 128 | 26 | Susan | Rock | | | | | | | |
| 180 | 108 | 90 | 147 | 145 | 45 | 20 | Bella B | ella | | | | | | |
| 190 | 118 | 90 | 157 | 155 | 55 | 30 | 10 | Pointe | r Island | (E end I | Lama P | ass.) | | |
| 210 | 138 | 110 | 167 | 176 | 63 | 50 | 30 | 20 | Ocean | Falls | | | | |
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| 203 | 131 | 103 | 181 | 179 | 68 | 42 | 23 | 12 | 33 | 56 | Namu | | | |
| 222 | 150 | 122 | 189 | 191 | 87 | 61 | 42 | 32 | 51 | 66 | 20 | Safety | Cove | |
| 232 | 160 | 132 | 199 | 201 | 98 | 71 | 52 | 42 | 61 | 86 | 30 | 10 | Dugou | t Rocks |
| 245 | 173 | 145 | 212 | 214 | 110 | 84 | 65 | 55 | 74 | 99 | 43 | 23 | 13 | Cape Caution-078° 2.2 miles |

The distances are approximate and expressed to the nearest even nautical mile.

They are based on the most frequently used tracks which may not be suitable for all vessels.

DISTANCES:

PRINCE RUPERT TO PORTLAND AND OBSERVATORY INLETS AND THE HEAD OF ALICE AND HASTINGS ARMS

Prince Rupert

| 19 | Lucy Is | lands | | | | | | |
|-----|---------|---------|---------|---------|-------|----------|-------|----------------------|
| 37 | 19 | Pointer | Rocks | | | | | |
| 39 | 20 | 5 | Port Si | mpson | | | | |
| 67 | 49 | 30 | 33 | Kincoli | th | | | |
| 92 | 74 | 55 | 58 | 27 | Brook | Shoal Li | ight | |
| 103 | 85 | 66 | 69 | 37 | 11 | Alice A | rm | |
| 95 | 77 | 58 | 61 | 29 | 5 | 16 | Anyox | |
| 107 | 89 | 70 | 73 | 42 | 15 | 26 | 19 | Head of Hastings Arm |

The distances are approximate and expressed to the nearest even nautical mile. They are based on the most frequently used tracks which may not be suitable for all vessels.

DISTANCES: PRINCE RUPERT TO STEWART VIA PORTLAND INLET AND CANAL

Prince Rupert

| 65 | Ramsd | len Poin | t Light | |
|-----|-------|----------|-----------|---------|
| 87 | 22 | Hattie | Island Li | ight |
| 111 | 46 | 24 | Cliff Po | int |
| 128 | 63 | 41 | 17 | Stewart |

The distances are approximate and expressed to the nearest even nautical mile. They are based on the most frequently used tracks which may not be suitable for all vessels.

U.S. PORTS

| Prince Rupert to Ketchikan | .131 r | niles |
|----------------------------|--------|-------|
| Ketchikan to Skagway | .276 r | niles |

DISTANCES:

PRINCE RUPERT TO LANGARA POINT VIA BROWN PASSAGE

Prince Rupert

| | in parts | | | | |
|----|----------|----------|--------|---------|---------------|
| 13 | Rache | Islands | ; | | |
| 27 | 14 | Triple I | slands | | |
| 49 | 36 | 22 | Rose S | pit Buo | у |
| 81 | 64 | 50 | 23 | Masset | t Bar |
| 99 | 86 | 72 | 50 | 33 | Langara Point |
| | | | | | |

The distances are approximate and expressed to the nearest even nautical mile. They are based on the most frequently used tracks which may not be suitable for all vessels.

CANADIAN CLIMATE NORMALS

The meteorological data in the following tables is supplied by Environment Canada, Atmospheric Environment Service.

Starting and ending dates given with each station are the total period of observation. Values of the climate elements are averages for the period 1961-90, or for a portion of that period no shorter than 20 years. Extreme or maximum values are the highest or lowest occurrence for all years that data is available.

Addenbroke Island 51°36'N 127°52'W 1969 to 1990

| Elevation 21 m (69 ft) | | | | | | | | | | | | | |
|-------------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|------|
| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
| Wind (knots) | | | | | | | | | | | | | |
| Speed | 9 | 9 | х | 8 | 8 | х | х | x | x | х | x | х | х |
| Most frequent direction | SE | s | х | s | N | х | х | х | х | х | х | х | х |
| Maximum hourly speed | 52 | 41 | 40 | 52 | 47 | 35 | 27 | 30 | 33 | 45 | 48 | 45 | |
| Direction | s | s | s | SE | SE | SE | s | s | s | SE | SE | SE | |

X/N = Some data exists but not enough to derive a value

Egg Island 51°15'N 127°50'W 1965 to 1990

| | | | | | 1905 | 1990 | | | | | | | |
|-------------------------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|--------|
| Elevation 14 m (46 ft) | | | | | | | | | | | | | |
| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
| Temperature (°C) | | | | | | | | | | | | | |
| Daily average | 3.7 | 4.7 | 5.6 | 6.9 | 9.4 | 11.5 | 13.2 | 13.5 | 11.8 | 9.1 | 6.0 | 4.0 | 8.3 |
| Daily maximum | 5.9 | 7.2 | 8.4 | 9.7 | 11.9 | 13.8 | 15.5 | 15.8 | 14.3 | 11.6 | 8.2 | 6.2 | 10.7 |
| Daily minimum | 1.4 | 2.1 | 2.8 | 4.1 | 6.7 | 9.1 | 10.9 | 11.1 | 9.3 | 6.7 | 3.8 | 1.8 | 5.8 |
| Extreme maximum | 16.7 | 16.7 | 17.6 | 20.6 | 25.5 | 20.0 | 21.0 | 21.7 | 23.4 | 23.7 | 17.0 | 13.9 | |
| Extreme minimum | -10.0 | -12.8 | -5.0 | -1.7 | 1.0 | 4.4 | 6.0 | 6.1 | 1.7 | -4.4 | -12.9 | -13.3 | |
| Precipitation | | | | | | | | | | | | | |
| Rainfall (mm) | 297.5 | 208.4 | 205.9 | 183.0 | 135.0 | 120.0 | 80.0 | 98.0 | 191.1 | 324.2 | 348.1 | 320.8 | 2511.9 |
| Extreme daily rainfall | 150.5 | 81.8 | 107.4 | 69.1 | 66.3 | 78.8 | 63.8 | 83.6 | 163.5 | 110.0 | 144.8 | 188.6 | |
| Days with rain | 20 | 19 | 21 | 19 | 17 | 16 | 13 | 15 | 17 | 23 | 24 | 22 | 226 |
| Snowfall (cm) | 23.2 | 16.5 | 8.6 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 3.6 | 12.7 | 68.0 |
| Extreme daily snowfall | 33.0 | 27.5 | 59.2 | 19.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 22.1 | 17.8 | |
| Days with snow | 4 | 3 | 1 | • | 0 | 0 | 0 | 0 | 0 | • | 1 | 3 | 13 |
| Days with precipitation | 23 | 20 | 22 | 20 | 17 | 16 | 13 | 15 | 17 | 23 | 24 | 23 | 232 |
| Wind (knots) | | | | | | | | | | | | | |
| Speed | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 8 | 9 | 12 | 15 | 14 | 11 |
| Most frequent direction | SE | SE | SE | SE | NW | NW | NW | NW | х | SE | SE | SE | х |
| Maximum hourly speed | 60 | 49 | 65 | 60 | 72 | 53 | 36 | 33 | 50 | 62 | 58 | 59 | |
| Direction | SE | SE | SE | Е | SE | SE | SE | SE | SE | SE | E | Е | |

= Average of less than one but greater than zero

X = Some data exists but not enough to derive a value

| Elevation 17 m (56 ft) | lan | Feb | Mar | Ann | Mav | June | July | A.1.0 | Cont | Oct | Nov | Dec | Year |
|-------------------------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|--------|
| | Jan | Feb | mar | Apr | мау | June | July | Aug | Sept | Oct | NOV | Dec | rear |
| Temperature (°C) | | | | | | | | | | | | | |
| Daily average | -2.6 | 0.0 | 3.2 | 6.4 | 10.4 | 14.2 | 16.6 | 16.6 | 12.9 | 7.7 | 2.3 | -1.2 | 7.2 |
| Daily maximum | -0.3 | 2.7 | 6.4 | 10.8 | 15.2 | 19.0 | 21.4 | 21.2 | 16.8 | 10.4 | 4.5 | 1.0 | 10.8 |
| Daily minimum | -5.0 | -2.7 | -0.1 | 2.1 | 5.5 | 9.4 | 11.7 | 12.0 | 8.9 | 5.0 | 0.0 | -3.5 | 3.6 |
| Extreme maximum | 10.0 | 12.0 | 16.5 | 25.6 | 35.5 | 33.5 | 35.6 | 36.7 | 33.3 | 20.5 | 15.5 | 12.5 | |
| Extreme minimum | -23.3 | -18.9 | -14.4 | -7.8 | -2.2 | 0.5 | 2.8 | 2.8 | 0.0 | -12.5 | -23.0 | -24.4 | |
| | | | | | | | | | | | | | |
| Precipitation | | | | | | | | | | | | | |
| Rainfall (mm) | 225.8 | 188.1 | 192.8 | 173.2 | 111.0 | 86.6 | 71.8 | 99.6 | 219.9 | 415.4 | 342.8 | 260.0 | 2387.0 |
| Extreme daily rainfall | 152.9 | 112.0 | 118.9 | 82.0 | 61.5 | 61.0 | 47.8 | 74.9 | 148.0 | 179.4 | 150.0 | 154.4 | |
| Days with rain | 12 | 12 | 17 | 17 | 17 | 14 | 14 | 13 | 18 | 23 | 19 | 13 | 188 |
| Snowfall (cm) | 116.6 | 75.2 | 32.8 | 3.7 | т | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 44.4 | 73.3 | 347.4 |
| Extreme daily snowfall | 82.6 | 76.2 | 53.6 | 20.3 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 9.0 | 45.0 | 59.0 | |
| Days with snow | 10 | 7 | 4 | • | * | 0 | 0 | 0 | 0 | • | 5 | 9 | 38 |
| Days with precipitation | 18 | 17 | 19 | 17 | 17 | 14 | 14 | 13 | 18 | 23 | 22 | 19 | 209 |

Kitimat 54°00'N 128°42'W 1965 to 1990

* = Average of less than one but greater than zero T = Trace

McInnes Island 52°16'N 128°43'W 1954 to 1990

| | | | | | 1954 | 0 1990 | | | | | | | |
|-------------------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|--------|
| Elevation 25 m (82 ft) | | | | | | | | | | | | | |
| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
| Temperature (°C) | | | | | | | | | | | | | |
| Daily average | 3.4 | 4.6 | 5.6 | 7.3 | 9.7 | 12.0 | 13.9 | 14.3 | 12.8 | 9.6 | 5.9 | 4.0 | 8.6 |
| Daily maximum | 5.2 | 6.5 | 7.9 | 9.9 | 12.4 | 14.6 | 16.4 | 16.7 | 15.2 | 11.5 | 7.7 | 5.8 | 10.8 |
| Daily minimum | 1.5 | 2.6 | 3.2 | 4.7 | 6.9 | 9.4 | 11.3 | 11.8 | 10.5 | 7.7 | 4.1 | 2.2 | 6.3 |
| Extreme maximum | 12.6 | 14.4 | 18.3 | 21.9 | 26.1 | 32.2 | 25.6 | 29.2 | 26.9 | 19.4 | 17.0 | 12.2 | |
| Extreme minimum | | | | | | | | | | | | | |
| Precipitation | | | | | | | | | | | | | |
| Rainfall (mm) | 296.1 | 223.1 | 206.4 | 185.0 | 151.2 | 125.5 | 100.2 | 137.1 | 208.1 | 344.3 | 328.2 | 273.0 | 2578.3 |
| Extreme daily rainfall | 319.0 | 116.1 | 79.5 | 73.8 | 71.4 | 96.0 | 62.2 | 69.6 | 103.6 | 156.0 | 122.2 | 117.4 | |
| Days with rain | 20 | 19 | 21 | 20 | 18 | 16 | 14 | 15 | 17 | 24 | 23 | 22 | 228 |
| Snowfall (cm) | 27.5 | 17.1 | 11.3 | 5.6 | 0.1 | 0.0 | 0.0 | 0.0 | т | 0.9 | 6.2 | 16.3 | 85.0 |
| Extreme daily snowfall | 51.6 | 30.2 | 34.3 | 16.3 | 2.4 | 0.0 | 0.0 | 0.0 | 0.2 | 12.2 | 40.1 | 35.6 | |
| Days with snow | 6 | 4 | 4 | 2 | • | 0 | 0 | 0 | • | * | 2 | 4 | 23 |
| Days with precipitation | 22 | 20 | 22 | 20 | 18 | 16 | 14 | 15 | 17 | 24 | 24 | 23 | 235 |
| Wind (knots) | | | | | | | | | | | | | |
| Speed | 12 | х | х | х | х | 8 | 6 | х | х | х | х | х | х |
| Most frequent direction | E | х | х | х | х | х | NW | х | х | х | х | х | х |
| Maximum hourly speed | 63 | 59 | 61 | 64 | 52 | 44 | 39 | 43 | 55 | 62 | 66 | 68 | |
| Direction | s | E | s | SE | SE | s | SE | s | s | s | s | SE | |
| Maximum gust speed | 79 | 74 | 64 | 82 | 56 | 58 | 43 | 44 | 69 | 85 | 80 | 76 | |
| Direction | SE | S | s | SE | SE | SE | s | S | S | s | s | s | |

Average of less than one but greater than zero
 T = Trace
 X = Some data exists but not enough to derive a value

Ocean Falls 52°21'N 127°41'W 1924 to 1986

| | | | | | 1924 | 1900 | | | | | | | |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Elevation 5 m (16 ft) | | _ | | _ | _ | _ | _ | _ | _ | _ | _ | _ | |
| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
| Temperature (°C) | | | | | | | | | | | | | |
| Daily average | 1.1 | 2.8 | 4.1 | 6.3 | 9.8 | 13.2 | 15.6 | 16.2 | 13.7 | 9.2 | 4.3 | 1.8 | 8.2 |
| Daily maximum | 3.2 | 5.2 | 7.0 | 9.9 | 14.0 | 17.2 | 19.5 | 19.8 | 16.8 | 11.7 | 6.4 | 3.8 | 11.2 |
| Daily minimum | -1.1 | 0.4 | 1.0 | 2.7 | 5.6 | 9.2 | 11.6 | 12.4 | 10.5 | 6.8 | 2.3 | -0.3 | 5.1 |
| Extreme maximum | 15.0 | 16.1 | 20.6 | 25.0 | 32.2 | 35.6 | 35.6 | 39.4 | 32.2 | 22.8 | 17.2 | 14.0 | |
| Extreme minimum | -18.3 | -15.0 | -16.7 | -5.0 | -7.2 | 1.1 | 3.9 | 2.2 | 1.1 | -17.8 | -20.0 | -17.8 | |
| | | | | | | | | | | | | | |
| Precipitation | | | | | | | | | | | | | |
| Rainfall (mm) | 448.7 | 379.4 | 312.0 | 316.0 | 238.1 | 195.8 | 155.5 | 197.9 | 366.0 | 586.0 | 480.5 | 469.1 | 4145.1 |
| Extreme daily rainfall | 215.9 | 188.2 | 161.3 | 97.8 | 129.3 | 130.4 | 97.5 | 152.1 | 177.3 | 233.9 | 203.5 | 216.2 | |
| Days with rain | 16 | 17 | 20 | 19 | 18 | 16 | 13 | 14 | 17 | 22 | 20 | 17 | 208 |
| Snowfall (cm) | 63.7 | 30.5 | 11.1 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 11.9 | 34.0 | 155.0 |
| Extreme daily snowfall | 215.9 | 188.2 | 161.3 | 97.8 | 129.3 | 130.4 | 97.5 | 152.1 | 177.3 | 233.9 | 203.5 | 216.2 | |
| Days with snow | 6 | 4 | 3 | * | 0 | 0 | 0 | 0 | 0 | * | 2 | 5 | 20 |
| Days with precipitation | 20 | 18 | 20 | 19 | 18 | 16 | 13 | 14 | 17 | 22 | 21 | 20 | 219 |
| | | | | | | | | | | | | | |

* = Average of less than one but greater than zero

| levation 34 m (112 ft) | | | | | | | | | | | | | |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1evatori 34 ili (112 il) | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
| Temperature (°C) | | | | | | | | | | | | | |
| Daily average | 0.8 | 2.5 | 3.7 | 5.5 | 8.4 | 10.9 | 12.9 | 13.3 | 11.3 | 8.0 | 3.8 | 1.7 | 6.9 |
| Daily maximum | 4.1 | 5.9 | 7.2 | 9.4 | 12.0 | 14.1 | 15.9 | 16.5 | 15.0 | 11.3 | 7.0 | 4.8 | 10.3 |
| Daily minimum | -2.5 | -1.0 | 0.0 | 1.6 | 4.6 | 7.6 | 9.8 | 10.0 | 7.7 | 4.7 | 0.6 | -1.5 | 3.5 |
| Extreme maximum | 17.6 | 17.8 | 17.2 | 23.3 | 27.3 | 25.5 | 27.8 | 28.7 | 27.0 | 21.7 | 18.9 | 18.9 | |
| Extreme minimum | -24.4 | -18.1 | -17.2 | -7.1 | -1.7 | 1.1 | 2.8 | 2.8 | -2.2 | -11.3 | -20.6 | -22.8 | |
| Precipitation | | | | | | | | | | | | | |
| Rainfall (mm) | 205.6 | 189.1 | 168.3 | 174.3 | 142.0 | 119.5 | 112.9 | 162.8 | 244.7 | 378.6 | 272.2 | 239.2 | 2409.1 |
| Extreme daily rainfall | 84.0 | 95.0 | 53.2 | 98.6 | 56.8 | 64.2 | 67.2 | 87.6 | 118.2 | 107.8 | 73.4 | 93.2 | |
| Days with rain | 17 | 17 | 19 | 18 | 18 | 17 | 16 | 17 | 19 | 25 | 22 | 19 | 223 |
| Snowfall (cm) | 46.9 | 28.4 | 19.1 | 6.4 | т | т | 0.0 | 0.0 | 0.0 | 0.4 | 10.9 | 30.4 | 142.6 |
| Extreme daily snowfall | 39.9 | 25.6 | 19.8 | 10.4 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 19.8 | 29.5 | |
| Days with snow | 8 | 5 | 5 | 2 | * | 0 | 0 | 0 | 0 | * | 3 | 6 | 29 |
| Days with precipitation | 21 | 19 | 21 | 19 | 18 | 17 | 16 | 17 | 19 | 25 | 23 | 22 | 236 |
| Sunshine (hours) | 42.6 | 64.7 | 97.0 | 139.5 | 175.0 | 154.5 | 141.4 | 141.6 | 106.1 | 67.6 | 48.3 | 33.5 | 1211.8 |
| Wind (knots) | | | | | | | | | | | | | |
| Speed | 8 | 9 | 8 | 9 | 8 | 6 | 5 | 5 | 6 | 9 | 9 | 8 | 8 |
| Most frequent direction | SE | SE | SE | SE | SE | w | w | SE | SE | SE | SE | SE | SE |
| Maximum hourly speed | 48 | 40 | 38 | 40 | 35 | 30 | 35 | 26 | 40 | 50 | 48 | 47 | |
| Direction | s | s | SE | s | SE | SE | SE | SE | s | SE | SE | s | |
| Maximum gust speed | 62 | 61 | 61 | 59 | 52 | 41 | 35 | 35 | 52 | 73 | 74 | 72 | |
| Direction | s | s | SE | s | SE | s | s | SE | s | s | SE | s | |

Prince Rupert 54°18'N 130°26'W 1961 to 1990

* = Average of less than one but greater than zero

T = Trace

APPENDICES

| | Observ | Percentage of observations when fog was present | | | | | | | | | | | | |
|------------------------------------|---------|---|------|------|------|------|------|------|------|------|------|------|------|------|
| Station | Years | No. Per Day | Jan | Feb | Mar | Apr | Мау | June | July | Aug | Sept | Oct | Nov | Dec |
| Cape St. James 51°56'N 131°01'W | 1953-80 | 24 | 22.3 | 24.1 | 16.8 | 16.1 | 14.9 | 18.6 | 21.5 | 20.5 | 23.3 | 26.3 | 19.5 | 24.3 |
| Cape Scott 50°47'N 128°26'W | 1966-81 | 8 | 12.3 | 11.1 | 11.8 | 10.6 | 12.3 | 14.7 | 19.3 | 24.7 | 20.0 | 17.7 | 13.4 | 14.4 |
| Mcinnes Island 52°16'N 128°43'W | 1955-80 | 6 | 6.9 | 5.2 | 4.7 | 5.0 | 5.6 | 7.1 | 9.4 | 13.9 | 13.7 | 10.5 | 7.6 | 6.6 |
| Prince Rupert 54°17'N 130°23'W | 1961-80 | 24 | 11.5 | 11.4 | 10.6 | 10.8 | 7.8 | 12.8 | 16.8 | 20.6 | 17.9 | 13.5 | 10.3 | 12.4 |
| Triple Islands 54°18'N 130°53'W | 1953-67 | 4 | 1.2 | 1.8 | 0.9 | 1.2 | 2.6 | 5.2 | 7.1 | 8.5 | 6.9 | 1.3 | 0.9 | 1.6 |

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Aaltanhash Inlet, C2/P286 Aaltanhash River, C2/P286 Abrupt Point, C1/P85 Active Islet, C1/P603 Ada Cove, C1/P420 Ada Islands, C2/P599 Adams Harbour, C4/P46 Ada Rock, C1/P49 Ada Shoal, C2/P55 Addenbroke Island, C1/P211 Addenbroke Point, C1/P166 Adelaide Point, C1/P111 Admiral Group, C4/P157 Adze Point, C2/P204 Agnes Point, C2/P85 Agnew Bank, C3/P210 Agnew Islet, C4/P218 Ahclakerho Channel, C1/P104 Ahclakerho Islands, C1/P104 Airacobra Rock, C4/P92 Alan Reach, C2/P372 Alarm Cove, C1/P427 Albert Islet, C1/P514 Aldrich Point, C2/P28 Alec Islet, C2/P118 Alert Island, C1/P427 Alexander Inlet, C2/P255 Alexandra Bank, C3/P138 Alexandra Passage, C1/P39 Alford Reefs, C3/P330 Algerine Island, C1/P492 Alice Island, C3/P155 Allard Bay, C1/P162 Allen Point, C2/P377 Alleyne Island, C4/P185 Amos Passage, C2/P449 Amy Point, C2/P323 Anchor Bight, C1/P84 Anchor Cone, C2/P505 Anchor Cove, C1/P103 Anchor Islets, C1/P84 Anchor Shoal, C3/P461 Anderson Point, C2/P401 Angle Bay, C1/P81 Angler Cove, C2/P317 Angle Rock, C3/P106 Anian Island, C3/P368 Anne, Cape, C1/P102 Anne Islands, C4/P132 Ann Island, C1/P40 Anthony Point, C1/P485 Archibald Islands, C3/P67 Archibald Point, C1/P427 Ardmillan Bay, C1/P600 Ark Island, C1/P612 Armour Rock, C3/P334 Armstrong Rock, C1/P40 Arthur Island (Edye Passage), C3/P116 Arthur Island (Mathieson Channel), C2/P126 Arthur Passage, C2/P566 Arthur Point, C1/P209 Arthur Rock, C3/P355 Asher Point, C2/P283 Ashton, Point, C2/P429 Athabaskan Island, C4/P175 Athlone Island, C2/P40 Atkins Bay, C2/P455

Atli Point, C1/P460 Aurelia Rock, C2/P78 Auriol Point, C3/P351 Avery Island, C3/P78

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