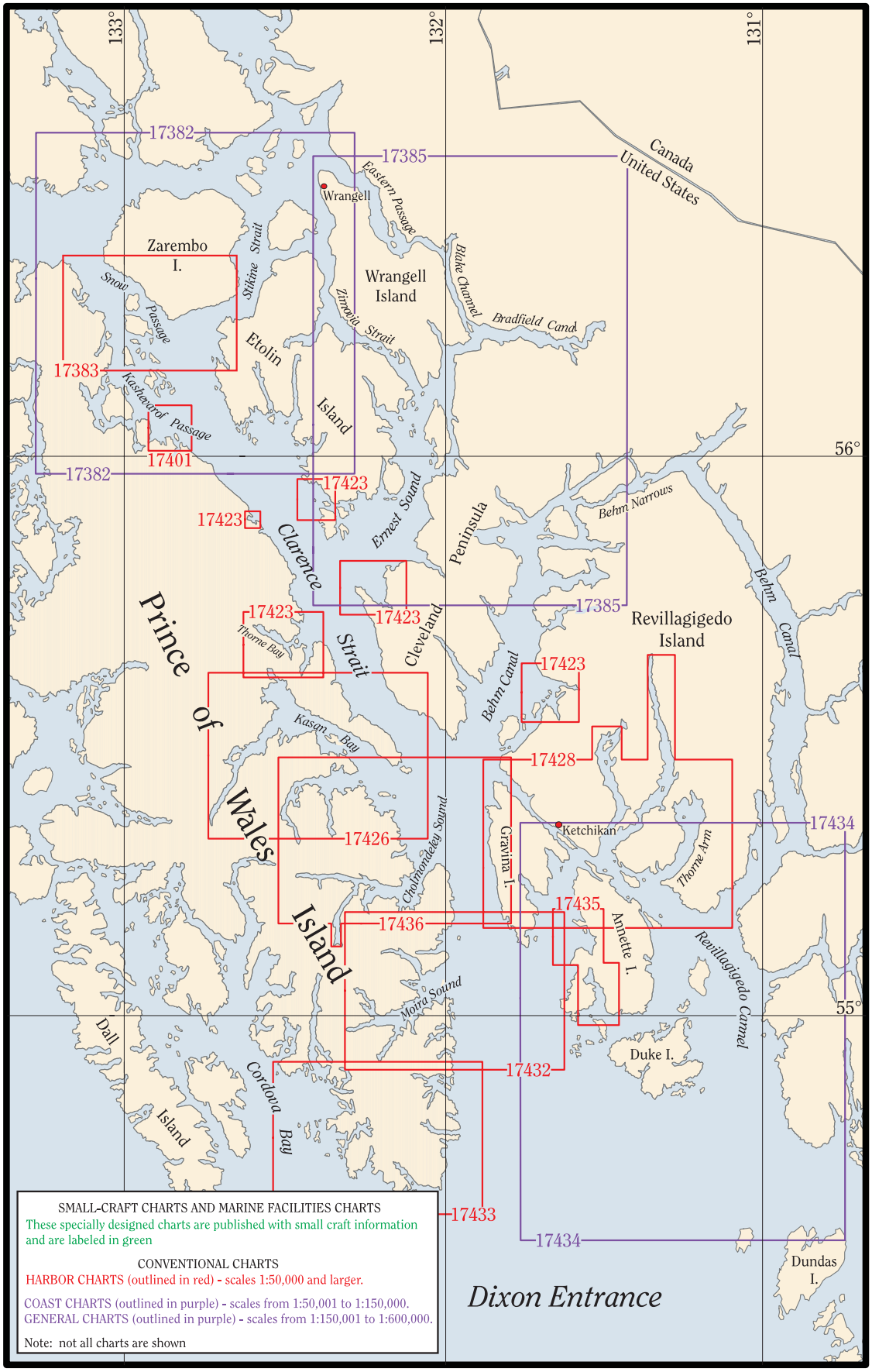
133°
132°
131°
56°
55°
17382
17385
Canada
United States
Wrangell
Eastern Passage
Zarembo I.
Snow Passage
Sitkine Strait
Wrangell Island
Blake Channel
Bradfield Canal
Zimovia Strait
Etolin Island
17383
Kashevarof Passage
17401
17382
17423
17423
Ernest Sound
Clarence Strait
Peninsula
Behm Narrows
17385
17423
17423
Cleveland
Revillagigedo Island
Behm Canal
Behm Canal
Prince of Wales Island
Thorne Bay
17423
Kasan Bay
17428
Ketchikan
17434
Chalmondeley Sound
17426
Gravina I.
Thorne Arm
17435
17436
Annette I.
Revillagigedo Channel
Moira Sound
Duke I.
Dall Island
Cordova Bay
17432
17433
17434
Dundas I.
Dixon Entrance
SMALL-CRAFT CHARTS AND MARINE FACILITIES CHARTS
These specially designed charts are published with small craft information and are labeled in green
CONVENTIONAL CHARTS
HARBOR CHARTS (outlined in red) - scales 1:50,000 and larger.
COAST CHARTS (outlined in purple) - scales from 1:50,001 to 1:150,000.
GENERAL CHARTS (outlined in purple) - scales from 1:150,001 to 1:600,000.
Note: not all charts are shown

Clarence Strait, Dixon Entrance to Wrangell

(1) This chapter describes Clarence Strait and the subsidiary channels to Sumner Strait and Wrangell. Also described are the numerous tributaries, islands, islets, towns, and villages related to these waterways. Preferred passages through these waterways are discussed.

Charts 17420, 17360

(2) **Clarence Strait** extends in a N direction from Dixon Entrance for 45 miles to Guard Islands and the W entrance to Tongass Narrows and Behm Canal, and thence in a NW direction for 67 miles to Sumner Strait. From its S entrance to Zarembo Island, a distance of about 100 miles, the channel is broad and comparatively free from dangers. At Zarembo Island the strait divides. The channel E of the island, called Stikine Strait, is the route taken by vessels to Wrangell and Wrangell Narrows; that W of the island, called Snow Passage, is used by vessels bound to Wrangell Narrows or W through Sumner Strait because it is more direct.

(3) Passage through Clarence Strait and subsidiary channels to Sumner Strait and Wrangell is described in the following order: W shore, Cape Chacon to Kasaan Bay; E shore, including Felice Strait and Nichols Passage, to Vallenar Point; Kasaan Bay and N to Kashevarof Passage; Snow Passage, Ernest Sound and Zimovia Strait; Blake Channel and Eastern Passage; and Stikine Strait to Wrangell.

(4) **Voluntary vessel traffic procedures** have been adopted for gillnet vessels and deep-draft vessels transiting the N section of Clarence Strait, Snow Passage, and Sumner Strait in the vicinity of Point Baker. Traffic lanes, about 0.2 mile wide, have been established for these areas as follows:

(5) **328°** from a point in Clarence Strait abeam of Point Stanhope in about 55°59.4'N., 132°39.8'W. to about 56°09.3'N., 132°50.8'W., thence;

(6) **333°** to a point about 56°15.9'N., 132°57.0'W., thence around the E side of Bushy Island to about 56°17.2'N., 132°58.0'W., thence;

(7) **299°** to a point about 56°18.6'N., 133°04.9'W., thence;

(8) **315°** to a point about 56°21.0'N., 133°09.5'W., thence;

(9) **277°** to a point about 56°23.0'N., 133°38.7'W., thence around Point Baker, about midway between Helm Rock and Mariposa Reef to a point about 56°22.5'N., 133°39.9'W., thence;

(10) **204°** to a point abeam of Calder Rocks in about 56°15.1'N., 133°45.7'W.

(11) Cruise ships, ferry vessels, and other deep-draft vessels are requested to observe the following practices:

(12) 1. Announce your presence 30-45 minutes prior to entering the area and at regular intervals while transiting through the area.

(13) 2. Avoid meeting and do not overtake vessels in Snow Passage.

(14) 3. Travel along indicated tracklines as much as possible and maintain a safe speed.

(15) Gillnet vessels should:

(16) 1. Adequately mark the net end with lights and radar reflectors.

(17) 2. Monitor VHF-FM channels 13 and 16 and listen for broadcasts by deep-draft vessels in the area.

(18) 3. Provide for two-way traffic of large vessels along the designated tracklines.

(19) 4. Warn other gillnetters if they appear to be in the lane when there is commercial vessel traffic approaching.

(20) 5. Do not place sleep sets within or adjacent to the shipping lane.

Currents

(21) The current has a maximum velocity of 4 knots in Clarence Strait from the S entrance to the vicinity of Zarembo Island. At Cape Chacon, the flood current sets NE around the cape and the ebb SW. S of the line of Cape Chacon the tidal currents are much confused.

(22) In general the currents in the strait set directly in and out during flood and ebb, except in the vicinity of the entrances to the tributaries, where a slight set across the channel may be experienced setting to or from them, especially the large tributaries; and along the shores of the strait where the current is either slack

or there is a small countercurrent. The most noticeable of these countercurrents is at Dewey Anchorage and among the islands at Onslow Point, where it has considerable velocity, from 2 to 3 knots, and sets directly opposite in direction to the current in the strait. This countercurrent meets the main current at the entrance of the large bay E of Point Stanhope, and is confined to the bay and the immediate vicinity of the shore SE. (See the Tidal Current Tables for daily predictions of places in Clarence Strait.)

Weather

(23) The orientation of Clarence Strait and its proximity to the continent influence its weather. The strait is exposed to the strong southeasterlies of fall and early winter, although shelter may be found in several bays and inlets. Winter gales may also blow down the strait from the NW. Williwaws blow in many of the anchorages that are off the strait. While these waters are often sheltered from the summer advection fog, they are susceptible to winter radiation fogs. The S part of the strait is more exposed here, poor visibilities are most likely in late summer and early fall.

Chart 17433

(24) **Cape Chacon** (54°41.5'N., 132°00.9'W.) has been described in Chapter 4.

(25) From Cape Chacon to Stone Rock Bay, the shoreline is rocky and the bottom irregular. Temporary anchorage may be obtained 0.5 mile offshore about 1.5 miles N from the cape in depths of 18 to 20 fathoms (33 to 36 m). A 2-fathom (3.7 m) shoal is about 2.3 miles NNE from the cape, and about 900 yards (823 m) offshore from **Huaji Cliff**.

(26) **Stone Rock**, gray-colored and bare, is 3.5 miles NNE of Cape Chacon. Rocks awash and unmarked shoals are within 0.4 mile of Stone Rock.

(27) **Stone Rock Bay**, about 4.5 miles N from Cape Chacon, is an open bight with deep water and irregular bottom. Foul ground extends off the entrance points, and there is a 5¼-fathom (9.6 m) shoal midway in the entrance. Small fishing craft anchor close to shore, but the use of the bay as an anchorage is not recommended.

(28) **Mallard Bay** is about 5 miles N from Cape Chacon. Foul ground extends about 0.6 mile offshore from the point separating Stone Rock Bay and Mallard Bay.

(29) Fair weather anchorage may be had near the head of the bay in 15 fathoms (27.5 m), sandy bottom, with about 0.1 mile swinging room. Favor the N shore of the bay when entering. The channel between the shoals making out from the N and S shores is narrow.

(30) **McLean Arm** is a narrow inlet about 6.5 miles above Cape Chacon. **McLean Point**, the S entrance point, is marked by **McLean Point Light** (54°47'30"N., 131°57'24"W.), 58 feet (17.7 m) above the water and shown from a skeleton tower with a red and white diamond-shaped daymark. The point is low but at a short distance back rises to a dome-shaped hill. **Island Point**, the N entrance point, is a wooded island close to the main shore. A bare rock, 22 feet (6.7 m) high, is 100 yards (91 m) S of the point.

(31) The head of the arm has two branches. The W and larger branch affords anchorage in its widest part in 20 fathoms (36 m), sticky bottom, with swinging room for small vessels. A flat extends 0.1 mile from the head of this branch. Anchorage can be selected in about 17 fathoms (31 m) at the entrance to the north branch, however it is less desirable, and care must be taken to avoid a ledge that bares, and extends about 250 yards (229 m) E from the point dividing the two branches. Large vessels can anchor at the head of the main arm in 28 to 30 fathoms (51 to 55 m), irregular rocky bottom. A midchannel course will lead safely to the anchorage. The williwaws come down from the adjacent mountains with considerable force. A small craft anchorage is close under the S shore about 3.2 miles inside the entrance. Water can be obtained from several streams.

(32) **Gardner Bay**, about 8 miles N from Cape Chacon, affords good anchorage, but its narrow entrance restricts its use to small vessels only. The N entrance point is a bold, light-colored, rocky point with timber on top. A breaker close to the point and one in the bight W of the point frequently show. A group of small wooded islands with rocks awash off the SE end is about 0.1 mile off the S entrance point.

(33) A group of islands choke the entrance to the inner bay. The channel N of the islands is narrow and crooked; its use is not recommended. The channel S is about 100 feet (30.5 m) wide and has a least depth of 8 fathoms (14.6). About midway between the islands off the point and those in the entrance is a 1½ -fathom (2.7 m) spot marked by kelp. Water may be obtained from several streams.

(34) Fishing vessels and small craft frequently use the channel S of the outer islands and rocks. Midchannel courses suffice. Caution should be exercised when entering, because the dangers are unmarked. Anchorage in 13 fathoms (24 m), mud bottom, can be had in the basin at the head of the bay. The points at the entrance to the basin should be given a berth of about 150 yards (137 m).

(35) **Kendrick Bay** is about 10 miles above Cape Chacon. Except for a reef in the middle of the bay 2 miles inside the entrance, and 7½- and 10-fathom (13.8 and 18.3 m) spots, 500 yards (457 m) N and 0.5 mile SE,

respectively, from the reef; it is free of off-lying dangers until near its head.

(36) Three arms lead S and W from Kendrick Bay. **South Arm** is clear, and, near its head, affords good anchorage for small craft. **Short Arm** is clear of off-lying dangers except for an 8-fathom (14.6 m) spot in the center of the arm, about 0.6 mile inside the entrance, and submerged rocks, about 0.3 mile from the head. **West Arm** is foul for a distance of 0.5 mile inside the entrance and should be entered preferably at low water. Enter S of the islets and proceed with caution. Good anchorage for small craft can be had near the head of the arm; however, during the colder winter months this area has ice and cannot be used as an anchorage.

(37) **Kendrick Islands**, on the N side of the entrance to Kendrick Bay, are a group of about 20 islands varying in size, and for the most part wooded. Foul ground extends about 0.7 mile SE of the main islands of the group. Small craft with local knowledge can enter Kendrick Bay from N by passing N of all the islands, between them and the main shore. Good anchorage and shelter for small craft can be found among the islands.

Local magnetic disturbance

(38) Differences of as much as 4° from normal variation have been observed N of the Kendrick Islands.

(39) The N point of Kendrick Bay rises rather sharply to a flat-topped peak, forming a headland that shows prominently from points along the W side of the strait.

(40) The shoreline from the N entrance point of Kendrick Bay to Hidden Bay (chart 17432), a distance of about 2.2 miles, is very broken. Rocks are offshore from 0.2 to 0.4 mile.

Chart 17432

(41) An inlet (54°55.3'N., 132°58.7'W.), 0.6 mile long in a NW direction and about 0.1 mile wide, is about 1.2 miles above the N entrance point of Kendrick Bay. The channel is narrow and has general depths of 3 to 6 fathoms (5.5 to 11.0 m), except in the narrow part, where they range from 2 to 4 fathoms (3.7 to 7.3 m). A rock covered 3¼ -fathoms (5.9 m) is 0.3 mile offshore in line with the S shore of the inlet, while rocks, awash, are 0.3 mile to the E of the N point of the entrance.

(42) **Hidden Bay** (54°56.4'N., 131°58.7'W.) indents the W shore of Clarence Strait about 15 miles N of Cape Chacon. The entrance is less than 100 yards (91 m) wide and is N of a group of rocky islets. A submerged rock covered 3¾ fathoms (6.9 m) and rocks awash are off the entrance. The largest island of the group, 200 feet (61 m) high, is to the S. The S entrance point at the first narrows rises to a rounding hill 260 feet (79 m) high. The N entrance point is low, with a little knob near the extremity. A depth of 1 fathom (1.8 m) is in the entrance to the first narrows, and rocks are close to its S shore. Depths of 5 to 21 fathoms (9.1 to 38) were obtained in the first cove. A rock is 50 yards (46 m) off the E entrance point of the second narrows. Depths in the second narrows range from 1 to 6 fathoms (1.8 to 11.0 m) and ledges project from the SE shore. Depths in the inner cove range from 4 to 18 fathoms (7.3 to 33 m).

(43) A stranger entering for the first time should select low-water slack when the reefs outside and the rocks in the entrance will be showing. The currents in the narrow part of the entrance are strong. Small craft may, with care, work their way to the entrance from the S back of the islands. The bay is suitable for small craft only.

(44) **Scott Point**, about 1 mile N of Hidden Bay, is a round point with an abrupt shoreline characterized by large gray ledges. It rises rapidly to a peak.

(45) **Ingraham Bay** is about 1.2 miles NW from Scott Point. Rocks, usually marked by kelp, extend about 200 yards (183 m) off the entrance points. The entrance to Ingraham Bay is best approached from the E in midchannel, between the S entrance point and the E end of the two groups of islets in the middle of the entrance. A depth of about 20 fathoms (36 m) can be carried to the head of the main bay and to an anchorage with sand and gravel bottom. The channel N of the inner group of islets is very narrow and should not be used.

(46) The bay has two arms and is about 3.5 miles long to the head of the S arm. The N arm starts about 0.8 mile within the entrance and is about 1.5 miles long.

(47) To enter the N arm, pass S of the two groups of rocky islets off its entrance. A narrow channel extends into the N arm. A shoal with a depth of 3¼ fathoms (5.9 m) extends from the W shore to the middle of the channel.

(48) The controlling depth in the narrows is 6 fathoms (11.0 m). Follow the trend of the channel leaving the small islet in the second narrows to the S and anchor in 10 fathoms (18.3 m), mud and sand bottom, in the bight at the head of the arm. This arm is suitable for small craft only.

(49) To enter the S arm, the small wooded islet, 200 yards (183 m) N of the long, wooded tongue that marks the SE point of the entrance to this arm, is left about 100 yards (91 m) to the S. The channel leads between this islet and the long reef, 200 yards (183 m) to the W, that parallels the shore.

(50) The S arm is characterized by numerous rocks and reefs; the controlling depth in the entrance is 3 fathoms (5.5 m). With local knowledge 4 fathoms (7.3 m)

may be carried to the head where anchorage may be found for small craft in depths of 2 to 10 fathoms (3.7 to 18.3 m), with excellent holding ground in mud bottom. The chart should be the guide.

(51) **Ingraham Point**, the NW entrance point of Ingraham Bay, is low and wooded for a distance of 0.6 mile from the point where it commences a sharp rise to a wooded ridge. The shoreline to Polk Island is rocky and foul.

(52) **Polk Island** is about 1.3 miles N of Ingraham Point. A reef, bare at half tide, is midway in the channel between the island and the Prince of Wales Island shore. The N end of the channel is obstructed by rocks and islets. There is a controlling depth of 2 fathoms (3.6 m) in the narrow crooked section at the NE end. Small craft with local knowledge can work their way through.

(53) A small rocky islet with a prominent tree is close to the SE end of Polk Island. It is noticeable from the N or S, for a distance of 2 miles.

(54) **Chichagof Bay** is about 2.5 miles N from Ingraham Point. It is about 0.3 mile in length and width, and has varying depths from 2¾ fathoms (5.0 m) in the entrance to 4 fathoms (7.3 m) near the shore. A reef extends 0.1 mile in a N direction from the S shore, 0.2 mile from the entrance point. A narrow inlet, with depths of 4 to 7 fathoms (7.3 to 13 m), extends 0.3 mile in a S direction from the SW corner of the bay. A depth of 1 fathom (1.8 m) is in the middle of the entrance to the inlet.

(55) **Rip Point**, about 3.2 miles N from Ingraham Point, is low for about 1 mile back from the shore, then rises steeply to a long ridge. There is a small wooded knob about 250 feet (76 m) high in the center of the flat area and several hummocks with an elevation of 200 feet (61 m) or less. Foul ground extends 0.3 mile SE from the point.

(56) **Sun Rocks**, the two most prominent rocks in this area, about 100 yards (91 m) long, 20 yards (18 m) wide, and 15 feet (4.6 m) high, are about 0.2 mile SE from Rip Point. Tide rips extend 0.8 mile off Sun Rocks and Rip Point during a SE wind and ebb tide.

(57) A small cove is 0.3 mile SW from Rip Point. Rocks are on both sides of the entrance about 50 yards (46 m) offshore. A rock is about 50 yards (46 m) off the middle of the NW shore. Depths in the middle of the cove range from 9 to 21 fathoms (16.4 to 38 m); small-craft anchorage in 5 to 6 fathoms (9.1 to 11.0 m), fine sand bottom, may be had in the arm that extends S from the center of the cove.

(58) **Moira Sound** indents the W shore of Clarence Strait, about 25 miles N of Cape Chacon; it is 4.5 miles wide between Rip Point and Adams Point. **Adams Point** (55°06.7'N., 131°59.7'W.), the N entrance point, is low and wooded. Near the extremity is a knob about 350 feet (106 m) high. Rocks extend about 0.2 mile off the E shore of the point. The general direction of the sound is SW, and within the entrance it divides into three separate arms.

(59) **South Arm** extends about 5 miles to the S and has numerous reefs that uncover at low water. Favor the E shore in entering. The S end of the arm affords good all-weather anchorage in about 6 fathoms (11.0 m). **West Arm** has a length of 2.2 miles and then divides into two short arms, the N, known as **Dickman Bay**, the S as **Frederick Cove**. **Johnson Cove** is about 2 miles long and indents the S shore of the sound about 2 miles S of **Black Point** (55°02.3'N., 132°05.2'W.). The chart is the guide.

(60) **Moira Rock Light** (55º04'58"N., 131º59'54"W.), 40 feet (12.2 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the highest part of Moira Rock, the northernmost of a chain of islands that stretch from Rip Point towards Adams Point. A rock with 6 fathoms (11.0 m) over it is 1 mile ENE of Moira Rock. **Moira Island**, 0.6 mile long and wooded, is about 0.9 mile to the SSW of Moira Rock. The channel between Moira Rock and Adams Point has depths ranging from about 26 to 189 fathoms (47 to 346 m).

(61) A small islet is about 0.2 mile ENE of the N end of Moira Island. Kelp and rocks are in the channel between them. A group of rocks, awash and marked by kelp, is midway between Moira Rock and Moira Island. Deep water surrounds these rocks; the channel between them and Moira Rock is clear.

(62) **Kegan Cove** is about 2.8 miles SW of Black Point. The outer cove has a fair anchorage in about 6 to 15 fathoms (11.0 to 27.5 m), rocky bottom. The inner cove has an entrance 50 yards (46 m) wide and can be entered by boats drawing 5 feet (1.5 m), on the upper half of the tide. The W shoreline should be favored when entering. Excellent shelter and anchorage in 6¾ fathoms (12.3 m), mud bottom, can be had inside. **Kegan Creek**, outlet from **Kegan Lake**, flows into the head of the cove. A marker on the E side of the stream indicates the end of a trail paralleling the creek to the shore of the lower part of the lake.

(63) **Whiterock Island**, about 0.3 mile SE of Moira Island, is irregular in shape and wooded. A large grayish-white, conical-shaped rock is on the SE side of Whiterock Island. S is a smaller rock with the same general features. The small cove on the NW shore of Whiterock Island is foul. Midway between the S ends of Moira and Whiterock Islands is a reef that uncovers 11 feet (3.4 m). A clear channel, about 250 yards (229 m) wide, favoring Moira Island, is W of this reef. The channel between Whiterock Island and the reef is foul. Foul ground extends off the N and E shores of Whiterock

Island for about 0.2 mile and off the S shore for about 0.5 mile.

Chart 17432

(64) **Menefee Anchorage**, about 1 mile W from Rip Point (55°02.2'N., 131°58.7'W.), is much used by fishing craft, but is not suitable for large vessels. Anchorage may be had in about 15 fathoms (27.5 m), mud and rock bottom, with 200 yards (183 m) swinging room. By following the shoreline from Rip Point at a distance of 0.2 to 0.3 mile, a clear channel may be carried to the anchorage. A small cove in the S part of the anchorage, with depths of 25 fathoms (45 m) in the center and shoal water near the E shore, is entered W of the midchannel islet.

(65) **Menefee Islands**, about 1.3 miles W of Rip Point, are two large wooded islands. A narrow ledge and small rocky islets project about 250 yards (229 m) from the N shore of the W and larger island. A group of three large islets and several smaller ones, covering an area about 0.9 mile long in a SW direction, is about 0.5 mile NW of the larger Menefee Island. Foul ground extends 300 yards (274 m) SE of the NE islands. The channel between these islands and the Menefee group is obstructed at the NE end by an islet, and at the SW end by a midchannel rock that is awash at low water.

(66) A bight is about 1.5 miles to the W of Menefee Anchorage. In the center of the bight is a rock, awash at high water. A bank with a least depth of 3 fathoms (5.5 m) is about 0.2 mile W from the rock. There are numerous rocks and islets along the S shores. The small cove on the NE shore of the bight might furnish anchorage for small vessels in 10 to 13 fathoms (18.3 to 24 m).

(67) **Egg Islands** are a group of wooded islands on the NW side of the entrance to Moira Sound, about 2.8 miles SW of Moira Rock.

(68) **Niblack Anchorage**, just W of the Egg Islands, affords good protection in depths of 6 to 20 fathoms (11.0 to 36 m), mud bottom. **Clare Island** is on the N side of the entrance to Niblack Anchorage. **Safety Rock,** grass covered and about 15 feet (4.6 m) high, is in midentrance. A ledge that uncovers 5 feet (1.5 m) is 400 yards (366 m) S of Clare Island and 250 yards (229 m) off the S shore. A rock, covered 9 feet (2.7 m), is 0.5 mile from the head of the anchorage and 0.1 mile from the S shore. Vessels entering Niblack Anchorage usually pass N of Moira Rock, Safety Rock, and the ledge S of Clare Island near the S shore of the anchorage.

(69) From Adams Point to **Point Halliday**, the N point of the entrance to North Arm, the shoreline is broken and there are many rocks close to shore. A 5-foot (1.5 m) spot is about 0.4 mile E from Point Halliday. A shoal making S from Point Halliday has a depth of 3½ fathoms (6.4 m) about 0.25 mile off the point.

(70) **North Arm**, about 4 miles long and 0.3 mile wide at the entrance, is in the NW side of Moira Sound about 2.8 miles W of Moira Rock. There is a 3¾-fathom (6.9 m) spot in the center of the entrance about 0.3 mile S of Point Halliday. A secure anchorage can be found inside near the E shore, in the cove about 1 mile from the entrance directly S of the small cedar-covered island, in 6 to 10 fathoms (11.0 to 18.3 m), mud bottom. There is a rock awash near the middle of the cove.

(71) **Deichman Island**, 2 miles inside the entrance of North Arm, has foul ground between it and the E shore, and foul ground extends about 400 yards (366 m) SE and 300 yards (274 m) S from it. In passing beyond Deichman Island, the S shore should be favored until past **Beck Rock**, about 700 yards (640 m) to the W, which uncovers 12 feet (3.6 m). Then a midchannel course will pass 200 yards (183 m) NE of **Cannery Rock**, about 0.8 mile WNW of Beck Rock, which uncovers 9 feet (2.7 m).

(72) At the head, North Arm divides into two fingers. The N finger, **Nowiskay Cove**, affords good small-craft anchorage in about 8 fathoms (14.6). The W finger extends to **Clarno Cove** and **Aiken Cove**. Craft entering this finger should favor the S shore, taking care to avoid the rock awash that is 240 yards (219 m) SE of the small islet off the N point at the entrance. By passing about 50 yards (46 m) off the S beach, a least depth of 10¼ fathoms (18.7 m) can be carried into Clarno Cove, where good all-weather anchorage is available in about 12 fathoms (22 m), soft mud bottom.

(73) The small unnamed bay S of Clarno Cove is entered by a narrow, crooked channel with a least depth of 1 fathom (1.8 m), between ledges that extend out from both shores. The middle of this bay provides excellent anchorage in about 4 fathoms (7.3 m).

(74) From Clarno Cove a narrow channel continues W into Aiken Cove, which is shoal and mostly bare except for a small area near the mouth where an anchorage can be found in about 9 fathoms (16.4 m). Favor the N shore in entering from Clarno Cove.

(75) **Cannery Cove**, just NW of **Cannery Point** (55°06.7'N., 132°08.3'W.), affords good anchorage in 13 fathoms (24 m), and the small bight on the NW side of the cove has small-craft anchorage in 1½ fathoms (2.7 m).

(76) **Port Johnson**, a narrow deep inlet, that extends about 3.5 miles in a W direction, is on the W side of Clarence Strait, between Adams Point and Wedge Islands. From the entrance, midchannel courses hold good. There is good anchorage in 15 fathoms (27.5 m) about 2.4 miles above the entrance. Water is available from a stream on the N shore about 0.2 mile below the head of

the inlet. Anchorage in about 11 to 14 fathoms (20.1 to 25.5 m), but with limited swinging room, is at the head, and from this shore a trail through a divide leads to North Arm of Moira Sound.

(77) **Scraggy Point** and **Inner Point,** on the N and S sides, respectively, at the entrance to Port Johnson, present no characteristics of interest to the navigator.

(78) **Dolomi Bay** is a small arm on the N side of Port Johnson, about 1.3 miles W of Inner Point. The cove on the W side and near the head of the bay has a rock, covered 5 feet (1.5 m), near its center. Dolomi Bay is very restricted; the chart is the best guide.

(79) **Paul Lake**, about 0.9 mile NNW of Dolomi Bay, has a high prominent mountain near its head. The summit is grass covered, the slopes are uniform, and it is not often clouded.

(80) **French Harbor** and **Dutch Harbor** are locally known small-boat anchorages behind Wedge Islands, 2 miles NE of the entrance to Port Johnson. They do not furnish good anchorages for strangers, and the approaches are rocky.

(81) **Wedge Islands** are a group of low islands and rocks 2 miles NE of the entrance to Port Johnson. From the larger island, rocks, bare and awash, extend for about 0.6 mile to the S; shoal and irregular bottom extends about 1 mile to the SW. A 2-fathom (3.7 m) spot is 1 mile to the SSW of this island. Rocks awash, marked by kelp, are 0.5 mile NW from the N end of the larger island. A submerged rock with a least depth of 3 feet (0.9 m) and marked by kelp is 0.2 mile N of these rocks. A shoal with 7½ fathoms (13.7 m) over it is 0.8 mile to the N of the N end of large Wedge Island. A channel 0.3 to 0.5 mile wide, with a least midchannel depth of 30 fathoms (55 m), is about 0.6 mile W of large Wedge Island; its direction is **030°**. This course is within 0.2 mile of dangerous shoals on either side, and those without local knowledge should not attempt to use the channel.

(82) Foul ground extends 0.3 to 0.5 mile offshore, to the point 4 miles N of Port Johnson. From this point to Windy Point, a distance of 2 miles, foul ground extends 200 yards (183 m) offshore.

Charts 17436, 17420

(83) **Windy Point** (55°13.0'N., 131°58.8'W.), low and wooded, is between two small exposed coves with an island close-to on each side. The S cove has midchannel depths of 5 to 9 fathoms (9.1 to 16.4 m) but is foul to the W of the small island and near the N shore. The N cove has midchannel depths of 1¾ to 10 fathoms (3.2 to 18.3 m) but is foul toward the head. Rocks extend off the point for about 240 yards (219 m).

(84) From **Scraggy Point** (55°07.6'N., 132°02.0'W.), the N entrance point to Port Johnson, to Chasina Point, which is the point about 4.5 miles N from Windy Point, the land is thickly wooded and slopes gently for about 0.2 mile from the shore and then rises quickly to a ridge. Two small exposed coves are midway between Windy Point and Chasina Point. Midchannel depths in the SE cove range from 5 to 10 fathoms (9.1 to 18.3 m), shoaling to 4 fathoms near the head. The NW cove has depths in the middle of 5 to 14 fathoms (9.1 to 25.5 m); the W bight has depths of 3 to 5 fathoms (5.5 to 9.1 m); the S bight is foul.

(85) Currents in the vicinity of Wedge Islands to Skin Island are stronger on the flood and reach an estimated velocity of 2 knots during spring tides. Moderate tide rips are set up with the wind against the current N of Wedge Island in the vicinity of Windy Point. (See the Tidal Current Tables for daily predictions in this area.)

(86) **Cholmondeley Sound** is a deep inlet entering Prince of Wales Island between Chasina Point and Skin Island. Its extreme length from the entrance of the sound to the head of **West Arm** is about 16 miles; it has several arms, all of which are deep and bold with heavily wooded mountain slopes ending with steep-to rock shorelines. Cholmondeley Sound's tributaries have not been closely surveyed but are generally free from dangers. The currents in the sound are too weak or variable to be predicted.

(87) **Chasina Point**, about 36 miles N of Cape Chacon and the S point of the entrance of Cholmondeley Sound, is a wooded rounded point without any prominent features. The land is low for a distance of about 0.8 mile and then rises rapidly. It is advisable to give the point a berth of at least 0.3 mile in rounding it.

Chart 17436

(88) **Chasina Island** is a low, wooded islet about 0.7 mile WSW from Chasina Point, about 0.1 mile offshore. The passage behind the island is foul. A 1-fathom (1.8 m) spot is midway between Chasina Point and Chasina Island and about 250 yards (229 m) offshore.

(89) **Chasina Anchorage**, to the W of Chasina Island, affords a lee only from E to S winds. Anchorage may be obtained on a rocky patch in about 9 fathoms (16.4 m) with the NW corner of Chasina Island bearing about 042° and Skin Island Light bearing about 338°; swinging room is about 250 yards (229 m). Anchorage in 17 fathoms (31 m), with the light on the same bearing, may be obtained farther offshore.

Charts 17436, 17420

(90) **Skin Island**, 0.8 mile off the NW point of the entrance to Cholmondeley Sound, is wooded, and about 170 feet (52 m) high on the SE side. A reef that uncovers 10 feet (3.0 m) is about 450 yards (411 m) to the SW of the island. A sunken wreck, with less than 11 fathoms (20.1 m) over it and a danger to navigation in this area, is about 200 yards (183 m) SW of the S edge of the reef. A group of small islets is between the reef and Skin Island. A rock, awash at low water, is about 0.1 mile off the point on the W side of the island. **Skin Island Light** (55°18'05"N., 132°04'22"W.), 33 feet (10 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the NE point of the island.

(91) The channel between Skin Island and Prince of Wales Island shore to the W is navigable, but the bottom is very irregular. Passage can be made through the channel without encountering depths of less than 6¾ fathoms (12.3 m), except for a 2½-fathom (4.6 m) patch about 0.85 mile 264° from Skin Island Light. The bight SE of Anderson Point, the S entrance point of Clover Bay, is foul.

(92) **Hump Island**, 3.5 miles inside the entrance to Cholmondeley Sound, about 4 miles SSW of Skin Island, is timbered and about 400 feet (122 m) high, and presents a conical appearance.

(93) **Lancaster Cove**, about 1 mile SE of Hump Island, is the N one of two coves E of an island on the E side of Cholmondeley Sound. It affords good anchorage in 13 to 14 fathoms (24 to 25.5 m). It can be entered on either side of the wooded island in its entrance. A bare rock is 0.1 mile N of the NW end of the island. An islet is close SW of the island, and a rock with a least depth of 3 fathoms (5.5 m) is close E of the island about 55°13'04"N., 132°05'13"W. In 1959, a survey vessel used an anchorage about 150 yards (137 m) S of the wooded island, in 12 to 20 fathoms (22 m to 37 m), mud bottom, good holding ground. There were no dangers in the anchorage or approach.

(94) **Kitkun Bay** has its entrance W of **Babe Islands**, about 6 miles SW of Chasina Point and extends in a general SW direction from the S side of Cholmondeley Sound. The area was surveyed in 1961. Entrance to the N part of the bay should be made through the W of two channels. The least depth in midchannel is 3½ fathoms (6.4 m). Entrance to the S part of the bay can be made through a narrow channel about halfway down the E shore of the N part of the bay. This channel is foul at the entrance; the foul area is marked by kelp. Currents in the channel and near the entrance are very strong, with tide rips near the entrance. The least depth in the narrowest part of the channel is 1½ fathoms (2.7 m).

(95) **Dora Bay,** on the S side, about 7 miles inside the entrance to Cholmondeley Sound, may be used as an anchorage, but is not recommended. There is an irregular ridge, with a least depth of 7¼ fathoms (13.2 m), in the middle of the bay about 1.1 miles inside the entrance.

(96) **Sunny Cove** is on the N side at the head of the main part of Cholmondeley Sound, about 8 miles W of Chasina Anchorage, and with local knowledge affords anchorage for small craft. Vessels entering Sunny Cove should steer midchannel courses. **Sunny Point** is the rounding point on the E side of the entrance to the cove.

(97) The head of Cholmondeley Sound is divided into two arms known as **South Arm** and **West Arm**. West Arm has a straight unbroken N shoreline. Its S shore has two indentations, the first about 1.5 miles above the confluence of the two arms is small but furnishes shelter for small craft with anchor depths of 4 to 8 fathoms (7.3 to 14.6 m). The second indentation in the S shore is SSW of the most E of the chain of small wooded islets. Anchorage with ample swinging room may be had here behind the islet in 7 to 15 fathoms(12.8 to 27.5 m), soft bottom. Enter the small bay from West Arm by keeping W of the islet. Anchorage may also be had in 7 to 15 fathoms (12.8 to 27.5 m), soft bottom, at the head of West Arm. This anchorage is exposed to strong winds drawing through the low pass from Hetta Inlet.

(98) From the head of West Arm a portage trail leads W about 3.5 miles to the head of Hetta Inlet.

(99) **South Arm** is free of off-lying dangers as far as is known. Vessels entering should steer midchannel courses to the head of the arm to anchorage in 6 to 10 fathoms (11.0 to 18.3 m), soft bottom. Strong winds from Klakas Inlet draw through the low pass at the head of South Arm.

(100) All tributaries of Cholmondeley Sound freeze in their upper reaches during the winter.

(101) To enter Cholmondeley Sound, from a position 0.5 mile NW of Chasina Island, vessels should steer **219°** to abeam of Hump Island, then steer midchannel courses to the head of West Arm, passing to the N of the chain of wooded islets.

(102) **Clover Bay** has its 0.2-mile-wide entrance between Clover Point and **Anderson Point**, the S entrance point, about 1.5 miles W of Skin Island. A bare rock is about 120 yards (110 m) N of Anderson Point, and a rock with a depth of ¼ fathom (0.4 m) is in midchannel in the entrance. Safe entry can be made on a course **245°**, passing between the midchannel rock and the rock off Anderson Point. Foul ground extends about 0.2 mile E from Anderson Point. An area, small in extent with a least depth of 1½ fathoms (2.7 m), is about 0.9 mile within the entrance and about 125 yards (114 m) from

the S shore; otherwise depths within the bay range from 7¾ to 41 fathoms (14.1 to 75 m).

(103) The head of the bay is blocked by small islands. A small cove with depths of 12 to 21 fathoms (22.0 to 38 m), except for lesser depths along the edges, is to the N of **King Island**, the largest of the group. A bar with a midchannel depth of 1¾ fathoms (3.2 m) stretches across the entrance to the cove from King Island to the rock off the point on the N shore. A ledge extends 50 yards (46 m) NW of King Island within the cove.

(104) **Clover Point**, a narrow wooded neck of land about 100 feet (30.5 m) high, projects NNE for about 0.6 mile. About 1 mile inshore the land rises to a series of knobs and ridges with higher peaks inland. A bank, small in extent with 6¼ fathoms (11.4 m) over it, is 0.6 mile NE from Clover Point.

(105) The cove to the W of Clover Point is blocked by rocks and islets. The open bight 1 mile NW of Clover Point is deep. A small 2½-fathom (4.5 m) patch is in midentrance. The cove, that is 1.6 miles NW from Clover Point, has depths of 11 to 12 fathoms (20.1 to 22.0 m) until near the head. Rocks extend off the S point of the entrance for 500 yards (457 m), and a rock, that uncovers 3 feet (0.9 m), is in midentrance. A flat area, with depths of 11 to 20 fathoms (20.1 to 36 m), extends about 1.5 miles in a NW direction from the N entrance point of the cove.

Charts 17434, 17435, 17436, 17428

(106) The E shore of Clarence Strait from Dixon Entrance to Vallenar Point, at the W end of Tongass Narrows, is formed by three large islands, Duke, Annette, and Gravina, and a number of smaller islands. Between these islands flow Felice Strait and Nichols Passage which connect Clarence Strait with Revillagigedo Channel.

Chart 17434

(107) **Sealed Passage** is an approach to Felice Strait from Clarence Strait and is between Duke Island on the E and Percy Islands and Hotspur Island on the W. On the SE side of the S end of the passage about 5.2 miles SW of **Point White**, the W extremity of Duke Island, there are numerous rocks, submerged and awash, of which Hassler Reef and the **Bee Rocks** are the outermost.

(108) Duke Island, the rocks to S, and Hassler Reef, about 5.2 miles SW of Point White, have been described in chapter 4.

(109) **Bee Rocks**, about 3.7 miles SW of Point White, is a group of awash and submerged rocks that is marked by kelp. Passage between Bee Rocks and Hassler Reef to the SW, and Point White to the NE, is not recommended without local knowledge.

(110) A shoal with 1¾ fathoms (3.2 m) over it, is about 2.8 miles S of Point White.

(111) **Percy Islands** are a large number of low wooded islands on the NW side of Sealed Passage. The passages between these islands are not navigable except for very small craft with local knowledge. Anchorage can be had either NE or SW of the southernmost island.

Local magnetic disturbance

(112) Differences of as much as 17½° from the normal variation have been observed in the vicinity of the southernmost island at 54°56.0'N., 131°35.5'W.

(113) **Sealing Reef** is a double-headed rock awash about 1 mile ESE from the S extremity of Percy Islands.

(114) A pinnacle rock, not marked by kelp, with a least found depth of 4¾ fathoms (8.7 m), is 1.5 miles ESE from the S extremity of Percy Islands. The depth may be less. A group of rocks, some of which are 6 to 8 feet (1.8 to 2.4 m) high, are 1.5 miles WNW of Point White.

(115) **Hotspur Island**, on the NW side of Sealed Passage NE of Percy Islands, is heavily wooded and has its greatest elevation near the N side.

(116) **Werlick Island**, S of Hotspur Island, is low and heavily wooded.

(117) **Vegas Islands**, 1.2 miles E of the S extremity of Hotspur Island and about 0.5 mile off the Duke Island shore, are 160 feet (49 m) high and heavily wooded. Between them and Duke Island are several rocks.

(118) **Felice Strait** extends from Sealed Passage to Revillagigedo Channel, between Duke Island, Dog Island, Cat Island, and Mary Island on the SE, and Annette Island on the NW. It offers the most direct route for vessels from the S end of Behm Canal, but is little used. There are several dangers, all charted, but those nearest the sailing line are marked or show above water, with the exception of the 1½-fathom (2.7 m) depth on Bostwick Reef in 55°02.3'N., 131°18.8'W. No difficulty should be experienced in making the passage through the strait in daytime and with clear weather.

(119) **Currents** in Felice Strait have considerable strength. At Harris Island they have a maximum velocity of about 4.2 knots, diminishing rapidly at short distances away. Around Snipe Island the currents have a maximum velocity of 4.2 knots. (See the Tidal Current Tables for daily predictions for places in Felice Strait.)

(120) **Percy Point** (54°56.8'N., 131°37.1'W.), the westernmost point of Percy Islands and on the N side of the SW entrance to Sealed Passage, is a small island, 150 feet (46 m) high, with a bold, rocky shore.

(121) From Percy Point NE to Harris Island, the shore is free from dangers except close-to. **Cow Island** is a

small, wooded island 100 feet (30.5 m) high, N of the Percy Island Group. N of Cow Island are two wooded islets; between the islets and Cow Island are two reefs that bare.

(122) **Point Davison** and the W part of Annette Island are low and wooded. There are numerous off-lying islands and reefs for some distance from the main shore. The extremity of Point Davison is a double island with a small wooded patch on it, and is conspicuous only from E or W. **Point Davison Light** (54º59'40"N., 131º36'51"W.), 33 feet (10.1 m) above the water, is shown from a spindle with a red and white diamond-shaped daymark on the outermost of the small islands off the S end of the point.

(123) **Harris Island** is a small wooded island 90 feet (27 m) high NW of Hotspur Island. Along the N shore of this island are considerable quantities of kelp that should be given a berth of at least 150 yards (137 m) in rounding the island. Fair anchorage in 6 to 12 fathoms (11.0 to 22 m), sandy bottom, can be had 0.2 mile NE of Harris Island. A light is on the N end of the island.

(124) A group of wooded islets are 0.2 to 0.8 mile off **Sextant Point**, the first point NE of Point Davison. Foul ground extends about 500 yards (457 m) N and about 700 yards (640 m) S of these islets. Between the islets and Sextant Point is a clear, deep channel, about 400 yards (366 m) wide. The main channel into Felice Strait and Tamgas Harbor passes E of the islets and midway between them and Harris Island.

(125) Foul ground extends for 0.4 mile off **Moss Point**, which is 2 miles NE of Point Davison.

Chart 17435

(126) **Tamgas Harbor** has its entrance about 1.5 miles N of Harris Island. It is a landlocked anchorage suitable for small and moderate-sized craft. The harbor is subject to strong winds in winter. Winds of over 60 knots from NE to S have been experienced when anchored off **Creek Point**. The depths are generally good except near the SW shore, which is shoal.

(127) **Survey Point**, E of the entrance to Tamgas Harbor, is indefinite; both it and the SE section of Annette Island are low and wooded for a distance of 1.5 miles, and then the land rises rapidly to the summit of **Davison Mountain**.

(128) **Ajax Reef**, about 2.5 miles E from Harris Island and about 0.7 mile offshore, extends 0.2 mile in a NE direction and uncovers 12 feet (3.6 m). It is surrounded by kelp. A light is on the S side of the reef on a rock awash at high water.

(129) **Grass Rock**, 0.3 mile off **Grey Point** on the W side of the entrance, is 15 feet (4.6 m) high and grass covered. A rock, bare at low water and marked by kelp, is about 200 yards (183 m) SSE from Grass Rock.

(130) **Mule Rock**, 0.2 mile from the E shore at the entrance, covers at high water; it may be passed on either side. **Tamgas Harbor Entrance Light** (55°01'19"N., 131°30'50"W.), 30 feet (9.1 m) above the water is shown from a small house on a skeleton tower with a red and white diamond-shaped daymark on the rock.

Prominent features

(131) About 1.7 miles NW of Crab Point is a microwave tower (see chart 17434), with red obstruction lights, that is prominent inside Tamgas Harbor. The waterfall at the mouth of the creek at the base of Berry Knoll is visible only at low water. A large prominent rock is on the beach off Tent Point.

Anchorages

(132) The best anchorage is in 6 fathoms (11.0 m) in the middle of the basin, about 0.5 mile N of Crab Point, taking care to avoid the 2½-fathom (4.5 m) spot 0.4 mile NW of the point.

Weather

(133) The climate of Annette is governed by the Gulf of Alaska, topography, and its nearness to the paths of extratropical storms. Its maritime location provides relatively mild temperatures with small daily variations. Periods of subfreezing temperatures seldom exceed 10 days, and a below 0°F reading has occurred only once during the entire period of record. During the summer, while maximums occasionally climb into the 80's, a 90°F reading is unlikely. Storms moving E across the Gulf of Alaska dump frequent and heavy precipitation with annual amounts similar to those along the Washington and Oregon coasts. Precipitation of some sort falls on an average of about 220 days each year, while snow can be expected on 3 to 5 days per month from December through March. Accumulated snow depths of 1 foot (0.3 m) or more are infrequent and, because of moderating temperatures, snow cover seldom persists beyond a week or two. As a result of topography, Annette averages about 65 percent as much precipitation as Ketchikan, just 20 miles to N. Winds blow out of the ESE through SSE. Strong southeasterlies are frequent from October through March with windspeeds attaining 28 knots or more 2 to 4 percent of the time. During summer afternoons, southerlies are common and conditions with windspeeds of 4 to 10 knots, temperatures between 33°F and 89° F, and no precipitation are encountered on about 20 days per month. Thick fogs are infrequent and of short duration. Visibilities of 0.25 miles or less occur on about 15 days each year; conditions are worst

from July through October. (See page T–1 for **Annette Island climatological table**.)

Routes

(134) In entering Tamgas Harbor, pass about 500 yards (457 m) W of Tamgas Harbor Entrance Light and keep the E shore close aboard, distant not over 300 yards (274 m) until about abeam of Tent Point. Then follow a midchannel track into the harbor avoiding the shoals that extend off Crab Point and Yellow Point.

Caution

(135) A shoal, marked by a buoy at its outer extremity, extends about 0.4 mile SE from Deer Point on the W side, 0.8 mile above Grass Rock. Shoals extend 300 yards (274 m) offshore between Tent Point and Crab Point, and 200 yards (183 m) off **Yellow Point**, thus narrowing the channel to a width of about 250 yards (229 m) between these points.

Quarantine, customs, immigration, and agricultural quarantine

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

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

Chart 17434

(138) **Wallace Reef**, 2 miles E from Ajax Reef and about 0.5 mile off the Annette Island shore, has a least depth of ¾ fathom (1.4 m) over it and is surrounded by kelp.

(139) **Snipe Island** is small and is marked by a light. The island is about 10 feet (3.0 m) above the water and has a few grassy patches on the highest part.

(140) **Annette Point**, at the SE extremity of Annette Island, is low and wooded and has deep water close-to.

(141) **Indian Rock**, 2 miles NE of Annette Point and 0.7 mile off Annette Island, is a cluster of rocks about 0.3 mile in diameter, several of which bare at extreme low water and are marked by heavy kelp. A lighted buoy marks the W side of the shoal.

(142) **Bostwick Reef** is 1 mile ENE of Indian Rock; it is of considerable extent, marked by kelp, and has a least found depth of 1½ fathoms (2.7 m) near its northernmost end.

(143) **Ryus Bay** is on the NW side of Duke Island about 1.4 miles E of Vegas Islands. It is easy of access and well-sheltered, and affords excellent anchorage for small craft in 10 fathoms (18.3 m), mud bottom.

(144) **Tamgas Reef**, about 0.8 mile off the N shore of Duke Island appears as a five-headed rock. One head shows about 3 feet (0.9 m) at high water; the others show at various stages of the tide.

(145) **Niquette Harbor**, E of Ryus Bay, is on the NW side of Duke Island and is about 0.3 mile wide at the widest part. It extends about 0.5 mile in a SW direction, narrowing to an inlet that dries, about 0.5 mile long. A submerged rock is 100 yards (91 m) off the E shore of the narrowest part of the entrance to the harbor, and a rock awash is opposite close to the W shore. Favor the W shore in entering. Anchorage for very small craft may be had in 4 to 6 fathoms (7.3 to 11.0 m) in the bight within the entrance. Two rocks, awash, extend about 150 yards (137 m) N from the point on the S side of the W shore of the bight.

(146) **Dog Bay**, about 1.4 miles ENE of Niquette Harbor, is a small open bight with 33 fathoms (60 m) at the entrance, 17 fathoms (31 m) near the head, and 13 to 15 fathoms (24 to 27.5 m) in the SE corner. Rocks are off the E and W shores, as shown on the chart.

(147) **Dog Island**, immediately E of Dog Bay, is heavily wooded and has a rocky shore. Between Dog Island and Cat Island about 1.8 miles to the NE, are Double Islands, Fish Islands, and Village Island.

(148) **Double Islands**, small and wooded, are connected at low water and are surrounded by a considerable area of rocks and reefs that bare.

(149) **Fish Islands**, two in number and surrounded by moderate-sized rocky ledges, are about 150 feet (46 m) high and heavily wooded.

(150) **Village Island** is low with a sand beach on all sides. During the summer, grass grows rankly around the old grave sites and decaying totem poles on the island.

(151) **Pond Bay**, SE of Dog Island between it and Duke Island, affords good anchorage when once inside, but is little used because of the dangerous approach. The entrance from Felice Strait and Dog Bay, W of Dog Island, bares about 2 feet (0.6 m). A 6-fathom (11.0 m) passage leads N of Dog Island into Pond Bay, but it is obstructed by rocks and requires local knowledge to enter safely.

(152) The best approach to Pond Bay is from Revillagigedo Channel through **Cat Passage** between Grave Point and three islets off the SE point of Cat Island. The best water leads about 0.3 mile off Grave Point until up to a reef that extends SW from a small highwater island off the NE point of the entrance to the bay; thence it leads about midchannel. It is advisable for strangers to enter at low water and with caution. Rocks in depths of 4½ and 6 feet (1.4 and 1.8 m) have been reported in the W end of Cat Passage.

(153) **Beaver Creek**, on the W side of Mary Island, is a small creek the entrance to which is not readily discerned at high water. A 2¾-fathom (5.0 m) spot is 0.3 mile to the SW of its entrance, with a rock awash between it and the shore.

(154) **Customhouse Cove** is an indentation in the W side of Mary Island that affords good shelter during SE weather. The anchorage is in the middle of the cove, 300 yards (274 m) from the bare ledges fringing the shore.

(155) **Giant Point**, the N extremity of Mary Island, has reefs that extend 200 yards (183 m) N from it.

(156) **Kwain Bay** and **Crab Bay** are on the E shore of Annette Island opposite Mary Island. The former affords fair anchorage for moderate-sized vessels and has an entrance S of the rocks in the center of the bay. Crab Bay is an excellent anchorage for small craft and is used considerably.

Charts 17432, 17434

(157) **Nichols Passage** is between **Annette Island** on the E and **Gravina Island** on the W, and connects Clarence Strait with the SE end of Tongass Narrows. It offers the shortest route for vessels from Dixon Entrance and the S part of Clarence Strait to Ketchikan. There are several clusters of dangerous rocks in the passage, but they are well marked and easily avoided. The channel generally used by large vessels passes W of Warburton Island and Kelp Rocks. Most small craft when entering or leaving Clarence Strait from the N, or from Moira Sound, use the narrow channel that passes between the Bronaugh Islands and Gravina Island into Nichols Passage.

Currents

(158) Vessels bound to Nichols Passage from points across Clarence Strait should take the current into consideration, for the course is rarely made good. In Nichols Passage the flood sets N with a velocity of 0.7 to 2.8 knots, the greatest strength being felt in the vicinity of Walden Rocks. Currents are considerably influenced by the winds. (See the Tidal Current Tables for predictions for places in Nichols Passage.)

(159) The SW end of Annette Island on the E side of Nichols Passage, from Point Davison to Yellow Hill, is about 200 feet (61 m) high and wooded. The shoreline is irregular and broken by numerous small bights, islands, and rocks. **Yellow Hill** is a yellow-topped hill 1.5 miles S from Metlakatla. The summit is formed by several bare, rounded knolls of approximately equal elevation.

Chart 17434

(160) **Hid Reef** (see also chart 17432) is about 2 miles off the W shore of Annette Island at the S entrance to Nichols Passage. On the reef are three distinct clumps of rocks, bare at about half tide with narrow passages between them. The outermost rock is 2.8 miles SW from **Cedar Point** (55°05.8'N., 131°36.4'W.), and is marked by a lighted whistle buoy.

(161) **Canoe Cove** indents the W shore of Annette Island about 3 miles S of Cedar Point. The cove is used by small boats and is entered through the N passage.

(162) **Smuggler Cove**, immediately S of Cedar Point, is open and exposed. In the upper part of the cove is a beach of fine clear sand 200 yards (183 m) long. The microwave tower close ESE of Smuggler Cove is prominent from the cove and Nichols Passage.

Chart 17432

(163) **Dall Head**, the S extremity of Gravina Island, is the W headland at the S entrance to Nichols Passage. It is low and wooded. At a distance of 1.5 miles N of Dall Head the land rises rapidly to the high mountains of **Dall Ridge** (chart 17434), with its high and remarkable peaks, forms a conspicuous landmark from Clarence Strait and Dixon Entrance in clear weather. The S end of Dall Ridge is unusually rugged and broken. The southernmost summit is crowned with a narrow cap of trees, below which for 600 feet (183 m)are bare cliffs of gray and brownish rock. Several rounded hills covered with dead trees show white against the mountains of Dall Ridge. At the S end of Dall Ridge are two large landslides facing S.

(164) **Bronaugh Islands**, that extend from 0.3 to 2 miles from Dall Head, are low and wooded with rocks and reefs surrounding them. The easternmost island of the group, known as **Point McCartey**, is bare on the S and E edges. It is marked by **Point McCartey Light** (55°06'49"N., 131°42'26"W.), 44 feet (13.4 m) above the water and shown from a skeleton tower with a red and white diamond-shaped daymark.

(165) A rock, bare at half tide, is 0.7 mile SW of Point McCartey Light. Several other similar rocks are between this one and the Bronaugh Islands. A rock, which uncovers 2 feet (0.6 m) and has deep water close to it, is about 0.3 mile ESE from Point McCartey. This rock is marked by a buoy. A shoal, covered 25 feet (7.6 m), is about 0.5 mile SE of Point McCartey Light.

(166) Banks and broken ground, with least found depths of 7 to 15 fathoms (12.8 to 27.5 m), are about 0.9 mile NE from Point McCartey. This area should be avoided.

(167) The narrow passage between Bronaugh Islands and Gravina Island has a least depth of 30 feet (9.1 m) and is used considerably by small craft. It should be used only with local knowledge.

(168) **Dall Bay**, on the W side of Nichols Passage, about 1.5 miles N of Dall Head, has many dangers that are shown on the chart. It offers good anchorage in 8 fathoms (14.1 m), mud bottom, between the two islands well inside the bay. There is also small-craft anchorage farther in, depth 3 fathoms (5.5 m), soft mud bottom. Local knowledge is essential for entering. A privately maintained mooring float is near the head of the bay. The bay is used for storing fish traps.

Chart 17435

(169) **Warburton Island** is about 2.8 miles NE of Point McCartey and 1.4 miles from the W shore of Annette Island. It is about 0.1 mile in diameter, 130 feet (40 m) high and round topped, and has steep, rocky shores. A rock with 1½ fathoms (2.7 m) over it is about 200 yards (183 m) NW of the island.

(170) **Warburton Island Light** (55º07'56"N., 131º38'01"W.), 35 feet (10.6 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the E side of the island.

(171) **Kelp Rocks** are four widely spaced patches surrounded by deep water, NW of Warburton Island Light. The northeasternmost patch is marked on its NE side by a buoy, and the westernmost patch by a lighted bell buoy on the W side. The northeasternmost rock is on the range of the waterfall in Port Chester and the N end of Gull Island.

(172) **Port Chester** is an extensive bay indenting the W shore of Annette Island E of Warburton Island. It is encumbered by numerous islands and reefs, of which the southernmost is **Gull Island**, known locally as **Crow Island**, 150 feet (46 m) high and wooded. About 0.4 mile WSW of Gull Island is a rock awash at highest tides. Surrounding it and extending to the islet E are extensive ledges with bare heads; the W extremity of these ledges is marked by a light. Another ledge with bare heads extends about 0.6 mile E from Gull Island. The bare head closest to Gull Island in this ledge is known locally as **One-Tree Island**. A lighted buoy is on the E side of the 1¼-fathom (2.3 m) rock lying about 0.7 mile ESE of Gull Island. **Village Point**, on the S side of the entrance to Port Chester, is low and sandy, with a gravel beach on the E side. W of Village Point are extensive reefs that bare to a distance of 0.2 mile offshore. A light is on the pier on the W side of Village Point.

(173) **Metlakatla** (55°07.7'N., 131°34.6'W.), is a large native American community on the S side of Port Chester about 16 miles S of Ketchikan, through Tongass Narrows and Nichols Passage.

(174) Metlakatla has a cold storage plant, a cannery, a sawmill, and an oil terminal.

Prominent features

(175) The cold storage plant and a large white church with two square towers are prominent from Nichols Passage.

Pilotage, Metlakatla

(176) Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the inside waters of the State of Alaska. (See Pilotage, Alaska, indexed as such, chapter 3 for details.)

(177) Vessels en route Metlakatla meet the pilot boat about 1 mile E of Point McCartey Light (55°06.8'N., 131°42.4'W.).

(178) The pilot boat, a tugboat, can be contacted by calling "METLAKATLA PILOT BOAT" on VHF-FM channels 16, 13, or 12.

Quarantine, customs, immigration, and agricultural quarantine

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

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

Wharves

(181) Metlakatla has an oil company pier, a city pier, a State ferry terminal, a packing company wharf, a barge terminal, a barge ramp, a seaplane float, and public and privately owned small-craft facilities.

(182) Union Oil Company Pier (55°07'55"N., 131°34'33"W.): on the W side of Village Point; a marine fuel facility extends NE from the outer end of the approach pier; 80-foot (24 m) face, S side 40 feet (12.2 m) long, NE side 40 feet (12.2 m) long; 10 to 12 feet (3.0 to 3.6 m) alongside; deck height, 26 feet (7.9 m); receipt of petroleum products and fuel for small craft and fishing vessels; owned by Metlakatla Indian Community and operated by Union Oil Company.

(183) Annette Island Packing Company Wharf (55°07'48"N., 131°34'14"W.): about 300 yards (274 m) SE of Village Point; 380-foot (116 m) face, SW side 70 feet (21 m) long, NE side 120 feet (37 m) long; 23 feet (7 m) alongside; deck height, 26 feet (7.9 m); 17 forklifts, one 25-ton forklift; ice for fishing vessels and water are available; receipt of seafood; owned by Metlakatla Indian Company and operated by the Annette Island Packing Company.

(184) Metlakatla City Dock (55°07'43"N., 131°34'02"W.): about 200 yards (183 m) SE of Annette Island Packing Company Wharf, close E and parallel to the breakwater protecting the small-craft basin to the W; 400-foot (122 m) face; 35 (11m) feet alongside; deck height, 26 feet (7.9 m); two 10-ton forklifts; forklifts up to 20 tons are

available; water and electricity are available; receipt and shipment of general cargo, shipment of logs, cants and occasionally lumber; owned and operated by Metlakatla Indian Community.

(185) Metlakatla City Barge Ramp: close S of the City Dock; adjustable transfer bridge; 15 feet (4.6 m) reported alongside the outer end of the ramp and the inshore is dry; uses same cargo handling equipment as City Dock; water and electricity are available; two 25-ton mobile forklift trucks and tractors are available; receipt and shipment of containerized and roll-on/roll-off general cargo; owned by Metlakatla Indian Community and operated by Foss Alaska Line and Boyer Alaska Barge Line, Inc.

(186) Louisiana-Pacific Annette Hemlock Mill Dock (55°07'38"N., 131°33'44"W.): about 340 yards (311 m) SE of the City Dock; 20-foot (6.1 m) T-head pier with six dolphins providing about 400 feet (122 m) of berthing space; 10 feet (3.0 m) alongside; receipt of log rafts; shipment of wood chips and waster; owned by Metlakatla Indian Community and operated by Louisiana-Pacific Corp., Ketchikan Division.

(187) Alaska Marine Highway System, Metlakatla Ferry Terminal: about 900 yards (823 m) SE of the City Dock; 35-ton transfer bridge with three dolphins providing 250 feet (76 m) of total berthing space; 15 feet (4.6 m) alongside; passengers and vehicles; owned and operated by the State of Alaska. In 1976, a State ferry terminal was under construction at the same location of the present State ferry terminal. The new terminal has a designed berthing area of 235 feet 72 m) and a project depth alongside of 24 feet (7.3 m).

Supplies

(188) Gasoline, diesel fuel, distillates, and water are available at the fuel facility. Provisions, fishing supplies, and limited amounts of marine supplies can be obtained in Metlakatla. Additional supplies may be obtained in Ketchikan 16 miles N.

Repairs

(189) There are no provisions for overhauling vessels in Metlakatla. During the fishing season, the machine shop at the Packing Company Wharf is available for minor repairs to small craft. Extensive repairs for small craft are available in Ketchikan, 16 miles to the N.

Small-craft facilities

(190) A small-craft basin, protected by a breakwater, is close SW of the City Pier. In April 2003, the controlling depth was 10 feet in the entrance channel and basin with lesser depths in the SW corner of the basin and along the edge of the basin about 100 yards SE of the entrance light. The entrance is marked by a light on the NW end of the breakwater. There is 1,100 feet (335 m) of berthing space along the floats. The basin is under the control of the **harbormaster** who monitors VHF-FM channel 16 and can also be contacted by telephone at (907) 886-4646. A combination seaplane and small-boat float is on the NE side of Village Point.

(191) Another small-craft basin, protected by breakwaters, is 0.3 mile W of Village Point. In April 2003, the controlling depth was 12.8 feet in the entrance, thence 12.5 feet in the W section of the basin and 8.6 feet in the E section except for lesser depths along the edges. The entrance is marked by a light on the end of the NW breakwater and daybeacons just off the end of the SE breakwater.

Communications

(192) The Alaska State Ferry System has scheduled ferry service to Metlakatla. Seaplanes from Ketchikan also make scheduled trips to the community. Metlakatla is connected with Annette by highway. Telephone and radiotelephone communication is maintained with other States and parts of Alaska.

(193) **Scrub Islands,** known locally as the **Two Sisters**, about 0.8 mile E of Gull Island, have two scraggy clumps of trees and are surrounded by ledges, mostly covered at high water. A buoy marks the NE side of the ledges.

(194) **Hub Rock**, known locally as **Devils Rock,** about 1 mile NNE of Village Point, is a small bare ledge about 6 feet (1.8 m) above high water marked by a light. A 1-fathom (1.8 m) spot is about 0.3 mile NNE from Hub Rock.

(195) **Martin Rock**, awash at low water, is 0.2 mile NW of Hub Rock; it is not marked by kelp.

(196) **Murdo Island**, about 1.1 miles N of Village Point, and locally known as **Battleship Island** from its former vegetation, is covered with grass and numerous trees. Extensive ledges extend S, W, and N from the island. A daybeacon is 0.8 mile NW of Murdo Island.

(197) **Fillmore Rock** is about 0.3 mile NNW of Murdo Island and bares 1 foot at lowest tides.

(198) **Lively Rock** is about 0.5 mile N from Murdo Island and has 5 feet (1.5 m) over it at low water. It is marked by a lighted buoy close NE of the rock.

(199) **Hemlock Island**, close to the N shore of Port Chester, is wooded. It is fringed with reefs, and at lowest tide is connected at its N corner with Annette Island.

(200) Leading to Port Chester are three channels, of which the S one, between Gull Island and Village Point, is of chief importance; the dangers are shown on the chart. Enter on a **085°** course with Warburton Island Light directly astern. The second entrance is the

narrow passage between Murdo and Gull Islands; it is seldom used.

(201) The N entrance leads from off Driest Point to midway between Hemlock Island and the lighted buoy marking Lively Rock, then SSE passing E of Scrub Island Buoy 7, then SSW to Port Chester.

(202) Port Chester does not afford good anchorage. During SE gales, winds blow with great violence across it, and williwaws of 60 to 70 knots sweep down from **Purple Mountain** and across the anchorage. Anchorage is to be had in 14 fathoms (25.5 m), mud bottom, about 0.5 mile E of the Packing Company Wharf.

(203) **Driest Point**, on the NW side of Port Chester and separating it from Sylburn Harbor, is a narrow, rocky stretch of land, 250 feet (76 m) high, and wooded down to high-water line. Foul ground extends about 0.5 mile N from the point. **Driest Point Light 4** (55°10'35"N., 131°36'23"W.), 29 feet (8.8 m) above the water, is shown from a spindle with a red triangular daymark on the W extremity of the point.

(204) **Sylburn Harbor** is a small bay N of Driest Point, the S end of which affords fair anchorage for small craft in 7 to 18 fathoms (12.8 to 33 m). The easternmost branch of the harbor is known locally as **Japan Bay**. About the middle of the outer entrance to Sylburn Harbor is a large double-headed rock that is covered several feet at high water. Strangers entering the harbor are advised to wait for low water when the dangers are visible. A **159°** course, with the middle of Blank Inlet (chart 17428) astern and the middle of the S bight ahead, leads midway between the foul ground off Driest Point and the rock in the middle of the outer entrance.

Charts 17428, 17434

(205) **Seal Cove** (55°11'N., 131°43'W.) is on the W side of Nichols Passage, 4 miles N of Point McCartey. It has depths of about 30 to 40 feet (9.1 to 12.2 m), but is suitable only for small craft because of its narrow entrance. A reef, mostly bare at half tide, extends across the entrance, through which are two channels. The N one has a depth of 8 feet (2.4 m) and width of 75 yards (69 m), but it is full of boulders and dangerous. The S entrance is generally used. It is close to the S shore and has a depth of about 3 to 11 feet (0.9 to 3.4 m). The channel is narrow and has thick kelp and strong currents. Caution is advised when entering Seal Cove by the N or S entrance. **Seal Cove Rock**, covered 1¼ fathoms (2.3 m) and surrounded by kelp, is about 0.4 mile E of the highest part of the reef in the entrance to Seal Cove.

(206) **Bostwick Inlet**, immediately N of Seal Cove, is on the W side of Nichols Passage, 6 miles N of Point McCartey. It affords no shelter in SE weather. The S shore is generally foul, and the upper part of the bay bares for 1.2 miles from the head. In entering, follow the N shore at a distance of about 0.2 mile. A rock awash at high water is on the SW side of the channel at about 55°13.2'N., 131°44.0'W.

(207) **Blank Inlet**, about 4 miles N of Bostwick Inlet and W of Gravina Point, the E extremity of Gravina Island, extends 3 miles NW into the shore of Gravina Island. It is open to the sea from Nichols Passage and affords no sheltered anchorage. Two rocks awash are almost in the center of the inlet.

(208) **Blank Islands**, two in number, 200 feet (61 m) high and wooded, are near the N side of the entrance to Blank Inlet. The S shoreline is bare rock for 50 to 100 yards (46 to 91 m) outside the trees, and the shore is bold. Small craft can find good anchorage in the bight on the N side of the islands. **Blank Islands Light** (55°15'59"N., 131°38'23"W.), 37 feet (11 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the SE extremity of the S Blank Island.

(209) **Walden Rocks** are a group of bare rocks at the N entrance to Nichols Passage. The group at its E end shows about 10 feet (3.0 m) at high water, and at that time the smaller rocks are covered. About 150 yards (137 m) W of the group is a rock that covers at half tide and shows kelp. The rock is marked by a light. Close N of the group are other kelp-marked rocks, and 0.2 mile NNW is a rock with 1 fathom (1.8 m) over it. About 0.6 mile S of Walden Rocks is a rocky ledge that uncovers 12 feet (3.6 m): between it and Annette Island are a number of rocks that bare.

(210) **Walden Point** offers considerable shelter for small craft directly offshore. **Bailey Rock** covers at high water, is marked by a daybeacon, and is about 1 mile S of Walden Point.

(211) **Annette Bay**, at the NW end of Annette Island, is about 0.8 mile wide at the entrance and narrows to a small stream; it is about 3 miles long, has deep water, and does not afford anchorage for vessels. Small craft can anchor near its head in 7 to 8 fathoms (12.8 to 14.6 m). **Race Point**, the N extremity of Annette Island, and the NE point at the entrance to the bay, is wooded and has a height of about 150 feet (46 m). A ledge with a rock awash extends 450 yards (411 m) NW of the point. The point should be given a berth of over 0.3 mile.

Charts 17436, 17420

(212) The W shore of Gravina Island from Dall Head to South Vallenar Point is heavily timbered, bold, and rocky. Close to shore are many large boulders and rocks, and the bottom is rocky and uneven. The

100-fathom (183 m) curve is from 0.5 to 1 mile offshore, and it is advisable to give the coast a berth of that distance.

(213) Tidal currents are usually strong close to shore, especially on the flood, reaching an estimated velocity of 2 knots. Small tide rips are found off the more prominent points when the wind is opposed to the current. W of Bronaugh Islands moderate tide rips are set up on a flood current with a N wind. Around South Vallenar Point, an estimated velocity of 2.5 knots is reached on the flood and 1.5 knots on the ebb, with moderate tide rips when wind and current are opposed. W of Vallenar Point the flood current is estimated at 3 knots and 1.5 knots on the ebb with strong tide rips on the ebb during a SE storm.

(214) Dall Head has been described with Nichols Passage.

Chart 17432

(215) Rocks and islands extend about 0.6 mile offshore for a distance of 1.2 miles NW from Dall Head. A small open bight, foul near the head, with depths of 6 to 7 fathoms (11.0 to 12.8 m) in the entrance, is 1.4 miles NW from Dall Head. A small rocky islet is off the S shore of the entrance. A rock awash is 400 yards (366 m) off the wooded islet S of the entrance; it is 1.5 miles WNW of Dall Head.

(216) **Nehenta Bay,** open to the S, is 2.5 miles NW of Dall Head. Depths of 12 to 16 fathoms (22.0 to 29.5 m) were obtained in the channel W of the small rocky islet in the middle of the entrance that marks the end of the chain of rocks and rocky islets that extend N from the island at the S entrance point. Foul ground extends 0.1 mile from the head of the bay, and a 6-foot (1.8 m) spot is 650 yards (595 m) 212° from the midchannel rock. Depths of 7¾ to 14 fathoms (14.1 to 25.5 m) were obtained in the middle of the bay, while depths of 14 fathoms (25.5 m) were obtained in the small bight E of midchannel rock. The narrow arm, 0.4 mile long in a NW direction on the NW side of the bay, has a depth of 3½ fathoms (6.4 m) at the entrance and 2¼ fathoms (4.1 m) halfway to the head. A reef extends from the NE shore to within 50 yards (46 m) of the SW shore of this arm.

(217) **Phocena Rocks**, the highest 25 feet (7.6 m), are 275 yards (251 m) offshore, W of the NW point of the entrance to Nehenta Bay.

Charts 17436, 17420

(218) **Phocena Bay** (55°10.8'N., 131°48.5'W.), 3.6 miles NW from Dall Head, open to the S, has a 5¼-fathom (9.6 m) spot about midentrance and depths of 9 to 17 fathoms (16.4 to 31 m) just within the entrance. Foul ground extends about 350 yards (320 m) off the N entrance point. The N end of the cove is foul for about 0.1 mile from the shore, to the S of which is an area about 200 yards (183 m) wide, with depths of 1 to 3 fathoms (1.8 to 5.5 m), where fishermen find fair-weather anchorage. The bight to the E of the S entrance point has 7 fathoms (12.8 m) at the entrance and shoals rapidly to the head. The small cove immediately W of the N entrance point to the cove is foul.

(219) **Open Bay** (55°11'45"N., 131°49'30"W.), 5 miles NW from Dall Head, is open to the W and NW. Depths of 6 fathoms (11.0 m) are found at the entrance, 1¾ fathoms (3.2 m) 150 yards (137 m) within, and shoal water to the head.

(220) **Grant Cove**, about 14.5 miles NNW of Dall Head and 1.7 miles SSE of South Vallenar Point, is exposed to the W. The cove shoals from depths of over 20 fathoms (36 m) at the entrance to depths of 10 fathoms (18.3 m) at the edge of the flat 300 yards (274 m) from the head. Give the shore S of the S entrance point to the cove a berth of about 0.3 mile. A mooring log is anchored near the head of the cove in 10 fathoms (18.3 m).

(221) The small cove 0.8 mile NNW of Grant Cove is open, exposed, shallow, and foul. A rock with a depth of about 1 fathom (1.8 m) is about 300 yards (274 m) W of the N entrance point to the cove. Another rock, which uncovers 3 feet (0.9 m), is about 200 yards (183 m) S of the N entrance point; the area N of this rock should be avoided. The small cove 1.1 miles NNW from Grant Cove bares at low water, with the exception of a very narrow opening 200 yards (183 m) long midway in the entrance that has depths of about 2 fathoms (3.6 m). A large kelp-marked shoal is about 0.5 mile WSW of the cove. A rock with a depth of about 3 feet (0.9 m) is near the S end of this shoal.

(222) **South Vallenar Point**, about 1.7 miles N of Grant Cove, is near the NW end of Gravina Island on the NE side of Clarence Strait.

(223) A ridge extends about 0.8 mile N from South Vallenar Point. The bottom is rocky and very irregular. A rock, 5 feet (1.5 m) high, is about 0.2 mile N of the point.

(224) **Vallenar Bay**, between South Vallenar and Vallenar Points, affords good shelter from winds drawing up the strait. A foul area with several rocks, some awash and others that uncover, extends about 0.5 mile N from the S shore of Vallenar Bay about 0.2 mile E of the 5-foot (1.5 m) high rock N of South Vallenar Point. A mudflat that dries extends about 0.4 mile from the head of the bay. Anchorage in about 14 fathoms (25.5 m) can be found 0.7 mile from the head of the bay about 350 yards (320 m) off the E shore.

(225) Vallenar Point is described in chapter 4.

Charts 17426, 17436

(226) **Kasaan Bay**, 47 miles N of Cape Chacon, has its entrance on the W side of Clarence Strait, between Island Point and Grindall Island, where it is about 4.0 miles wide. It extends about 17.5 miles NW to Karta Bay at its head. About halfway up the bay, in the middle, are several islands. The shores of the bay and islands are steep-to and heavily wooded. A high, steep mountain range extends along the N shore of the bay almost to the head. Fog often prevails in the S part of Clarence Strait, while it is clear in Kasaan Bay. During SE stormy weather, clouds and mist travel low along the N shore, while the S shore is generally free from low-flying scud. During SE storms the sea at the entrance to the bay is rough and treacherous for small craft. Temporary anchorage while waiting for the fog to lift may be had on an extensive bank, 0.6 to 1.2 miles S from Grindall Point in depths of 8 to 16 fathoms (14.6 to 29.5 m). All known dangers are shown on the chart. Midchannel depths are generally good.

(227) **Currents** in Clarence Strait from Clover Bay to High Island are most noticeable on the flood, and with a S wind attain an estimated velocity of 2 to 2.5 knots. From Island Point S there is generally a S eddy close to shore during flood tides. Off Island Point and the E end of High Island, moderate tide rips are formed when the wind is against the current.

(228) **Island Point**, the S point at the entrance to Kasaan Bay, is rounded and wooded and has an elevation of 228 feet (69 m). A small rocky islet is close to the N shore and two small rocks are close to the E shore of the point. The shoreline is grayish-white rock about 25 feet (7.6 m) high. Moderate tide rips are encountered off the point.

(229) The small cove to the W of Island Point has depths of 22 fathoms (40 m) at the entrance shoaling to 6 fathoms (11.0 m) near the head. It is used as an anchorage by fishing boats, but is exposed to the N.

(230) **Twenty Fathom Bank** is 2 miles ESE of Island Point. The bottom is rocky and has a least depth of 17 fathoms (31 m). The bank is used extensively by fishermen engaged in trolling.

(231) **High Island**, about 1.4 miles N of Island Point, is wooded. From the S there appears to be twin summits on the island, but they merge into one from the E and again become visible from the NW. The slope of the island is uniform. The NE and S shores are abrupt and consist of gray rock, 20 to 40 feet (6.1 to 12.2 m) high.

(232) **High Island Light** (55°24.1'N., 132°09.9'W.), 40 feet (12.2 m) above the water, shown from a skeleton tower with a red and white diamond-shaped daymark on the NE side of the island, marks the entrance to Kasaan Bay. A rocky islet, 43 feet (13.1 m) high and with a few trees on it, is off the SE end of the island.

(233) **Patterson Island**, separated by a channel from the W end of High Island, extends W about 1.3 miles. The channel, about 100 yards (91 m) wide, is clear for small boats and has a depth of 3 fathoms (5.5 m). The island is timbered and has three summits; the highest is at the E end. A bight makes into the S shore of the island near the W end in the depression between the W summit and the E ridge. It is used as an anchorage during N weather, but affords no protection during SE weather. Several rocks that cover at high water are at the entrance. The outermost rock, which bares at half tide, is 0.25 mile ESE from the W point of the entrance to the bight. A house is at the head of the bight.

(234) A rock with 1¼ fathoms (2.3 m) over it is about 0.4 mile SSW from the easternmost point of Patterson Island, and it is not always marked by kelp; otherwise the passage S of the island is clear.

(235) **Grindall Island**, the N point of the entrance to Kasaan Bay, is about 4.0 miles N from Island Point. It is heavily wooded and has two knobs near the SW end, the W knob is the highest. The E part of the island is low. **Approach Point** is the E extremity of the island.

Local magnetic disturbance

(236) Differences of as much as 5° from the normal variation have been observed on Grindall Island in the vicinity of Approach Point.

(237) **Grindall Point**, the SE end of Kasaan Peninsula, has a symmetrical rounded hill that is visible in every direction. Being separated from the higher land of the peninsula, it forms an excellent landmark. From the upper reaches of Kasaan Bay it could possibly be mistaken for the hill on Grindall Island, which it obscures from view.

(238) **Grindall Passage** is frequently used by those with local knowledge. It is safe for steamers, though the clear part of the channel is only 150 yards (137 m) wide in the narrowest part. A wooded islet and two bare rocks about 550 and 750 yards (503 and 686 m), respectively, SSW of it are close to the W end of Grindall Island. A 1½-fathom (2.7 m) spot is 275 yards (251 m) 290° from the southernmost rock. A rock with a depth of 2¼ fathoms (4.1 m) is in the middle of the passage, 300 yards (274 m) N of the wooded islet off the W end of Grindall Island. A patch of foul ground is on the W side of the S entrance to the passage. This foul ground will be cleared by keeping E of the range formed by two prominent points, one on either side of the cove on the W side of the passage. The N point has a wooded islet close by that should not be mistaken for the point. Pass close to the S point of the cove to avoid the 2¼-fathom

(4.1 m) spot in the middle of the passage. The N entrance is clear.

(239) A good anchorage for small vessels in N weather may be had in what is locally called **Grindall Anchorage**, the small cove at the end of Grindall Point. Anchor in 5 to 12 fathoms (9.1 to 22.0 m), soft bottom. In S weather fair protection can be found directly across the pass off a U.S. Forest Service cabin. The U.S. Forest Service maintains a mooring buoy in the small cove close to the cabin. Fresh water may be obtained here. The current floods E through Grindall Passage, ebbs W, and is of moderate strength.

(240) **Trollers Cove** is back of a chain of islands about 1.4 miles W from Island Point. The cove has depths of 4 to 6 fathoms (7.3 to 11.0 m). It is considered a good small-boat anchorage and is used by those fishing on Twenty Fathom Bank. Three channels may be used in entering. The channel E of the islands bares, is foul, and should be used only by those with local knowledge. The channel in the middle of the chain of islands has a depth of 5 fathoms (9.1 m). It is marked by a light on the E end of a small island on the W side of the entrance to the cove. The channel W of the island is the best.

(241) Round the W island at a distance of about 125 yards (114 m) and then follow a midchannel course to the S of the islands. Pass about 50 yards (46 m) S of the S shore of the E island to avoid a rock awash that is about 100 yards (91 m) S of the island. When abeam the SE end of the island, anchor in about 4 fathoms (7.3 m).

(242) The small cove W of the W island has three rocky islets and several rocks marked by kelp in the center. It is not recommended as an anchorage.

(243) **Skowl Arm** and Polk Inlet, its W arm, have a combined length of about 14 miles. The head of the inlet is only about 3 miles from the head of Cholmondeley Sound (chart 17436), though the intervening land is high. **Skowl Point**, the S point at the entrance to Skowl Arm, is the northern-most tip of **Skowl Island**.

(244) **Skowl Point Light** (55º25'39"N., 132º16'11"W.), 15 feet (4.6 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the outlying bare rock about 300 yards (274 m) N of the point at the entrance to Skowl Arm. Fishing boats find good protection close to the shore immediately W of Skowl Point during SE storms.

(245) On the N side, about 3.5 miles up the arm, is the abandoned Haida village of **Old Kasaan**. No evidence of the village remains; other than a few weathered totem poles and a few graves. The village site is part of **Old Kasaan Village Historical Area**, administered by the U.S. Forest Service. In front of the village site is a ledge, covered at high water, that extends about 100 yards (91 m) offshore.

(246) **Smith Cove**, the large bay E of Old Kasaan village site and about 2 miles W of **Kasaan Point**, affords good anchorage in 10 to 20 fathoms (18.3 to 36 m), soft bottom. It should be entered with caution, taking care to avoid the rocks and shoals off the two small wooded islets at the entrance and inside the bay. In September 1998, a dangerous rock was reported in the E part of Smith Cove on the W side of the narrow channel about midway between the two islets in about 55°26.4'N., 132°19.8'W. A seaplane float is on the NW side of Smith Cove.

(247) **Saltery Cove** is a small bay, about 1 mile long, in the SE shore of Skowl Arm, about 2.5 miles W of Skowl Point and close E of McKenzie Inlet. A group of islands, surrounded by foul ground, is on the E side of the cove; this foul ground extends into the cove about 0.5 mile from the E shore. The channel E of the group of islands in the entrance is the one mostly used. A well-protected anchorage for small craft in about 4 to 9 fathoms (7.3 to 16.4 m), mud bottom, is at the head of the cove.

(248) **McKenzie Inlet**, the S branch of Skowl Arm, has its entrance about 3.7 miles W of Skowl Point. The inlet extends about 5 miles in a S direction. **McKenzie Rock**, bare, is about 0.5 mile W of **Khayyam Point**, the E point at the entrance; there is no safe channel between. A dangerous submerged rock is immediately N of McKenzie Rock. A rock, that uncovers 3 feet (0.9 m), and a rock awash immediately to the NW, are about 400 yards (366 m) from the E shore, 0.5 mile S of McKenzie Rock. The only good anchorage in Skowl Arm for vessels of any size is in McKenzie Inlet, about 500 yards (457 m) N of East Sentinel Island, in 28 fathoms (51 m), mud bottom.

(249) About 1 mile inside the entrance, the channel leads between **East Sentinel Island** and **West Sentinel Island**, two rounded wooded islands. Kelp extends from the islands a short distance into the channel, which is narrow and has a depth of about 5 fathoms (9.1 m). A careful midchannel course between the islands leads through safely; S of the islands the inlet is clear. There is good anchorage near the head of the inlet on the W side of **Peacock Island**, in depths of 7 to 10 fathoms (12.8 to 18.3 m), soft bottom.

(250) **Paul Bight**, on the W side of the entrance to McKenzie Inlet, affords anchorage for small craft in 3 to 5 fathoms (5.5 to 9.1 m). A group of bare rocks is off the N point at the entrance. In entering, favor the S point.

(251) **Polk Inlet**, the W arm of Skowl Arm, is entered about 4.7 miles above the entrance to Skowl Arm, and extends W and S for about 9.3 miles. The entrance to the inlet is foul, and extreme caution must be exercised when entering. The current in the entrance to the inlet is weak.

(252) **Black Rock bares** 10 feet (3.0 m) and is about 1 mile N from Kasaan Point. The range formed by the NE tangent of **Daisy Island**, 1.3 miles NW of Black Rock, and the rocky islet SE of Daisy Island clears Black Rock by a distance of about 0.1 mile.

(253) **Kasaan Island**, low and wooded, and **Round Island**, a small wooded islet NW of Kasaan Island, are the most noticeable of the islands in the middle of Kasaan Bay. A reef that uncovers 9 feet (2.7 m) is 0.6 mile 162° from the W end of Kasaan Island. The channel S of this reef and S of Kasaan Island has been found clear of dangers. The entrance at both ends of the channel are clear, with the exception of a 2½-fathom (4.5 m) spot 0.1 mile NW of **Berry Island**. A 5¼-fathom (9.6 m) spot is 0.8 mile 125° from the E end of Kasaan Island.

(254) Anchorage for small boats is to be found in the landlocked inlet on the NE side of Kasaan Island in 7 to 10 fathoms (12.8 to 18.3 m), soft bottom. This is called **Happy Harbor** locally. The entrance is 2 feet (0.6 m) deep, and caution is necessary in entering. A shoal, covered 11 feet (3.3 m) and marked by kelp, is 150 yards (137 m) NNW of the rock awash off the NE entrance point. Another shoal, covered 9 feet (2.7 m) and marked by kelp, is 300 yards (274 m) N of the same rock awash. After entering the narrow channel, favor the E side until through the entrance.

(255) The lagoon on the S side of Kasaan Island is sheltered, but subject to strong winds drawing through from the N. The channel is very narrow and has a controlling depth of 4 feet (1.2 m).

(256) A small cove, known locally as **Linney Bay**, 0.6 mile W of Daisy Island, is used regularly for storage of log rafts. Excellent shelter is afforded in all weather, but center depths and bottom do not favor good anchorage. A 2-fathom (3.6 m) shoal is just E of the center of the entrance, but depths throughout the greater part of the bay are 10 to 24 fathoms (18.3 to 44 m) with no known dangers.

(257) The small bay about 1.8 miles S of the W end of Kasaan Island affords anchorage for small boats in depths of 6 to 10 fathoms (11.0 to 18.3 m). A reef, which bares, extends about 200 yards (183 m) SE from the small island at the SW side of the entrance, and another reef with a dangerous rock at its end extends about the same distance to the NE. When entering the bay, favor the E point. A least depth of 2¼ fathoms (4.1 m) was obtained in the entrance.

(258) **Kasaan** is a village on the N shore of Kasaan Bay about 10 miles NW of Grindall Island. The former cannery wharf here has a face 125 feet (38 m) long with a depth of 32 feet (9.8 m) alongside. Some of the pilings under the wharf are badly deteriorated, and some are broken off. Neither water nor supplies are available. The cannery building fronting the wharf is in poor condition as the cannery has not been in operation since 1954. A State-maintained small-craft and seaplane float, with 224 feet (68 m) of berthing space, is about 25 yards (22 m) N of the cannery wharf. In 1976, 10 to 25 feet (3.0 to 7.6 m) was reported alongside the float. The State-operated radio station in Kasaan maintains radiotelephone communications with Ketchikan. **Kasaan Light** (55º32'05"N., 132º23'46"W.), 12 feet (3.6 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on shore, S of the cannery. The point W of the village is foul and should be given a berth of at least 150 yards (137 m).

(259) **Coal Bay**, on the S shore of Kasaan Bay about 3.8 miles SW of Kasaan and 1.5 miles SE of Outer Point, affords good anchorage in 15 fathoms (27.5 m) except in N weather. It is probable that winter gales from the NW blow hard into the bay. A reef, that bares, extends about 0.3 mile in a N direction off the W point of the entrance to the bay. A shoal, with 2¾ fathoms (5.0 m) over it, is about 0.4 mile ENE from the same point.

(260) **Kina Cove**, about 0.5 mile W of Coal Bay, affords good anchorage in 7 to 10 fathoms (12.8 to 18.3 m), 0.8 mile inside the entrance. In entering, follow a midchannel course. A reef is about 100 yards (91 m) off the W shore about 0.1 mile S of the W point of the narrow entrance to the inner bay.

(261) **Karta Bay**, at the head of Kasaan Bay about 2 miles NW of Sandy Point, affords good anchorage in 10 to 12 fathoms (18.3 to 22.0 m), with a clearance of about 430 yards (393 m). **Mound Point** (55°34.6'N., 132°34.0'W.), on the N side of the entrance to Karta Bay, is prominent. A 4-fathom (7.3 m) shoal is about 1.1 miles ESE from the point. A number of shoals with less water over them are farther inshore in the direction of Sandy Point.

(262) The head of Kasaan Bay is separated from the main part of the bay by a chain of wooded islands and affords secure anchorage in 5 to 8 fathoms (9.1 to 14.6 m). In heavy SE weather the NE part of this inner bay affords the only secure anchorage in 7 to 12 fathoms (12.8 to 22 m), soft bottom. The best entrance is between the fourth and fifth islands counting from E. This passage is 225 yards (206 m) wide, but the channel is only 50 yards (46 m) wide between the 3-fathom (5.5 m) curves, with a depth of 4 fathoms (7.3 m) in midchannel.

(263) **Twelvemile Arm**, a narrow inlet entered between Sandy Point on the N and Outer Point on the S, extends SW about 13 miles from near the head of Kasaan Bay. The depths are generally good.

(264) **Sandy Point** (55°33.2'N., 132°31.4'W.), the N point at the entrance to Twelvemile Arm on the W shore, is low and wooded. A reef about 300 yards (274 m) wide extends off the point in a SE direction for about 500

yards (457 m). The approximate center of the reef is marked by a flat islet 5 feet (1.5 m) high. The immediate vicinity of this reef is shoal and rocky. For 1 mile to the SW, the shoreline forms two small bights, and is marked by rocks and islets. Beyond this point the shore is comparatively clear to Loy Island and the entrance to Hollis Anchorage, except for log rafts moored close ashore in the vicinity of **Pellett Point**, 2.4 miles SW of Sandy Point.

(265) **Outer Point** is a rocky, wooded promontory, on the S shore at the entrance to Twelvemile Arm. A small island with a lone tree on it is just off the point to the NE in Kasaan Bay. Reefs extend about 150 yards (137 m) offshore on the Twelvemile Arm side. A 4-fathom (7.3 m) spot is about 300 yards (274 m) NW of the point.

(266) **Jarvis Island** is about 1.1 miles SW of Outer Point along the SE shore of Twelvemile Arm. The shoreline is abrupt like the general shoreline. About 0.3 mile NE of Jarvis Island is a small grass-covered rock about 0.3 mile from shore. A 1-fathom (1.8 m) shoal is about 250 yards (229 m) NW of this rock. About 1.5 miles SW of Outer Point and 0.2 mile W of Jarvis Island is a small island, with a reef about 50 yards (46 m) in diameter, just off the NW shore. It is wooded and about 200 feet (61 m) high to the tree tops. To a ship entering Twelvemile Arm, this reef appears as two rocks awash, except at very low water. At high water the reef is covered. **Jarvis Island Light 1** (55°30'24"N., 132°33'37"W.), 12 feet (3.7 m) above the water, is shown from a spindle with a green square daymark on the N side of the reef.

(267) **Loy Island** is to the NE of the entrance to Hollis Anchorage on the W shore of Twelvemile Arm. The water toward the center of the arm from the island is clear. Behind the island the bottom is foul and full of reefs. The bight is hardly large enough for anchorage, and the rocks render it of no value as such.

(268) A ferry terminal is in **Clark Bay**, about 0.4 mile NNW of the NE point of Loy Island. The terminal has berthing space, with dolphins, of about 235 feet (72 m), and a reported depth alongside of about 26 feet (7.9 m).

(269) **Hollis Anchorage**, on the W side of Twelvemile Arm, affords good anchorage in 3¾ to 9½ fathoms (6.8 to 17.5 m). The anchorage is somewhat constricted by a rocky ledge that extends W about 200 yards (183 m) from the W end of the island on the N side of the entrance, and by the extensive flat in the NW part of the anchorage that extends off the mouth of **Maybeso Creek**. In entering Hollis Anchorage, avoid the gravel reef that uncovers 9 feet (2.7 m) making off from the S shore to the center of the channel, and the rock that uncovers 4 feet (1.3 m) lying 80 yards (73 m) off the N shore opposite the reef; the latter danger is marked by a daybeacon.

(270) The approach channel to Hollis Anchorage has been cleared by a wire drag to a depth of 25 feet (7.6 m). The small arm of Hollis Anchorage that extends NE has a controlling depth of 12 feet (3.6 m). The usable area of the arm is very limited and is suitable only for small vessels. The cleared 12-foot (3.6 m) dragged area is only 45 yards (41 m) wide at the entrance to the arm. The shoal area on the NW side of the arm extends with depths of 5 to 10 feet (1.5 to 3.0 m) for two-thirds of the distance across the entrance.

(271) **Hollis** is on the peninsula on the N side of the anchorage. A small-boat float, with a seaplane float at its SW end, and a surfaced launching ramp are near the SE end of the peninsula.

(272) **Althouse Point** is the S point at the entrance to Hollis Anchorage. A rocky shoal with 2 fathoms (3.6 m) over it is 550 yards (503 m) S of the point and 300 yards (274 m) offshore.

(273) **Harris River Bay,** at the mouth of **Harris River,** is bare, but at high tide small craft can cross into the river.

(274) Midchannel courses lead in good water through Twelvemile Arm. Numerous rocky reefs at the points do not extend more than 60 yards (55 m) offshore. In the middle of the arm, about 400 yards (366 m) NNE from the first wooded islet at the head of the arm, is a small grass-covered islet that is just awash at extreme high tide. A rocky shoal that bares is 400 yards (366 m) NNE from this islet and numerous patches of rocks that uncover 4 feet (1.2 m) are between the islet and the W shore. Log booms and rafting grounds are reported to cover much of the head of Twelvemile Arm.

Chart 17420

(275) **Caamano Point**, marked by a light (55°29.9'N., 131°58.9'W.), is the S extremity of Cleveland Peninsula and the W point at the W entrance to Behm Canal; ledges extend SE from the point. Caamano Point and light, and Behm Canal are described in chapter 4.

(276) The W coast of **Cleveland Peninsula** from Caamano Point to Lemesurier Point, a distance of 20.5 miles, is rocky, bold, and heavily wooded, and has deep water close inshore. The shore is fringed with kelp and has many dangers, but none are more than 0.5 mile offshore. Very often a following sea will be encountered along this section of the coast; mariners are cautioned to guard against being set onto these dangers.

(277) Launches may find anchorage in any of the several shallow bights that indent the W coast of Cleveland Peninsula between Caamano Point and Lemesurier Point. These bights, however, are surrounded with

many dangerous rocks, and their use during stormy weather is attended with extreme danger.

(278) **Lee Rock** (55°42.2'N., 132°14.2'W.), close off the W coast of Cleveland Peninsula, about 15.9 miles and 6.4 miles N of Caamano Point and Ship Island, respectively, is about 20 feet (6.1 m) high and the westernmost of three rocky wooded islands at the entrance to a small cove. Anchorage may be made in the center of the cove, 0.2 mile from its head in 8 to 14 fathoms (14.6 to 25.5 m). Passage can be made between Lee Rock and the two E islands in 7 to 9 fathoms (12.8 to 16.4 m). There is no safe passage between the two E islands or between the islands and the shore. A reef 200 yards (183 m) S of the easternmost island and 100 yards (91 m) offshore bares 10 feet (3.0 m).

(279) **Cabin Cove**, indenting the W coast of Cleveland Peninsula, about 3.2 miles N of Ship Island, is shoal and should not be entered.

(280) A rock (55°38.5'N., 132°12.5'W.), about 3 feet (0.9 m) high, is about 400 yards (366 m) offshore 2.6 miles N of Ship Island. Midchannel depths between the rock and the shore are 8 to 14 fathoms (14.6 to 25.5 m).

Chart 17426

(281) **Niblack Point** (55°33.1'N., 132°07.1'W.), 5.5 miles NW of Caamano Point, is marked by a daybeacon.

(282) **Ship Island**, 0.3 mile offshore on the E side of Clarence Strait, is about 4 miles NW of Niblack Point and 14.5 miles above Guard Islands. The island is 35 feet (10.6 m) high and has a few scraggy trees on it. A ledge extends a short distance from the S end. **Ship Island Light** (55º35'56"N., 132º12'11"W.), 40 feet (12.2 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the highest part of the island. Passage may be made in 10 to 15 fathoms (18.3 to 27.5 m) midway between the island and the mainland.

Chart 17423

(283) **Meyers Chuck**, a small harbor with good anchorage for small craft, is about 1.6 miles SE of **Lemesurier Point** (55°45.9'N., 132°16.9'W.) and immediately E of **Meyers Island**. A light is on the N side of the island. The harbor is entered between the light and a buoy that marks the end of the reef that extends SE of the small island NNW of Meyers Island. **Meyers Chuck** is a small settlement along the E shore of the harbor. The lighted microwave tower at the settlement is visible from Clearance Strait.

(284) A State-operated float with about 384 feet (117 m) of berthing space and a reported depth of 12 feet (3.6 m) alongside the NE end, and 25 feet (7.6 m) alongside the rest is at the NE side of the harbor; a seaplane float extends NW from the float near the approach pier. Care should be taken to avoid the reef that bares about 25 feet (7.6 m) NW of the head of the approach pier. A private float, S of the State float, has gasoline and diesel fuel; water is available in an emergency. A 56-foot (17 m) boat grid is available just inside the State-operated float. Limited amounts of provisions can be obtained at the store at the head of the private float.

(285) A State-operated radiotelephone is at the residence next to the store. A telephone is outside the store. Seaplane transportation to Ketchikan is available upon request. A supply and mail boat from Ketchikan calls weekly at Meyers Chuck.

(286) Anchorage for small craft can also be had in the narrow arm between Meyers Chuck and the mainland. This arm, however, freezes over in the winter and the outer harbor does not.

(287) To enter, give the NW point of Meyers Island a good berth to avoid a submerged rock with 5 to 6 feet (1.5 to 1.8 m) over it, which is reported to be about 100 yards (91 m) off this point. Pass midway between the light and the buoy and turn SE into the harbor.

(288) **Misery Island** is 0.5 mile NW from Meyers Chuck. The W shore is faced by almost perpendicular cliffs about 40 feet (12.2 m) high. Two rocks, marked by a daybeacon, are S from the island; the outermost, distant about 300 yards (274 m), bares 4 feet (1.2 m), and the inner rock bares 9 feet (2.7 m). A small rock, marked by kelp, two rocks awash, and a reported submerged rock with about 4 feet (1.3 m) over it extend from about 300 to 600 yards (274 to 548 m) E from near the S point of Misery Island. There is reported to be 3 to 4 fathoms (5.5 to 7.3 m) in the passage between the N end of Misery Island and the mainland. Favor the mainland shore.

(289) **Lemesurier Point**, the S point at the entrance to Ernest Sound, and also the SW entrance point to Union Bay, is long, low, and wooded; its shores are bold. Ernest Sound and Union Bay are described later in this chapter.

(290) **Lemly Rocks**, 0.2 mile off Lemesurier Point, are about 3 feet (0.9 m) high. At low water there are three rocks close together with submerged rocks between them.

(291) **McHenry Ledge**, with a depth of ¼ fathom (0.4 m) and showing kelp, is 0.7 mile 320° from Lemly Rocks; it is marked by a lighted bell buoy 0.1 mile NW of it. There is a good passage between McHenry Ledge and Lemly Rocks, but the currents have considerable velocity; strong tide rips have been reported. A number of groundings have occurred on Lemly Rocks in attempting the passage in thick weather.

Chart 17426

(292) The W shore of Clarence Strait along the E side of Kasaan Peninsula from Grindall Island to Windfall Harbor, a distance of about 12 miles, is rocky, abrupt, and wooded, and rises rapidly to peaks. The shore close-in is paralleled by kelp beds that give a good indication of the many dangers along this section of the coast; mariners are advised to exercise caution. Occasional beaches do exist, and these are covered by rocks ranging from pebbles to large boulders. Almost all contain a large number of deteriorating cut timber. Among the small inlets and indentations along this coast, Lyman Anchorage and Windfall Harbor are the largest.

(293) **Streets Island** is a low rocky islet, 0.4 mile from the W shore of Clarence Strait, and about 2.3 miles NNW from Approach Point, Grindall Island. Kelp extends a short distance from the ends of the island. About 175 yards (160 m) SE of the island is a rock covered 12 feet (3.6 m). A shoal area, with a depth of 3 fathoms (5.5 m) near its outer end and with lesser depths inside, extends ENE for about 0.3 mile from the E side of Kasaan Peninsula towards Streets Island. A narrow channel with a controlling depth of 15 fathoms (27.5 m) is between the outer end of this shoal and the island. However, this passage is not recommended without local knowledge.

(294) **Lyman Anchorage** is on the SW shore of Clarence Strait about 6.5 miles NW of Streets Island. Its outer part is an open bight about 1 mile wide at its entrance. The inner harbor extends 0.6 mile to the SW from the head of the main bay, is about 200 yards (183 m) wide, and has a controlling depth of ½ fathom (0.9 m) in its narrow approach. It offers excellent shelter in all weather for small craft in 4 to 5 fathoms (7.3 to 9.1 m), mud bottom.

(295) **Lyman Point i**s the E point of the entrance. Rocky shoals are N and NE of the point.

(296) **Lyman Rock** is a submerged rock near the middle of Lyman Anchorage.

(297) **Hadley** is a settlement on the S side of Lyman Anchorage E of Sawmill Point. It was formerly a shipping point for the abandoned mines in the vicinity.

(298) **Figgins Point** is a very bluff point about 0.8 mile N of Lyman Anchorage. Rocks that bare are about 150 yards (137 m) off the point.

(299) **Windfall Harbor**, about 4 miles NW of Lyman Anchorage, is a narrow, crooked inlet that extends SW for about 1 mile. Its entrance is obstructed by rocks, reefs, and islands. It is a poor anchorage and should be avoided by all except small craft with local knowledge.

Chart 17420

(300) From Windfall Harbor to Tolstoi Point small rocks and islets extend offshore for about 300 yards (274 m). **Tolstoi Point** (55°40.2'N., 132°23.5'W.), 9 miles above Lyman Point, is high, bluff, and wooded, and has a low, bare rock close to its N end and a similar rock at its W end.

Local magnetic disturbance

(301) Differences of as much as 3¼° from normal variation have been observed at Tolstoi Point.

Chart 17423

(302) **Tolstoi Bay** has its entrance W of Tolstoi Point and extends in a general S direction for about 4 miles. The E shore is high and steep; the head of the bay is flat, and the land is low and marshy. Near the E shore at the head of the bay is a wooded islet, and S of it is a line of rocks, some of which are covered at high water. There is anchorage in about 10 to 15 fathoms (18.3 to 27.5 m) in midchannel W of the wooded islet, protected from all directions except from N, from which direction the wind and sea come home, making the anchorage uncomfortable. SW winds draw through with considerable force. A midchannel course leads to the anchorage. There are several private mooring buoys in the bay.

(303) On the W side of Tolstoi Bay about 1.2 miles S of the entrance is a small harbor marked by a wooded islet 150 yards (137 m) offshore. The entrance is obstructed by an islet in midchannel and a rock that shows at low water off its E side, leaving a clear channel less than 100 yards (91 m) wide on the NE side of the islet. The anchorage is in about 7½ fathoms (13.7 m) near the middle. In entering, pass S of the outlying wooded islet.

(304) There is no safe passage inside the group of small islands close to the W point at the entrance to Tolstoi Bay, although entering from SE, between submerged rocks, one can find contracted anchorage for small craft in 6 to 7 fathoms (11.0 to 12.8 m).

Charts 17423, 17420

(305) **Thorne Bay** (55°40.8'N., 132°28.2'W.) has its navigable entrance on the N side of a large island obstructing its mouth, 2.5 miles W of Tolstoi Point. The entrance is marked on the N side by a light and reportedly by private daymarks. A shoal area is close to the N shore of the channel leading into Thorne Bay, N of the large island, and extends over one-half of the way into the channel from the main shore toward the island. This area is thick with kelp; however, the kelp is towed

under when the current runs strong. This current causes numerous eddies and rips through the entrance. After passing this shoal area, follow a midchannel course to the entrance to Thorne Bay proper. Thorne Bay is about 0.4 mile wide with an arm that extends about 1.5 miles SE and a larger arm that extends about 2 miles NW. In rounding the N point, between the entrance channel and Thorne Bay proper, follow a course slightly S of midchannel to avoid a gently sloping sandbar that extends SW from the point. After this point is cleared, Thorne Bay is clear and has depths of 4¼ fathoms (7.8 m) or more to a line running SW from the lumber camp float in the small cove in the N shore of the bay. Midbay, on a line with the float bearing 052°, is a shoal with a least depth of 1 fathom (1.8 m). NW of this line the bay shoals gently to the head. A fan-shaped shoal area extends about 0.25 mile from the mouth of the Thorne River.

(306) Floating logs and deadheads may be encountered in the bay and off the entrance; caution is advised. Reefs and rocks in the entrance and out into Clarence Strait are usually covered with kelp; this kelp may be towed under by the existing currents.

(307) The bight S of the large island in the entrance to Thorne Bay affords a good anchorage in 14 to 20 fathoms (25.5 to 36 m); the channel to it favors the main S shore. A large reef, covered with kelp, extends almost midway into this channel from the large island. The small cove in the N shore of the bay, about 2.3 miles WNW of the island in the entrance, has depths of 2 to 3 fathoms (3.7 to 5.5 m). In 1976, a logging company was operating in this small cove and was maintaining several floats for small craft, tugs, and float planes. Gasoline, diesel fuel, water, and some provisions can be obtained in an emergency. The logging company maintains telephone and radiotelephone communications with other States and parts of Alaska.

(308) **Tolstoi Island**, about 2 miles NW of Tolstoi Point, is low and flat, with a few scrubby trees.

(309) **Snug Anchorage** is about 1 mile W of Tolstoi Island. It is about 1.2 miles long and from 0.1 to 0.2 mile wide. An islet is in the center of the bight at the head of the anchorage. In entering, pass S of the islands off the entrance, then favor the W shore to avoid the rock awash that is about 300 yards (274 m) S of an island off the N point of the entrance. The channel passes to the SW of the small islets that are close to the N shore. Depths of 4 to 5 fathoms (7.3 to 9.1 m) were obtained in the narrowest part of the channel, and depths of 3 to 16 fathoms (5.5 to 29.5 m) were found at the head of the cove. In the small cove E of Snug Anchorage, depths of 12 to 15 fathoms (22.0 to 27.5 m) were found. Rocks are along the W side and near the head of this cove. Irregular depths indicate the necessity for caution in Snug Anchorage and the cove to the E.

(310) **Forss Cove** is about 1.8 miles NNW from Tolstoi Island. A narrow channel 0.3 mile long in a SW direction and in places less than 50 yards (46 m) wide, opens into a bight 0.5 mile long in a NW direction and 0.2 mile wide, in which there are numerous small islets. A midchannel course should be followed until about 150 yards (137 m) before the entrance opens into the cove. The SE shore should then be favored to avoid a large reef and shoal area. The bottom comes up to about 1¼ fathoms (2.3 m) at this point. Anchorage in 14 fathoms (25.5 m) can be obtained 100 yards (91 m) NW of the large island SW of the entrance. The N part of the cove has numerous reefs and shoal areas and should not be entered.

(311) From Forss Cove to Narrow Point there are numerous small bights, exposed to S winds, in which there are rocks and small islets.

(312) **Narrow Point**, about 7.5 miles NNW of Tolstoi Point, shows as a wooded knob just above the wooded shore in its vicinity. **Narrow Point Light** (55°47'27"N., 132°28'35"W.), 35 feet (10.6 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the point.

(313) A small cove, open to the SE, is 5.5 miles NW of Narrow Point. It is rocky in the N part.

Chart 17423

(314) **Ratz Harbor**, about 7 miles NNW of Narrow Point, is a small anchorage that is little more than 0.5 mile long and 0.2 mile wide. It affords shelter from all winds except from N to NE, and these probably blow home with some force. Williwaws from the SE at times strike with great force in this anchorage. The NW point at the entrance is a ledge with an islet near the shore, and two heads, each with a single scrubby tree, near its SE end all connected at low water. **Ratz Harbor Entrance Light** (55°53'16"N., 132°35'53"W.), 20 feet (6.1 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the outer head or islet. From the SE point at the entrance, a ledge covered only at high water extends 175 yards (160 m) NW and has two rocky heads. The width of the channel between is about 230 yards (210 m).

(315) A careful midchannel course carries in clear. Depths of 4 to 11 fathoms (7.3 to 20.1 m) were found at the entrance and 4 to 13 fathoms (7.3 to 24 m) inside. The usual anchorage is in the middle of the S part of the harbor. There is a flat in the W indentation of the harbor, and a few stub pilings on the SE side of the harbor.

Chart 17360

(316) The shoreline from Ratz Harbor NW to **Clear Creek**, a distance of 6.3 miles, is practically straight. A small rock, 20 feet (6.1 m) high, is 450 yards (411 m) to the NE of the mouth of the creek.

(317) **Luck Point** (55°59'N., 132°44'W.), on the W side of Clarence Strait opposite Point Stanhope, is a rounding point without marked features. Here the shoreline turns WNW and changes from a steep, rocky formation to a boulder beach about 100 yards (91 m) wide. About 0.4 mile WNW from Luck Point, a narrow ledge extends offshore for about 0.3 mile. From about 0.7 mile NW of Luck Point to Coffman Cove, the coast is fringed with bare, awash, and submerged rocks. The outermost rock is about 0.3 mile from the shore.

(318) **Etolin Island**, on the NE side of Clarence Strait near its head, separates Ernest Sound from Stikine Strait. The coast is bold, rocky, and densely wooded, and is broken by numerous inlets and off-lying islands.

Chart 17385

(319) The Onslow Islands, on the N side at the entrance to Ernest Sound, are five wooded islands and numerous small ones, the largest of which is **Onslow Island**, 3.5 miles long and about 350 feet (106 m) high.

(320) The W shore of Onslow Island is indented with small bays filled with ledges and rocks. Small rocks and islets extend offshore 0.1 to 0.5 mile. An inlet about 0.5 mile long, opening from the S and extending E, is about 1.8 miles from Ernest Point. It is unsurveyed, but it is reported that 8 feet (2.4 m) can be carried through the narrow neck near high water, and that 4 fathoms (7.3 m), mud bottom, are obtained within. Rocks awash and kelp are in the entrance, and tide rips extend off the point.

(321) **Ernest Point** (55°51.1'N., 132°22.1'W.) is the southernmost point of Onslow Island and is the NW point to Ernest Sound. Foul ground extends for 0.5 mile SSE of the point.

(322) **Onslow Point**, about 2.1 miles ESE of Ernest Point, consists of a large and small islet with a large bare rock to the SE; deep water is close SW of the point. Reefs and foul ground connect Onslow Point with **Eagle Island,** a large wooded island N of Onslow Point. The cove on the SE side of Eagle Island is foul. Tide rips form off Onslow Point.

(323) **Muffin Islands** are a group of four small wooded islands about 0.4 mile E of Eagle Island. The channel between Eagle Island and Muffin Islands is clear. Reefs extend offshore about 0.6 mile to the N and NW of the Muffin Islands.

(324) The SE and E shores of **Stone Islands**, about 0.6 mile N of Eagle Island, are foul; rocks extend offshore 0.2 to 0.5 mile. The small bight between the Stone Islands affords shelter for very small craft to the SE of the wooded island in the entrance. Anchorage may be obtained in 5 fathoms (9.1 m), mud bottom; the channels leading to it are tortuous. The cove in the N shore of the larger Stone Island is completely filled by flats. No freshwater was found here.

(325) The channel between Onslow Island and Eagle Island is clear except for reefs that make out from each side of the channel about 1 mile N from the S end of Eagle Island. The end of each reef is marked by a rock; the rock on the E side of the channel uncovers 8 feet (2.4 m), and the rock on the W side uncovers 6 feet (1.8 m). Midchannel courses are good, but, when passing between the two rocks, slightly favor the E side. The cove on the W side of the channel to the S of the N end of Eagle Island has depths of 3½ fathoms (6.4 m) in the middle and 12 fathoms (22.0 m), mud bottom, at the entrance. Water may be obtained from a small stream at the head.

(326) The channel between Onslow and Stone Islands is irregular, depths of 6 fathoms (11.0 m) being found near the S end. A wooded island is in the passage with deep water between it and the larger Stone Island. Rocks awash are 0.1 mile E and 0.2 SE, respectively, of the wooded island. In passing, favor the larger Stone Island. The channel between Onslow Island and Carlton Island to the N is foul and bares. The passage N of Carlton Island has depths of 5½ to 7 fathoms (10.0 to 12.8 m) and from the S passes E of the rock that uncovers about 8 feet (2.4 m) and is 500 yards (457 m) E of Carlton Island.

(327) A dangerous rock that uncovers about 6 feet (1.8 m) is in midchannel in the passage N of Stone Islands. Keep Stone Islands close aboard about 100 yards (91 m) distant when this rock is covered. A dangerous ledge, which uncovers, extends more than halfway from Etolin Island toward E Stone Island. Rocks awash are just off the N end of the E Stone Island. These dangers render this passage hazardous except at low water.

(328) These channels are small-boat passages and are not suitable as anchorage because of the rocky bottom and the currents that vary in strength from 2 to 4 knots and often are considerably strengthened by a moderate breeze.

Chart 17423

(329) **Dewey Anchorage**, on the NE side of Clarence Strait opposite Ratz Harbor, can be used as a summer anchorage, but the bottom is irregular and rocky; there

are several dangers in the entrance and the protection is poor. **Gull Point,** the NW extremity of Onslow Island, is the SE point at the entrance. A rock awash is about 200 yards (183 m) NW of the point, and a reef, marked by kelp and covered by 1½ feet (0.4 m) of water, is 0.6 mile SW of it. **Carlton Island**, flat and timbered, is the larger island NE of Gull Point; a shoal extends 350 yards (320 m) SW from its W end. **Mabel Island**, about 0.2 mile in diameter, is about 0.8 mile NW of Gull Point; a reef covered at half tide and without kelp is 0.6 mile SSW of the island; two reefs that bare are about 0.8 mile to the NW. The channel between the reefs to the NW has a least depth of 17 feet (5.2 m); a rock awash is 0.1 mile S of the E reef. A 9-foot (2.7 m) spot is 1.3 miles NW of Mabel Island. **Center Island**, about 0.1 mile in diameter, is about midway between Mabel Island and the N shore of Dewey Anchorage. A shoal with a least depth of 23 feet (7.0 m)is between Center and Mabel Islands. A reef extends about 75 yards (68 m) off the NE side of Center Island; a rock awash is just off the end of the reef. A shoal with a least depth of 20 feet (6.1 m) is 0.5 mile SE of Center Island. The area between Center Island and the N shore of Dewey Anchorage is shoal and has a least depth of 21 feet (6.4 m).

Caution

(330) There may be other dangers that are not charted.

(331) **Split Island**, small and wooded, is 0.3 mile to the S of the S extremity of **Kelp Point** (chart 17360), the NW entrance point of Dewey Anchorage. A reef is close to the E end of the island. **Double Island,** small and wooded, is about 0.2 mile S of Split Island. A small wooded islet is 0.1 mile SE of Double Island, and foul ground extends to the NE; the channel between is foul.

(332) To enter Dewey Anchorage from S, stand in on the line of the E sides of Mabel Island and Center Island until abreast of Gull Point, and then pass midway between Mabel Island and Carlton Island, taking care to avoid the 14-foot (4.2 m) shoal 0.5 mile NW of Carlton Island. Anchor 0.4 to 0.5 mile NNW of Carlton Island in 15 to 18 fathoms (27.5 to 33 m).

(333) From W, pass 0.5 mile S of Double Island and head for the N end of Center Island. When abeam the W end of Mabel Island, proceed with caution to the anchorage. The chart is the guide.

(334) Small craft can find better anchorage 0.5 mile E of Carlton Island in 6 to 8 fathoms (11.0 to 14.6 m), hard sand bottom. This anchorage can be entered from W, passing N of Carlton Island, or from SE, using one of the passages described previously.

Chart 17360

(335) **McHenry Anchorage**, about 7.5 miles N of Ernest Point (55°51'N., 132°22'W.), has a clear width of about 700 yards (640 m) and a length of about 1 mile from Avon Island to a small island at its head. It is sheltered except from W, and small vessels can anchor in the SE part of the harbor with shelter from all winds. **Avon Island**, on the N side of the entrance, is small, wooded, and close to shore; it should be given a berth of over 250 yards (229 m). A reef extends about 400 yards (366 m) in a SE direction from the SE side of Avon Island. A rock, with a depth of 1¾ fathoms (3.2 m) over it, is 0.5 mile WSW of Avon Island. **Sand Islet**, with a green bush on it, is close to the SE point at the entrance; a reef that bares and shows kelp extends 0.2 mile NW from it, and a shoal extends 250 E of Sand Islet.

(336) To enter McHenry Anchorage, keep Avon Island aboard, distant 450 yards (411 m), and anchor in the middle, with Sand Islet bearing 198°, in about 8 fathoms (14.6 m); or a small vessel can follow a midchannel course and anchor 250 yards (229 m) W of the wooded island in the SE end of the harbor in 5 to 7 fathoms (9.1 to 12.8 m).

(337) **Quartz Rock** is the extremity of the reef, awash at high water, about 0.3 mile W from the point NW of McHenry Anchorage.

Chart 17382

(338) **McHenry Inlet** has its entrance 5 miles E of Point Stanhope (56°00.9'N., 132°36.5'W.), and 2.5 miles N from McHenry Anchorage. It is horn-shaped, about 4 miles long, and about 0.4 to 0.8 mile wide. Foul ground extends about 1.5 miles in a W direction from the SE entrance point. **Range Island**, the small wooded island in midchannel at the entrance, is the most N of the group off this point and is about 0.4 mile to the SW of a small rocky islet off the NW point of the entrance, with a clear channel between. A 2-fathom (3.6 m) spot is 1.2 miles 310° from Range Island. A long narrow ridge, with depths of 3¼ to 10 fathoms (5.9 to 18.3 m) with deep water on each side, is in midchannel in the direction of the channel, 0.6 mile ENE of Range Island.

(339) **McHenry Islet**, a small rocky islet, is 1.6 miles 082° from Range Island. Foul ground extends in a SW direction from this islet for about 0.1 mile, and to the NW extends to the N shore of the bay.

(340) **Nut Rock** is about 700 yards (640 m) 220° from McHenry Islet. A rock awash is 550 yards (503 m) 073° from McHenry Islet.

(341) In entering, pass about 0.1 mile N of Range Island, then turn between McHenry Islet and Nut Rock, favoring Nut Rock, and follow the trend of the channel

favoring the SE shore until past the rock awash NE of McHenry Islet; then follow midchannel courses. Anchorage may be had in 12 to 19 fathoms (22.0 to 35 m) beyond the turn in the channel. Foul ground extends about 0.3 mile from the head of the inlet.

(342) **Jadski Cove**, on the N side of McHenry Inlet, has its entrance about 1 mile NE of Range Island. A depth of about 10¼ fathoms (18.7 m) was found in the bight in the NW end of the cove, but the approaches are foul.

(343) **Burnett Inlet**, about 5 miles NE of Point Stanhope, extends in a N direction for about 7 miles, with an average width of 0.2 mile. **Fawn Island**, wooded, is on the W side of the channel at the entrance. Three small wooded islands and some rocks extend 0.2 mile off the N shore of Fawn Island. A small wooded islet, with a rock awash 150 yards (137 m) off its N end, is 0.3 mile W of Fawn Island. A 3¼-fathom (6 m) spot is 0.8 mile SW and a 2¼-fathom (4.1 m) spot is 0.5 mile SE of Fawn Island close to the E shore. A midchannel entrance between Fawn Island and the E shore is safe from hazards. There is an anchorage for deep-draft vessels off the small cove on the E side of Burnett Inlet about 0.7 mile due E of Fawn Island. To safely reach this anchorage area, approach from the S on a course that is tangent to the E edge of Fawn Island. At a distance of 0.3 mile from Fawn Island come right to 070° and proceed to the anchorage area about 0.4 mile offshore in a depth of about 20 fathoms (36 m), mud bottom.

(344) Rocks extend from 50 to 100 yards (46 to 91 m) off the E and S shores of **Cannery Point**, the W point of the entrance. A reef, bare at low water, is about 300 yards (274 m) off Cannery Point. The channel between it and the point is too narrow for ships to use. Two shoals separated by depths of 12 fathoms (22 m) are almost in midchannel between Cannery Point and South Burnett Island. The N shoal, about 300 yards (274 m) long in a N direction, has a least depth of 1¼ fathoms (2.3 m) near its N end; the S shoal, about 100 yards (91 m) to the S, is narrow and has a least found depth of 6¼ fathoms (11.4 m). The 1¼-fathom (2.3 m) spot is marked by a buoy. The channel between the shoals and the reef to the W has depths of 10 to 37 fathoms (18.3 to 67 m).

(345) The small cove behind Cannery Point has depths of 6 to 7 fathoms (11.0 to 12.8 m) in the middle, with swinging room of about 150 yards (137 m), and is used by fishing craft for an anchorage.

(346) **North Burnett Island** and **South Burnett Island** are close to the E shore of Burnett Inlet near the entrance. The passage between the midchannel shoal and South Burnett Island has a least depth of 17 fathoms (31 m). **Deadman Island,** about 0.4 mile NNE of Cannery Point, is at the N end of the bight off the NW shore near the entrance. A narrow shoal with depths of 6¼ fathoms (11.4 m) is midway between Deadman Island and North Burnett Island. The channel W of this shoal has depths of 10 to 27 fathoms (18.3 to 49 m), but leads over a 4¼-fathom (7.8 m) spot and probably less water. The channel E of this shoal has depths of 20 fathoms (36 m).

(347) The depth of the inlet remains greater than 10 fathoms (18.3 m) until about 1 mile S of the narrows. There are minimum depths of 1 fathom (1.8 m) at the narrows, which is obstructed by kelp. The inlet above the narrows, about 3.5 miles above Deadman Island, is quite deep and clear. At periods of low water, the upper part of the inlet shoals to less than 5 fathoms (9.1 m) with an even muddy bottom. There is a prominent waterfall on the E shore 3 miles above the entrance. The inlet is too deep for secure anchorage.

(348) **Mosman Inlet**, about 4 miles NE of Point Stanhope, makes NNW into Etolin Island for about 6 miles, with an average width of about 0.3 mile. There are two rocks on the E side about 0.8 mile above **Marble Point**, the E point at the entrance. A reef extends from the N end of the islet lying 1 mile NNW of Marble Point to the W shore. This reef obstructs the N approach to the coves on the W side of the entrance to the inlet. Above this area, the inlet is deep and free of obstructions.

(349) **Cooney Cove** is a narrow inlet to the NE of Rocky Bay. It is exposed to the S, the approach is foul, and there are rocks near the head.

(350) **Rocky Bay,** to the N of Point Stanhope, is studded with rocky islets and rocks awash. **Streets Lake** has its outlet in the middle bight at the head of Rocky Bay. A rock with ½ fathom (0.9 m) on it is 2.5 miles 060° from Point Stanhope.

(351) **Point Stanhope** is the S extremity of a group of islands. A rock with a depth of 1 fathom (1.8 m) over it, marked by a buoy, is 0.8 mile SSW of the point. There are several available passages among these islands for small craft bound for Rocky Bay. **Three Way Passage,** having its entrance about 1.3 miles NW of Point Stanhope, is the best. It has a depth of about 2½ fathoms (4.5 m), is narrow, leads close to several dangers, and requires local knowledge for its safe navigation.

(352) Anchorage may be obtained by small craft drawing less than 4 feet (1.2 m) in the channel just E of Three Way Passage. The widest part of the channel is about 150 yards (137 m) and is entered by way of Three Way Passage. There is an anchorage for very small craft in the cove, 2.6 miles NW from Point Stanhope. The channel that leads from the head of the cove to Rocky Bay bares in spots and is suitable only for boats drawing about 1 to 3 feet (0.3 to 0.9 m), with local knowledge and making passage at high water only.

(353) The Etolin Island shore from Point Stanhope NNW to Point Harrington, a distance of about 10.5 miles, is rocky and generally foul. A fringe of islands parallel the

coast about 0.6 mile off to Point Harrington. It comprises **Abraham Islands**, **Screen Islands**, **Marsh Island**, **Observation Island**, and **Steamer Rocks**, which is a wooded islet about 100 feet (30.5 m) high with a rock 12 feet (3.6 m) high that marks the SSE extremity of a ledge that connects them. It is advisable for vessels navigating the strait to give the shore a berth of at least 1.5 miles and pass W of Lincoln Rock West Light. The passage E of the islands may be used by small craft. The chart shows the known dangers.

(354) **Lincoln Rock West Light** (56º03'24"N., 132º41'50"W.), 58 feet (17.7 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on **Lincoln Rock**. A 35-foot (11 m) white square tower on a house, 0.3 mile 062° from Lincoln Rock West Light, is prominent on an islet; it is the site of a former lighthouse.

(355) **Abraham Islands** are 0.6 mile off the W shore of Etolin Island. The largest island is 150 feet (46 m) high and wooded.

(356) **Johnson Cove**, to the E of the N end of Screen Islands, offers anchorage for two or three small craft of less than 4-foot (1.2 meters) draft to those with local knowledge. Strangers should not attempt entrance. Swinging room is limited by ledges and rocks on the W side of the cove, rocks and pilings to the NE and shoal water toward its head. Several islands are off the entrance, all connected by ledges and foul areas. Entrance should only be made S of the rock, awash, 150 yards (137 m) off the SE end of the large island near the entrance and E of the rock, awash at high water in midchannel at the entrance. Water may be obtained from streams that empty into the cove.

(357) **Steamer Bay**, E of **Point Harrington**, affords anchorage at its head, but the holding ground is not good and SE winds draw with considerable force through **Porcupine Creek**. It is open to NW. The bay is 1 mile wide at its entrance, gradually contracting near its head to less than 0.2 mile, then again widening into a basin about 0.3 mile long, into which Porcupine Creek empties. For a distance of about 2 miles from Point Harrington both shores of the bay have some rocks and ledges close inshore with the exception of a reef about 300 yards (274 m) NW of the E shore near the U.S. Forest Service cabin, approximately 1.2 miles from the head.

Local magnetic disturbance

(358) Differences of as much as 3° from the normal variation have been observed at Point Harrington.

(359) The bay is easy to access; a midchannel course leads fair into the inner basin. The best anchorage is probably near the middle of the basin, favoring the E shore, in about 16 fathoms (29.5 m). Small craft may find better bottom by anchoring in 10 fathoms (18.8 m) close to the E shore in a cove, just past the Forest Service cabin on the beach and S of **Independence Island**. A bare rock, 12 feet (3 m) high is near the shore on the NE side of the basin.

(360) **Mariposa Rock**, with 1.6-fathoms (3 m) over it and marked by a buoy off its NW side, is 0.6 mile 312° from Point Harrington.

(361) **Kindergarten Bay**, the deep cove 2 miles N of Point Harrington, is used extensively as an anchorage for small craft. It is one of the best anchorages in the area and affords protection in all weather, although at times strong winds will blow down from the hills. It was reported that the N side of the bay appeared to be clear. Enter midchannel, passing S of the wooded islet, and anchor in 5 to 7 fathoms (9.1 to 12.8 m), soft bottom. Mariners are cautioned to avoid a large rock, covered 4 to 6 feet (1.2 to 1.8 m) at high tide, that was reported close SW of the largest islet near the head of the bay.

(362) **Steamer Point**, 3 miles N of **Point Harrington**, is bold, steep, and heavily wooded. Deep water extends close to the point. **Steamer Point Light** (56°13.4'N., 132°42.8'W.), 30 feet (9.1 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on a small wooded islet close N of the point.

(363) **Kashevarof Passage** and Snow Passage form the head of Clarence Strait and are the two passages connecting with Summer Strait W of Zarembo Island. Kashevarof Passage is wide, but is beset with rocks, reefs, and shoals, with strong tidal currents and tide rips. The pass is used extensively by small craft. Large vessels use Snow Passage, which is clear and marked by lights and a lighted buoy.

(364) (See the Tidal Current Tables for daily predictions in the passages.)

Chart 17401

(365) An unnamed cove (56°01'N., 132°49'W.), on the W side of Clarence Strait about 2.3 miles SE of Beck Island, is noticeable for its low-water area at the head, and a sand beach about 600 yards (548 m) wide. The sand and mud flat extends approximately 0.3 mile from the high water line. The cove is fringed with rocks and shoals. Mariners, without local knowledge, are to use caution in this area. The chart is the best guide.

(366) **Coffman Cove**, protected on the N by Coffman Island, is close W of the unnamed cove and about 1.5 miles SSE of Beck Island. The NW half of the cove is filled with rocks, some of which bare. Good anchorage for small craft may be had in the middle of the SE part

of the cove in 8 to 10 fathoms (14.9 to 18.1 m); mud bottom, and a midchannel course will carry in safely. The passage into the SE part of the cove E of Coffman Island is marked by lights and lighted buoys. In May 2001, a new pier was under construction in the SE part of the cove. Upon completion, the pier will provide a terminal for the Alaska Marine Highway/Inter-Island Ferry Authority. Just S of the new pier is a boat ramp. The outermost dangers in the SE part of the cove are a 2¾-fathom (5.0 m) spot and two rocks awash about 500 yards (457 m) SSW, 0.3 mile SSW, and 0.5 mile S of the southernmost tip of Coffman Island, respectively. A flat extends about 0.2 mile from the SE end of the cove.

(367) In 1976, a logging camp was operating in Coffman Cove. There are remains of log storage booms scattered along the beaches in the SE part of the cove. A small craft and seaplane float is anchored to the bottom and located in the center of the main channel leading to the inner cove, about 0.8 mile SSE of Coffman Island. Water and gasoline are available only in an emergency. Radiotelephone communications are maintained with Ketchikan.

(368) **Lake Bay** is on the S side of Kashevarof Passage between **Stevenson Island** and **Coffman Island**. Across the entrance and in the bay are detached islands and reefs and the best channel is from NE between Beck and Coffman Islands, staying N of Gull Rock.

(369) **Beck Island**, small and wooded, is about 0.8 mile NW of Coffman Island. **Beck Island Light** (56°02'51"N., 132°51'45"W.), 27 feet (8.2 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the N side of the island; it marks the entrance to Kashevarof Passage.

(370) **Gull Rock** and **Barnacle Rock**, awash at highest tides, are about 0.6 mile SSW and W, respectively, from Beck Island; they should be given a berth of over 300 yards (274 m). There are also extensive submerged reefs between Beck Island and **Bush Rock**, about 1.9 miles to the WNW. The latter is 35 feet (10.6 m) high and has bushes on top.

(371) Abreast **Keg Point** (56°02'02"N., 132°55'18"W.), on Stevenson Island, the channel is about 150 yards (137 m) between an extensive shoal that makes out from the E shore and a shoal projecting out about 175 yards (160 m) from Keg Point. There is good anchorage inside the constricted entrance for large or small craft in 6 to 15 fathoms (11.0 to 27.5 m), soft bottom. The buildings of a fishery are on the E shore about 0.3 mile inside the entrance to **Lake Bay Creek**.

Chart 17382

(372) **Point Barnes** (56°03.6'N., 132°55.8'W.), the NE extremity of Stevenson Island, is low and wooded, without characteristics of interest to the navigator.

(373) **Barnes Lake** is a saltwater lake of considerable extent lying SW of Stevenson Island. It has two outlets through which strong currents flow during changes of tide. Small craft up to 10-foot (3.0 m) draft may enter into the lake on high water slack, passing through **Indian Creek**, the W of the two entrances. This passage has many dangers and must be navigated with extreme caution. It has a least depth of 3 feet (0.9 m) in midchannel.

(374) At high water small boats with outboards go from Barnes Lake through **Gold and Galligan Lagoon** into large inner **Sweetwater Lake** (chart 17360).

(375) **Whale Passage** leads S and W of Thorne Island. The passage is used extensively by tugs, oil barges, and a freight boat servicing a logging camp in the bay that extends NW from about the middle of the passage.

(376) This passage has many dangers and must be navigated with extreme caution. The chart is the best guide for mariners without local knowledge.

(377) Shelter for small craft may be found on the N side of the passage near its S entrance in 5 fathoms (9.1 m), soft bottom, in the small cove just after passing between the two charted rocks directly off a small cabin near the beach. The bay that extends to the NW near the middle of the passage affords good anchorage with ample swinging room in about 4 to 10 fathoms (7.3 to 18.3 m), soft bottom. In 1976, a logging camp was operating on the NE side of the bay. Logs are stored on both sides of the bay. Floats for small craft, tugs, and seaplanes are at the camp. Fresh water and gasoline may be obtained in an emergency. Radiotelephone communication is maintained with Ketchikan. An excellent anchorage for small craft in all weather may be found when headed N from the middle of Whale Passage, on the E side between the irregularly shaped wooded island and the shore of Thorne Island. Enter around the N end of the wooded island and N of the charted rocks, pass S along the E side of the island, keeping the charted rocks on the starboard side, and come to anchor in 4 to 5 fathoms (7.3 to 9.1 m) of water, soft bottom, off the SE tip of the small island and a cabin on the shore of Thorne Island.

(378) **Kashevarof Islands**, on the NE side of Kashevarof Passage, are low and wooded, though there are many bare rocks. There are many passages between the islands, but all are beset with numerous rocks and reefs. Extreme caution is advised when navigating between these islands.

(379) The **Blashke Islands** form a group of islands at the SE end of the Kashevarof group. All are wooded and separated by narrow foul channels. **Rose Rock**, **Rose Island**, **Seal Rock**, **The Triplets**, and **Deichman Rock** are on the foul ground to the SE.

(380) The islets and bays at the NW end of Kashevarof Passage are described with Snow Passage following.

(381) The currents at the NW end of Kashevarof Passage are similar to those of Snow Passage, but their velocity is considerably less. Many small eddies and whirlpools are found in this area.

(382) The main channel, Kashevarof Passage, leading between Beck Island and The Triplets to Point Colpoys and MacNamara Point was examined by the NOAA Ship RAINIER in 2000 with full bottom coverage, and the dangers are shown on the charts. There are dangerous reefs and rocks, but passage can be had by following the chart closely.

(383) **Kashevarof Passage Light** (56º10'47"N., 133º01'18"W.), 27 feet (8.2 m) above water, is shown from a skeleton tower with a red and white diamond-shaped daymark, on the W side of a small islet off the West Island.

(384) **Exchange Cove**, on the NW side of Kashevarof Passage about 2 miles NW of Kashevarof Passage Light, is about 0.2 mile wide and 2.5 miles long, and is the largest sheltered anchorage in this vicinity. It has room for several small vessels and is well protected from all directions. The depths are 10 fathoms (18.3 m) at the entrance, shoaling gradually toward the head. Exchange Island forms the E shore of the N part of the cove.

(385) To pass through the N part of Kashevarof Passage, West Island should be left about 0.5 mile to the E to avoid a 2¾-fathom (5.0 m) spot. Pass midway between West Island and Kashevarof Passage Light; thence about 0.2 mile to the E of the small rocky wooded islet that is about 0.8 mile E of the S end of Exchange Island; thence in midchannel between Exchange Island and the small double island to the N. Continuing northward, travel midchannel between Prince of Wales Island and Fire Island, avoiding the kelp covered rocks which are 0.5 mile due north of this pass, just 0.2 mile E of Prince of Wales. After Fire Island, the channel splits with passage between Tide and Bushy Islands, or Rookery and Tide Islands. A 3½-fathom shoal exists 1 mile SSE of Tide Island.

(386) There is another channel between **Fire Island** and **Echo Island**. Echo Island, about 150 feet (46 m) high and wooded, has foul shores with the outermost danger extending about 800 yards 732 m) SSW. A rock awash, marked by a daybeacon, is in the channel about 1.1 miles S of Echo Island; the channel W of Fire Island is preferred. This channel can be transited by keeping the daybeacon 0.2 mile to the E and the foul shores which extend off of Echo Island 0.3 mile to the E. There are a few 3½ -fathom shoals on the outer limits of this channel and a rock which extends 0.3 mile off of the eastern shore of Fire Island. Depths in this channel run from 7 to 15 fathoms. The channel to the S of **Shrubby Island** is suitable for small craft. In making the passage avoid kelp at all times. Transit between Shrubby Island and the daybeacon is not advised due to a large rocky shoal area. The channel between **East Island** and **Middle Island** is used by small boats; caution is advised when transiting through this channel due to a ¾-fathom shoal at the NE entrance to this channel.

(387) There is a channel E 0.9 mile N of the N end of West Island and S of the small wooded island with an islet bearing to the E. Follow the shore of the Middle Islands about 0.3 mile off and S of the larger wooded island nearest Shrubby Island.

(388) On the S side of the last described channel, between the 240-foot (73 m) island and the larger island SE of it, is a shelter for small craft in all weather.

(389) **Key Reef** is an extensive reef about 1.8 miles E from the Kashevarof Islands. The N end of the reef, about 3.5 miles W of Point Harrington, usually shows at high water as two rocks about 5 feet (1.5 m) high and about 100 yards (91 m) long, but they are awash at extreme high tides. **Key Reef Light** (56°09'36"N, 132°49'54"W.), 43 feet (13.1 m) above the water and shown from a single pile on a truncated concrete pyramid with a red and white diamond-shaped daymark, is near the N end of the reef. A number of low water rocks are near Key Reef. **Key Reef Rock** about 0.7 mile SE uncovers 12 feet (3.6 m).

(390) **Bluff Island** is a small wooded island about 1.8 miles to the WNW of Key Reef. Islets extend about 250 yards (229 m) from the N and S ends of the island. The E and W shores are clear.

(391) **Zarembo Island**, heavily wooded, is at the head of Clarence Strait. A low valley extends E and W across the island. The shoreline is rocky, with off lying rocks and reefs, except along the E shore. There are also numerous logs on its beaches, which dislodge during spring tides and stormy weather. The SW shore of Zarembo Island has kelp patches and rocky shoal areas extending out 0.6 mile.

(392) **Point Nesbitt**, the S point of Zarembo Island, has a broken ledge and foul area that extends 0.2 mile offshore and rises to high ground inshore.

(393) **Nesbitt Reef** is a dangerous reef that extends 0.8 miles S from Point Nesbitt. Near the outer end of the reef is a rock that uncovers 12 feet (3.6 m). There are rocks that bare a short distance outside it and a string of rocks between it and the shore, which covers at various stages of the tide. The tidal currents have considerable velocity in its vicinity, and care should be taken,

especially in the foggy weather. Shoals with a least depth of 4.5 fathoms (9.0 m) are located 0.8 mile E of the reef. **Nesbitt Reef Light** (56°13'13"N., 132°51'50"W.), 27 feet (8.2 m) above the water, shown from a pile with a red and white diamond-shaped daymark is on the S end of Nesbitt Reef.

(394) From Point Nesbitt NW to **MacNamara Point**, a low wooded point, a distance of 9 miles, ledges extend offshore in places about 0.5 mile, almost all of which bare. Rocks extend about 0.4 mile S from MacNamara Point.

(395) From MacNamara Point NE to St. John Harbor the shore is fringed with ledges to a distance of 0.5 mile in places, with broken ground farther out, and this shore should be given a berth of 1 mile or more.

(396) **Snow Passage** is between **Bushy Island**, the northernmost of the Kashevarof group, and Zarembo Island. It is a deep channel with foul shores and strong tidal currents. Snow Passage is largely used by vessels bound from or to Wrangell Narrows or between Clarence and Sumner Straits, and not desiring to touch at Wrangell, as it is shorter than the route through Stikine Strait. It is clear in midchannel, except for a shoal with a depth of 4½ fathoms (8.2 m) in the middle of the channel at the N end, 0.7 mile ENE of Round Island. The shoal is marked on its W side by a buoy. The shoals in Snow Passage are clearly marked by kelp at slack water. During spring tides, the passage may have a considerable number of drifting logs that may endanger vessels. The passage is transited by tugs, barges, coastal freighters, as well as cruise ships from May through September. Larger vessels are advised to make a Security call prior to entering Snow Passage in either direction.

(397) **Voluntary vessel traffic procedures** have been established for gillnet vessels and deep-draft vessels transiting Snow Passage. See the description of **Clarence Strait** at the beginning of this chapter for designated tracklines and procedures.

(398) **Bushy Island Light** (56°16.6'N., 132°57.6'W.), 22 feet (6.7 m) above the water and shown from a skeleton tower on a brown cylindrical base with a red and white diamond-shaped daymark, is on a rock off the NE end of Bushy Island, and marks Snow Passage. From points to the NW the light appears well off the Bushy Island shore. Just S of Bushy Island Light are bare rocks which extend 0.2 mile E of Bushy Island. The submerged rocks in this region are covered by kelp.

(399) A lighted buoy is about 0.7 mile SE from Bushy Island Light. It marks the E side of the channel close to a kelp patch near the edge of which are two rocks covered at half tide.

(400) Excellent anchorage may be had NW of Bushy Island in 15 to 22 fathoms (27.5 to 40 m), with Tide Island bearing 209°, distance 1 mile. This anchorage is protected from all but winds from the NW.

(401) The currents of Snow Passage somewhat resemble those of Seymour and Sergius Narrows in their peculiarities. The flood or SE current has a velocity of 1.4 to 3.4 knots and the ebb or NW current 3.1 to 4 knots in the narrowest part of the passage. Swirls of some severity at times occur from abreast Ossipee Channel to the N end of Bushy Island; W of the last named point they are very much lessened. Particularly steep waves exist at both entrances to Snow Passage during strong S winds with contrary currents. (See the Tidal Current Tables for predictions of times and velocities of the current in Snow Passage.)

(402) **Ossipee Channel** is between Shrubby and Bushy Islands with the channel becoming more constricted toward the west. An examination by shallow water multibeam indicate depths ranging from 5 to 9 fathoms in the midchannel. A dangerous submerged rock with a least depth of 0.8 fathom (1.6 m) extends 0.14 mile into the channel from the NW shore of Shrubby Island and an area foul with rocks lies 0.1 mile from the SW end of Bushy Island. This constricts small boat traffic to 0.1 mile between the two sets of rocks on the western end of the channel. Thick kelp and ledges line the channel on both sides.

(403) The current sets fair with the channel in Ossipee Channel. When the current runs N in Snow Passage, its direction in Ossipee Channel is W, and when S in Snow Passage, its direction in Ossipee Channel is E.

(404) **Tide Island** is small consisting of 3 stands of trees that are connected by ledges that bare at low water. It lies about 2.2 miles WNW of Bushy Island. Rocks, marked by kelp and bare at low water, are to the SE and SW, close-to.

(405) **Rookery Islands**, three in number and wooded, are in midchannel near the NW end of the passage and 1.8 miles SW of Macnamara Point. Between the islands are bare rocks and ledges that cover, and close W of W Rookery Island are two islets, each with a clump of trees. **Rookery Islands Light** (56°18.9'N., 133°06.4'W.), 40 feet (12.2 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the NE side of **Round Island**, the easternmost island of the group.

(406) **Salmon Bay** is about 1.2 miles WSW of Rookery Islands. Small craft can find sheltered anchorage in 1 to 3 fathoms (1.8 to 5.5 m) near the head. It is extensively used as a harbor by local boats during certain seasons of the year.

(407) A line of detached rocks about 1.4 miles long in a NNW-SSE orientation, bare at different stages of the tide and marked by kelp at slack water, is about midway between Rookery Islands and Point Colpoys and from 0.2 to 0.7 mile offshore. A daybeacon is on a rock at the

NW end, 0.7 mile NE of Bay Point. The channel leading along the shore W of them is clear.

(408) The bays and coves to the S of Salmon Bay are almost dry at low water and have foul entrances. They lead into an extensive salt marsh that parallels the beach. Overfalls, currents, and rocks make the various entrances dangerous except at high water. It is reported that at extreme high water boats drawing 5 feet (1.5 m) make the passage from Salmon Bay to the first bay to the S through the salt marsh.

(409) **Point Colpoys**, about 4.5 miles W of Macnamara Point, is low and wooded, and is marked by **Point Colpoys Light** (56°20.2'N., 133°11.9'W.), 19 feet (5.8 m) above the water and shown from a skeleton tower with a red and white diamond-shaped daymark. Irregular bottom extends about 0.3 mile to the N.

(410) **Bay Point** is a low wooded point about 1 mile to the SE of Point Colpoys.

Chart 17360

(411) Ernest Sound and Stikine Strait, with their connecting passages, Zimovia Strait, Blake Channel, and Eastern Passage, afford various routes from Clarence Strait to Wrangell. Large vessels go by way of Stikine Strait, but small craft frequently go by way of Ernest Sound and Zimovia Strait, or by Ernest Sound, Blake Channel, and Eastern Passage. The last two routes afford better protection in stormy weather. The distances to Wrangell by these routes from a point 2 miles W of Lemesurier Point are about 52, 50, and 60 miles, respectively.

Chart 17385

(412) **Ernest Sound** is the large body of water that opens from Clarence Strait between Lemesurier Point and Onslow Point, with a width of about 4.5 miles between the points. Its general direction is NNE for about 25 miles to Point Warde; from this point, under the name of Bradfield Canal, it extends about 17 miles in a general E direction, with a width of about 1 mile. There are numerous small islands in the sound and two large ones, one on each side, about midway of its length.

(413) From Ernest Sound two arms extend NNW and join N of the northernmost extremity of Wrangell Island near the mouth of Stikine River. The W arm is called Zimovia Strait. The S part of the E arm is called Blake Channel and the N part Eastern Passage. A passage to Wrangell through Ernest Sound, Blake Channel, and Eastern Passage is practicable and is sometimes used. Small craft use Zimovia Strait frequently.

(414) The principal dangers in the main part of Ernest Sound are McHenry Ledge (55°46.7'N., 132°18.0'W.), with a depth of ¼ fathom (0.4 m) and marked by a lighted bell buoy, and a 2¾-fathom (5.0 m) rock about 2.2 miles NE of McHenry Ledge off the entrance to Union Bay. A shoal area with a least depth of 13 fathoms (24 m) is off the entrance to Ernest Sound in 55°49.1'N., 132°21.5'W. To keep in the middle of the channel between Eaton Point (55°56.3'N., 132°04.0'W.) and the N end of Deer Island, vessels should pass 0.6 mile W of Eaton Point; thence 1.2 miles W of Point Peters, the S extremity of Deer Island; thence in midchannel between Deer and Niblack Islands; thence 0.6 mile W of the N end of Deer Island.

(415) Lemesurier Point, Lemly Rocks, McHenry Ledge, the Onslow Group, on the N side of the entrance to Ernest Sound, together with Ernest Point, Onslow Point, and the passage leading from Ernest Sound to Dewey Anchorage, have been described with Clarence Strait earlier in this chapter.

Currents

(416) The currents in Ernest Sound follow the general direction of the channel. The flood current sets N with an average velocity of about 1.7 to 2.1 knots. The ebb current sets S with about the same average velocity. At the junction of Bradfield Canal and Blake Channel, the joining of the tidal currents cause swirls. (See the Tidal Current Tables for daily predictions.)

Chart 17423

(417) **Union Bay** is E of Lemesurier Point. At its head is a large lagoon, mostly bare, into which a large stream, **Black Bear Creek**, empties. The waters of the bay are deep, but there is anchorage with protection from S, on the E side of the head of the bay, in about 18 fathoms (33 m). The SW angle of the bay is foul for 0.2 mile offshore. The only danger, except near the shores, is a rock with a depth of 2¾ fathoms (5.0 m) in the middle of the entrance and about 2.5 miles NNE of Lemesurier Point. At high water do not approach the head of the bay too rapidly as the points at the entrance to the lagoon are platforms of rock only 3 feet (0.9 m) above high water and are not readily distinguished. Anchor in 18 fathoms (33 m), about 0.4 mile offshore, on the E side of the head of the bay, with the NE point at the entrance to the lagoon bearing about 140°.

(418) For anchorage, fishermen use the cove behind the small islet (55°46.3'N., 132°11.0'W.) and the long cove behind **Magnetic Point**, about 1 mile N of the islet.

(419) Small boats use the channel between **Union Point**, which is low and wooded, and the two islets S of it.

(420) An estimated current velocity of 3 knots sets S around Union Point on the ebb.

Local magnetic disturbance

(421) Differences of as much as 10° from the normal variation have been observed in the E part of Union Bay, and a difference of 38° from normal variation has been observed at a small islet 0.8 mile SW of Union Point.

(422) **Vixen Harbor**, 0.8 mile E of Union Point, is about 0.4 mile long, with an even sand and mud bottom and an average depth of 4½ fathoms (8.2 m). The entrance channel, about 100 yards (91 m) wide, has depths of only 2 fathoms (3.6 m). In entering, proceed carefully to the N of and close to the small islands in the entrance. Temporary anchorage for larger craft may be had in 16 fathoms (29.5 m), sand and gravel, 0.4 mile N of the small island in the entrance.

Chart 17385

(423) **Vixen Inlet**, about 6.5 miles NE of Lemesurier Point and S of **Vixen Point** (55°51.0'N., 132°05.5' W.), has a small islet, **Sunshine Island**, in the middle of the entrance and a stream at the head. A reef makes out from the W side of Vixen Point and extends S about 1.2 miles. A reef with a least depth of ¾ fathom (1.3 m), not marked by kelp, is in the middle of the entrance, 1.2 miles 284° from Sunshine Island.

(424) In entering, the passage to the S of Sunshine Island is preferable. Round the S end at a distance of about 250 yards (229 m) and select anchorage in depths of 11 to 15 fathoms (20.1 to 27.5 m). The inlet dries for a considerable distance from the head of the flats, dropping off sharply to 7 fathoms (12.8 m).

(425) **Emerald Bay**, open and exposed, is 2.8 miles N of Vixen Point. It is used by fishermen during E weather, but is a poor anchorage. A stream empties at its head.

(426) **Easterly Island**, a small timbered island with sheer steep sides, is in midchannel about 2.8 miles N of Vixen Point. **Easterly Island Light** (55°53'47"N., 132°05'27"W.), 28 feet (8.5 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the N end of the island.

(427) **Petersen Islands**, separated by a narrow channel with a depth of 3 fathoms (5.5 m) and having the appearance of a split island, are about 4.6 miles W of Easterly Island Light and 3 miles SSW of Brownson Island.

(428) **Westerly Island**, small and wooded, is about 1.4 miles S of Brownson Island. The channel between it and Brownson Island is clear, except for the rocks N and NNE of Petersen Islands.

(429) **Brownson Island**, on the W side of Ernest Sound 7 miles NE of Onslow Point, is cut almost in two by a large lagoon. A group of small islands is separated from the S end of the island by a channel about 0.1 mile wide, suitable for launches, which also find anchorage there.

(430) An island, small and wooded, is 0.7 mile SE of Brownson Island. Rocks awash at extreme high tide are about 0.2 mile E of the N end of the island. About 0.2 mile E of these rocks is a cluster of rocks that bare about 5 feet (1.5 m) and are marked by a daybeacon. These constitute a danger. In navigating this section of Ernest Sound, Eaton Point on the Cleveland Peninsula shore should be favored.

(431) A small, narrow island, with rocks off its N and S ends, is close to the E shore of Brownson Island, near the S end. The channel separating the two is used by launches, the deeper water being W of the rock off the point N of the middle of the island.

(432) **Canoe Passage** separates Brownson Island from Etolin Island. It runs in a N direction, with depths too great for anchorage, until the narrows are reached about 2 miles from the N end, where the channel dries and in places is 100 yards (91 m) wide. Pass E of a small islet at the N end of the narrows. A shoal makes out about 150 yards (137 m) from the W shore, 0.4 mile S of the N end of the passage. Beyond this point midchannel depths are the greatest. At the N end of Brownson Island, the passage turns E, increases in width, and affords anchorage in 13 fathoms (24 m), sand bottom.

(433) **Deer Island**, E of the N part of Brownson Island, is on the E side of Ernest Sound. There are a number of islands and rocks close to the W shore of the island.

(434) Two coves indent the W shore of the S part of Deer Island. The more S cove is entered from the S just W of **Point Peters**, the S point of Deer Island. The cove's W shores are formed by two islands. A depth of 10 fathoms (18.3 m) can be carried in the narrowest part of the entrance by avoiding the foul ground that extends off the E side of the S island, and the rocks that extend about 0.1 mile off the W side of Point Peters. Depths inside range from 7 to 35 fathoms (12.8 to 64 m). There is a narrow small-boat passage between the two islands and between the N island and Deer Island. The more N cove, about 2 miles N of Point Peters, has depths of 8 to 38 fathoms (14.6 to 69 m). Rocks are 0.5 mile inside the entrance, 0.1 mile from the W shore. The channel leading NW from the NW end of the cove bares in places. This channel and the channels between the islands close to the W shore of Deer Island are suitable for small boats only.

(435) **Kuakan Point** is the N point of Deer Island. A 3½-fathom (6.4 m) spot is 0.2 mile N of the point, and a small cove too deep for anchorage is SE of the point.

(436) **Seward Passage**, deep and clear, separates Deer Island from the mainland. **Watkins Point** (55°57.5'N., 132°02.3'W.), the S point of the S entrance, is low and timbered. **Sunny Bay** and the small coves between Watkins Point and **Point Santa Anna**, about 3.2 miles to the ENE, are used by launches. A group of islands is off the SW end of Sunny Bay, the outermost of which, **Change Island**, is timbered.

(437) **Santa Anna Inlet** is on the E side of Seward Passage about 2.7 miles NNE of Point Peters. A shoal area extends about 200 yards (183 m) off the SW shore about 0.5 mile from the entrance. From 1 mile within the entrance the midchannel depths decrease gradually from 18 to 9 fathoms (33 to 16.4 m) near the head. Small craft will find good anchorage in 9 fathoms (16.4 m) near the head of the inlet.

(438) **Frosty Bay** is on the E side of Seward Passage near the N end. Two rocks, bare at half tide, are about 150 yards (137 m) N of the S point of the entrance. Fishing craft anchor in 7 fathoms (12.8 m) in the SW part of the bay. The head of the bay narrows, then widens, forming a bight with depths less than 1 fathom (1.8 m). A large stream empties at the head of the bay.

(439) **Niblack Islands** are a cluster of small islands between Brownson and Deer Islands. The passage on the E side is deep and clear. **South Niblack Islands Light** (56°00'24"N., 132°05'26"W.), 24 feet (7.3 m) above the water, is shown from a square frame structure with red and white diamond-shaped daymarks on the E side of the largest of the southernmost Niblack Islands.

(440) **Bold Island**, with a conspicuous cliff 100 feet (30.5 m) high on the W shore, is at the entrance to Menefee Inlet about 3.6 miles NNW of South Niblack Islands Light. A channel with a depth of 15 fathoms (27.5 m) separates Bold Island from a group of small islands to the S.

(441) **Menefee Inlet**, on the W side of Ernest Sound, is deep to within 1 mile of the head, where three fair-sized streams empty. Anchorage may be had 1.2 miles from the head of the inlet in 14 fathoms (25.5 m), sand and mud bottom.

(442) **Fisherman Chuck** separates **Menefee Point**, the low wooded point on the S side of Menefee Inlet, from Etolin Island. It is from 30 to 100 yards (27 to 91 m) in width, has a depth of 14 fathoms (25.5 m) at the N entrance, shoals to 2 fathoms (3.6 m) 0.3 mile to the S, and thence to the S end is dry except at high water. It is used as an anchorage by fishermen.

(443) **Southwest Cove**, to the N of Bold Island, is too deep for anchorage. A reef extends offshore about 100 yards (91 m) from a point at the head of the cove. Very small craft find anchorage back of the island on the E side of the cove.

(444) **Found Island**, at the S entrance to Zimovia Strait and about 3.2 miles NE of Bold Island, is rectangular in shape and wooded, with ledges that extend about 100 yards (91 m) off the N shore. **Found Island Light** (54°06'10"N., 132°04'49"W.), 34 feet (10 m) above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the SW side of the island. A grass-covered rock, 12 feet (3.6 m) high, is 0.2 mile W of the N end of the island. A small submerged reef, 125 feet wide, awash at low water and marked by a red and white daybeacon, is 0.4 mile N of Found Island. **Blanche Rock**, 7 feet (2.1 m) high, about 1.1 miles SSW of Found Island off the S point of the entrance to Zimovia Strait, is conspicuous because of its white color.

(445) **Southeast Cove**, about 1.5 miles NE of Found Island has mostly steep shoreline on the W side of the cove and gravel beaches on the E side. It does not afford anchorage.

(446) **Fools Inlet** is about 5 miles NE of Found Island. Mudflats bare 0.9 mile from its head, almost to two small islets. Anchorage may be had in 14 to 19 fathoms (25.5 to 35 m) S of the S islet.

(447) **Point Warde** (56°10.5'N., 131°58.1'W.), to the SE of Fools Inlet, is the S point at the entrance to Bradfield Canal. The point rises to two not very definite timbered knobs with higher land to the E. The shore is rocky. Cliffs on the W face of the point average 80 feet (24 m) in height.

(448) Foul ground extends about 75 yards (69 m) off the N shore of the cove, 1 mile S of Point Warde. The cove has depths of 18 to 38 fathoms (33 to 69 m) in the middle. It shoals gradually to the N shore. In the small bight on the N side of the cove, depths range from 6 to 9 fathoms (11.0 to 16.4 m).

(449) **Bradfield Canal** is apparently free of dangers, although, in 1976, a shoal about 10.8 miles above Point Warde with a depth of 10 fathoms (18.3 m) near the end was reported to extend toward the middle of the canal from the N shore. About 12 miles from Point Warde, the canal is almost closed by **Duck Point** which is wooded. The small cove W of the point affords the best protection for small craft in the canal. The best anchorage is at the head of the cove in depths of 5 to 8 fathoms (9.1 to 14.6 m), soft bottom.

(450) The navigable channel of Bradfield Canal above Duck Point follows the N shore of the point, being restricted in one place to a width of 0.2 mile by a small islet which is passed on its S side. Beyond this point the canal continues 2 miles, where it ends in a broad flat off the mouths of two large streams.

(451) **Anan Bay**, about 2.3 miles E of Point Warde, is an open bight on the S shore of Bradfield Canal. A large salmon stream empties into Anan Bay and offers a good

shelter and anchorage for small craft during S weather in 5 to 10 fathoms (9.1 to 18.3 m), mud bottom. A mooring float is on the E side of Anan Bay in about 56°11'10"N., 131°53'26"W. About 450 yards (411 m) SW of the mooring float, shoaling to ¾ fathom (1.3 m) has been reported in about 5°11.0'N., 131°53.8'W. There are no other known dangers other than those charted. The U.S. Forest Service maintains a bear observatory on **Anan Creek** at the large waterfall about 0.5 mile from the beach. A trail marker on the beach indicates the end of a well-maintained trail leading inland along the creek and passing the bear observatory. This area is visited each year by many people who come to observe the thousands of salmon in the stream and passing up the falls, and the many black bear feeding on the salmon.

(452) **Zimovia Strait**, between Etolin Island and Wrangell Island, connects Ernest Sound with the E end of Sumner Strait. It is about 25 miles long, varies in width from about 0.4 to 2.5 miles, and furnishes a convenient route for small vessels bound from Ketchikan to Wrangell. The critical part of the passage is in **The Narrows**, in the vicinity of Button Island, (56°12'04"N., 132°15'05"W.), where the channel is tortuous, but marked by buoys, daybeacons, and lights.

Currents

(453) The flood current enters Zimovia Strait from both the N and S ends and meets near Village Islands. The approximate velocity of the current is 1.6 knots. Between Woronkofski Island and Wrangell Island, the ebb sets S and out through Chichagof Pass with a velocity of about 1.7 knots and the flood sets N with a velocity of about 1.7 knots. (See the Tidal Current Tables for daily predictions.)

(454) The channel in places is narrow and intricate, the depths are irregular, and local knowledge is desirable for safe navigation.

(455) A small cove (56°06.9'N., 132°07.0'W.) on the Etolin Island side of the channel, about 1.4 miles from the S entrance, has depths of 18 fathoms (33 m) 0.3 mile from the head, shoaling to 6 fathoms (11.0 m) at the head.

(456) **Thoms Place**, a cove on the Wrangell Island side of the channel, about 3.5 miles from the S entrance, has two small wooded islets in the entrance. A group of islets is near the head close to the SW shore, and another close to the NE shore. A ledge surrounding the SW islets extends E 100 yards (91.4 m) towards the channel. The islet close to the NE shore is surrounded by a ledge on the N and S and a rock awash at low water at the SW corner of the islet.

(457) In entering, pass between the entrance islets, where soundings vary from 6 to 12 fathoms (10.9 to 21.9 m). The channel between the E islet and the Wrangell Island shore is foul. The SW shore and the head of the cove are foul and should be given a wide berth. A wooded island, about 0.2 mile in diameter, is about 0.2 mile off the headland on the W side of the entrance to Thoms Place.

(458) A lagoon, about 0.8 mile long, is W of Thoms Place. Rocks are off the entrance, and the channel is narrow, with a controlling depth of ½ fathom (0.9 m). A small bight just inside the entrance has depths of 6 to 10 fathoms (11.0 to 18.3 m). There are several smooth beaches that have been used for beaching boats. The head of the lagoon is foul. Several private cabins and small piers are found along the shore.

(459) **Zimovia Islets**, about 6 miles from the S entrance to the strait, are a group of low wooded islands, the largest and highest of which has an elevation of 268 feet (82 m). **Zimovia Strait Light 2** (56°11'03"N., 132°12'50"W.), 23 feet (7 m) above the water, is shown from a small pile structure with a triangular red daymark on an islet off the W end of the largest island of the group.

(460) **Trap Rock**, 0.4 mile WNW of Zimovia Strait Light 2 and 0.5 mile E of the entrance to Whaletail Cove, consists of a shoal of sand and boulders that bare 2 feet (0.7 m). A buoy is 100 yards (91 m) E of the rock. Foul ground is between the rock and Etolin Island. The cove, 0.4 mile E of Trap Rock, contains a small private float. The depth in the area is reported to be 3.0 fathoms (5.4 m).

(461) A small islet, 125 feet (38 m) high, is about 0.4 mile N from Trap Rock. Small vessels anchor in the vicinity.

(462) **Whaletail Cove**, W of Trap Rock, has two branches; the entrance has depths of about 1 foot (0.3 m). The W branch, which dries almost entirely, has a small island at its entrance. Depths of 1 to 8 fathoms (1.8 to 14.6 m) are found in the E branch, the greater depths are near the S shore. This branch shoals rapidly near the head.

(463) **Whaletail Point** is on the N side of the entrance to Whaletail Cove. **Button Island**, 160 feet (49 m) high and wooded, is near the N end of a shoal area that extends between the island and Whaletail Point. A buoy about 250 yards (228 m) E of Button Island marks the N edge of the shoal area. A wooded island is about 0.2 mile S of Button Island. The shoal area between these two islands is foul with rocks and kelp and passage is not recommended.

(464) A light is on the Wrangell Island shore 0.2 mile N of Button Island.

(465) **Double Rock** uncovers 11 feet (3.3m), is marked by a daybeacon, and is close to the Wrangell Island shore about 0.2 mile W of the light. A rock, with ½ fathom

(1.0 m) over it and marked on its S side by a buoy, is about 0.25 mile S of Double Rock.

(466) **Midchannel Rock**, which uncovers 3 feet (0.9 m) and marked by a daybeacon, is 0.4 mile W of Double Rock. A deserted village is on the point about 0.3 mile N of Midchannel Rock.

(467) **Village Islands**, a group of islands, rocks, and ledges, are a part of a general shoal area that extends about 2.4 miles NW from the W end of Whaletail Point, and about 0.5 mile off the NE shore of the strait, with the main channel between.

(468) **Village Islands Light 13** (56°12'47"N., 132°18'07"W.), 17 feet (5.2 m) above the water, is shown from a pile structure with a square green daymark on a rock off the NE shore of the largest island of the group.

(469) **Village Rock**, marked by a daybeacon, is on the NE edge of the channel about 0.3 mile from Village Islands Light 13.

(470) **Village Islands Rock**, awash and marked by a daybeacon, is about 0.6 mile NW of Village Islands Light 13 and marks the NW end of the general shoal area, at the W end of The Narrows.

(471) **Olive Cove** is SSW of the Village Islands. A stream of considerable size empties through the flats, which at low water extend about 0.6 mile from the head of the cove. With local knowledge anchorage may be had off the entrance in 8 to 11 fathoms (14.6 to 20.1 m).

(472) A small cove, which dries, is about 0.7 mile E of Olive Cove. Foul ground between this cove, Whaletail Point and the Village Islands makes it dangerous to transit S of the Village Islands without local knowledge.

Chart 17382

(473) **Anita Bay**, on the W side of Zimovia Strait, about 13 miles from the N entrance, is deep and clear inshore on both sides, except for a shoal that extends E about 0.2 mile from the point of the cove on the S side of the bay, 3.7 miles from the entrance. A floating pier is 0.2 mile SW from the same point of the cove. Shoals extend about 0.1 mile off the entrances to small coves, one on each side, about 0.6 mile from the head of the bay. A depth of 10 fathoms (18.3 m) may be obtained 0.2 mile from the head of the bay, but beyond this it shoals rapidly. **Anita Point** (56°13.6'N., 132°22.4'W.), the S point of the entrance, rounded, wooded, and indefinite, may be passed at a distance of 0.2 mile. The bight in the NW shore of the bay near the entrance dries about 50 yards (46 m) offshore. A group of rocks is in the entrance to the bight in the NW shore, 1 mile W of Anita Point. A cabin is on the N shore of the bight. Anchorage may be had near the head of the bay in 13 to 17 fathoms (24 to 31 m), mud and sand bottom, with swinging room somewhat restricted by flats that make out from the head and side of the bay. A fish hatchery is in a small inlet along the NW shore of Anita Bay, 1.2 miles NW of the head of the bay at (56°12'07"N., 132°29'06"W). A log boom lies across the inlet, and a mooring buoy is 60 yards (55 m) offshore of the log boom.

(474) **Turn Island** is close to the Wrangell Island shore about 1.4 miles NE from Anita Point. **Nemo Point** is about 2.8 miles N of Turn Island.

(475) The E shore of Zimovia Strait, between 2 and 5 miles above Nemo Point, is foul with rocks and islets that extend for 0.5 mile offshore. **Young Rock**, about 4.5 miles N of Nemo Point, with a depth of 2 fathoms (3.6 m) and not marked by kelp, is in the center of the strait at its junction with Chichagof Pass.

Chart 17385

(476) **Blake Channel**, locally called **Back Channel**, having its entrance 3 miles NE of Point Warde (56°10.5'N., 131°58.1'W.), connects Ernest Sound with **Eastern Passage** and through it with the E end of Sumner Strait. **Blake Channel Light 1** (56°12'38"N., 131°55'26"W.), 28 feet (8.5 m) above the water, is shown from a skeleton tower with green square daymarks on the W side of the channel entrance. Because of deposits from the Stikine River, shoaling at the N end of Eastern Passage has progressed S. From **Gerard Point** (56°30.8'N., 132°19.6'W.) the shoal extends SE for about 0.5 mile to and beyond the next small creek. The current from the South Arm of the Stikine River is diverted through the channel off Green Point (56°32.5'N., 132°21.5'W.; chart 17360). The deepwater passage N of Highfield Anchorage, 1.7 miles SW of Gerard Point, has been narrowed to a width of less than 0.5 mile by the encroachment of the shoaling from sedimentation on its N side. It is recommended that ships using Eastern Passage favor Simonof Island that is on the N side of Highfield Anchorage, passing a safe distance off. A light is shown from the N side of Simonof Island.

Currents

(477) In Blake Channel the flood current sets NNW with a velocity of about 2.2 to 3 knots, and meets the flood current from Eastern Passage in the vicinity of The Narrows. The ebb current sets in the opposite direction with a velocity of about 2.2 to 3 knots.

(478) In Eastern Passage NW of The Narrows, the flood current sets SE and the ebb sets NW with average velocities of about 1.8 knots. The first and last of the ebb is backed into Eastern Passage by the current from the Stikine River. (See the Tidal Current Tables for daily predictions.)

(479) **Blake Island**, locally called **Ham Island,** is at the S entrance, with a narrow channel on each side. A pinnacle rock, not marked by kelp, with a depth of 1¼ fathoms (2.3 m), is about 0.3 mile N of the SE end of Blake Island. A 5-fathom (9.1 m) spot is SW of Blake Island near the entrance about 150 yards (137 m) from the Wrangell Island shore. If the W channel is used, avoid the rocks off the point of the cove on the W side of the channel when turning in from Bradfield Canal.

(480) The channel E of Blake Island passes E of a reef that extends NW from the NW end of Blake Island and terminates in a wooded islet at the narrowest part of the channel. A midchannel course will avoid the rocks along the E side of Blake Island. The tidal currents have considerable velocity in this vicinity, and a midchannel course should be followed through either channel.

(481) **Neptune Island**, about 7.5 miles NNW of Blake Island, is low and wooded and marked at its SW end by a light. The lagoon with its entrance E of Neptune Island shoals too rapidly for good anchorage. The greater part of the lagoon bares at low water, and the E side is used for log storage. **Aaron Creek** empties into the head of the lagoon.

(482) **Berg Bay**, N of Neptune Island, has depths of 5 to 11 fathoms (9.1 to 20.1 m) to near its head and affords the best anchorage in Blake Channel. Vessels can enter on either side of the island in the mouth, but should give the island a good berth, and avoid a reef that extends 0.1 mile N of the inner end of the island. A log storage area is along the E shore in the E entrance. A mooring float is on the E side of the bay, near the head. Other tributaries of Blake Channel and Eastern Passage shoal rapidly inside their entrances, and are not good anchorages.

(483) Between Neptune Island and The Narrows, the S shore should be favored to avoid dangers that are off the N shore.

(484) **The Narrows**, about 12 miles NNW of the entrance to Blake Channel, is about 1.5 miles long and about 250 yards (229 m) wide at its narrowest part, and connects Blake Channel with Eastern Passage. The only dangers are a reef off the N point at the E entrance, and a rocky area with 3 to 4 feet (0.9 to 1.2 m) over it at high water and marked by a light, on the S side of the channel just W of the narrowest part of the channel.

(485) **Channel Island**, about 100 feet (31 m) high and wooded, is in midchannel in Eastern Passage, about 1.3 miles W of The Narrows. The island, marked near its N end by a light, can be passed on either side but the channel N is more direct. The small cove SE of Channel Island is used as an anchorage by very small craft.

(486) **Point Madan**, on the E side of Eastern Passage, about 2 miles WNW of The Narrows, is high and wooded; a shoal covered 2¼ fathoms (4.1 m) is 0.2 mile SE of the point. **Madan Bay**, E of Point Madan, is deep and clear of dangers. It offers excellent anchorage for small craft N of the projecting point near its head on the W side in 7 fathoms (12.8 m), soft bottom. Large vessels may find anchorage in 12 fathoms (22 m), soft bottom, farther offshore and near the head of the bay.

(487) **Mill Creek** empties into the N side of Eastern Passage about 5 miles above Point Madan. A path leads from the shore to **Virginia Lake**, about 1.2 miles inland.

Chart 17382

(488) **Stikine Strait** connects the N part of Clarence Strait with the E end of Sumner Strait and the waters off the mouth of Stikine River. The strait is broad and deep, and is generally used by vessels going to Wrangell, or following the Inner Passage from Clarence Strait to Wrangell Narrows. Both shores of Stikine Strait are free from dangers except at a few points, and all dangers are shown on the chart.

Currents

(489) In Stikine Strait the flood current sets N through the strait until met by the current from Stikine River W of Wrangell Harbor. Velocity of the current is about 2 knots. (See the Tidal Current Tables for daily predictions.) The glacial waters of the Stikine River usually discolor all the water in the vicinity of Wrangell Harbor.

(490) **Quiet Harbor** (56°14.2'N., 132°39.8'W.) is on the SE side of Stikine Strait about 2.5 miles S of Round Point, Zarembo Island. A well-protected and easily accessible anchorage, except in N wind, is reported to be about 400 yards (366 m) from the head of the harbor in about 16 fathoms (29.5 m), mud and sand bottom.

(491) **King George Bay**, on the W side of Etolin Island about 6.5 miles NNE of Quiet Harbor, dries at low water. Anchorage is not recommended.

(492) **Round Point**, the SE extremity of Zarembo Island, drops steeply from a high headland, rounding off in an almost perfect quadrant. The shoreline consists of gray and yellow cliffs rising to heights of about 40 feet (12.2 m). **Round Point Light** (56°16.7'N., 132°39.5'W.), 24 feet (7.3 m) above the water, is shown from a small white house with a red and white diamond-shaped daymark on the point.

(493) **Meter Bight**, 4 miles N of Round Point, is an open bight with sand flats at the head over 1 mile in extent that bares for about 500 yards (457 m) offshore. Three streams empty through the flats. From the edge of the flats the water deepens rapidly.

(494) **South Craig Point**, marked by a light, is about 7 miles N from Round Point. It has no special characteristics.

(495) **Fritter Cove**, to the S of South Craig Point, is an open bight with rocks off the N point of the entrance. Depths inside Fritter Cove are generally too deep for anchorage.

(496) **Roosevelt Harbor**, NNW of South Craig Point, affords anchorage near the head for small craft in depths of 11 fathoms (20.1 m), mud bottom. In entering, leave the grass-covered rock at the entrance to the S. The channel S of the rock is reported foul.

(497) **Deep Bay** is on the Zarembo Island side of the N end of Stikine Strait, about 1.1 mile N of South Craig Point Light. It is too deep for anchorage until near the head, although the bottom is rocky.

(498) **Woronkofski Island**, E of Zarembo Island, is about 5.5 miles in diameter. It rises in a series of peaks to **Mount Woronkofski** near its center, and is timbered to a height of 2,500 feet (762 m). The shoreline is generally rocky, with off-lying rocks close-to.

(499) **Reef Point**, low and wooded, is the SW extremity of Woronkofski Island. Rocks and kelp extend offshore for about 300 yards (274 m). A rock, with 1¾ fathoms (3.2 m) on it, is about 0.6 mile NNW from this point.

(500) **Drag Island**, about 250 yards (229 m) in diameter and about 150 feet (46 m) high, is 0.2 mile S of the point.

(501) **Point Ancon** is on the W side of Woronkofski Island. **Point Ancon Light** (56°24'18"N., 132°33'19"W.), 20 feet (6.1 m) above the water, is shown from a square frame structure with a red and white diamond-shaped daymark on the point. A rock awash and kelp are close to the point.

(502) **Wedge Point**, about 1.1 miles NNE of Point Ancon, is a low, thickly wooded point that shows prominently.

(503) **Elephants Nose** is a knob on a ridge near the N end of Woronkofski Island.

(504) **Woronkofski Point**, the N point of the island, is low and rounding without any marked characteristics. A daybeacon marks the NE end of the point. The shore SE of Woronkofski Point should be given a berth of at least 0.5 mile. There are rocks along this section of the coast, and also piles enclosing log storage areas.

(505) **Fivemile Island** is about 1.9 miles N of Woronkofski Point. **Fivemile Island Light** (56°28'14"N., 132°30'43"W.), 34 feet (10.4 m) above the water, is shown from a single pile with a red and white diamond-shaped daymark on the N end of the island.

(506) **Chichagof Pass**, between the S side of Woronkofski Island and the N side of Etolin Island, connects Stikine Strait with the N part of Zimovia Strait. It is clear except for Young Rock, with a depth of 2 fathoms (3.6 m), at the E end of Chichagof Pass in Zimovia Strait. **East Point**, at the E end of Woronkofski Island, is low and wooded. There is a small cove on the N side of East Point. **Circle Bay** is an open bight W of East Point. The bay is free of obstructions.

(507) **Hat Island** is at the entrance to Circle Bay, about 0.8 mile SW of East Point. It is wooded, and is marked by a light on the S side. A rocky ledge extends about 90 yards (81.5 m) south of Hat Island.

Chart 17384

(508) **Highfield Anchorage** is at the N end of Wrangell Island, about 1.5 miles from Wrangell Harbor. The anchorage is in 4 to 15 fathoms (7.3 to 27.5 m), fine sand and mud bottom, extending E from **Point Highfield** to Polk Point and N to **Deadman Island**, which is marked on its N side by **Eastern Passage Light** (56°29'38"N., 132°22'13"W.); the light is 13 feet (4.0 m) above the water and showing a red and white diamond-shaped daymark on a skeleton tower. Light floating ice from Stikine River is encountered here in the spring, and countercurrents render a vessel very uneasy at times.

(509) The mud flats N of Wrangell Island, at the mouth of the Stikine River from Kadin Island to Gerard Point, are very dynamic and have a tendency to migrate seaward. Mariners are advised to use extreme caution while navigating in these areas due to the constantly changing nature of the bottom.

(510) **City of Topeka Rock**, marked by a light in Highfield Anchorage about 50 yards (46 m) N of the airport runway, is awash at low water.

(511) **Wrangell Harbor** is on the W side of the N end of Wrangell Island, about 1 mile below Point Highfield. It is a bight formed by **Point Shekesti**, that projects 0.4 mile in a NW direction from the island. A breakwater 200 yards (183 m) long extends from the N extremity of Point Shekesti and affords protection for small craft in the S part of the harbor. **Wrangell Harbor Breakwater Light 2** (56°28'01"N., 132°23'09"W.), 21 feet (6.4 m) above the water, is shown from a skeleton tower with a red triangular daymark on the outer end of the breakwater.

(512) **Wrangell** is a city on the N side of Wrangell Harbor, 89 miles from Ketchikan and 148 miles from Juneau. The deepest draft commercial vessel calling at Wrangell in 1976 was 33 feet (10 m). Wrangell has a cannery, a cold storage facility, large lumber mills, and two oil company facilities.

Prominent features

(513) An 80-foot (24 m) high standpipe, on a low ridge immediately E of the city of Wrangell and marked on top by a red light, a lighted microwave tower, and the

aerobeacon at the airport are the most prominent objects seen in Wrangell from seaward.

Channels

(514) A Federal project provides for a mooring basin within the protected area in the SE part of the harbor and a breakwater on the W side of the entrance; an inner basin on the tidal flat area E of Shakes Island with a connecting channel to it, all dredged to a depth of 10 feet (3.0 m). The connecting channel is marked by daybeacons, and the breakwater is marked by a light at its outer end. In May 2001, depths of 10 feet (3.0 m) were available except for lesser depths alongside some of the moorings and along the edges of the basins and connecting channel.

Anchorages

(515) Except for the mooring basin inside Point Shekesti, Wrangell Harbor affords shelter for vessels only from offshore winds. During heavy SE winter gales Highfield Anchorage is sometimes used for better shelter. Good anchorage in strong SE weather has been found 0.8 mile off the NE side of Woronkofski Island in about 23 fathoms (42 m), mud bottom.

Dangers

(516) The approach to Wrangell Harbor is clear of dangers. A shoal of 2.6 fathoms (4.7 m) is about 55 yards (50.3 m) N of the breakwater. One submerged dolphin is along the eastern side of the entrance channel, approximately 200 yards (182.9 m) ENE of the breakwater. A small pier with one exposed dolphin just off the N end is along the W side of the entrance channel. Submerged piles are about 114 yards (104.2 m) off the SE end of the outer mooring basin, about 33 yards (30.2 m) NW of a floating dock.

Tides and currents

(517) The mean range of tide in Wrangell Harbor is 13.3 feet (4.0 m), and the diurnal range 15.7 feet (4.8 m). Tidal currents in Wrangell Harbor are variable. Vessels approaching the wharves should note the way small craft are swinging to anchor to determine the direction of the current and should exercise caution in coming alongside.

Pilotage, Wrangell

(518) Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the inside waters of the State of Alaska. (See Pilotage, Alaska, indexed as such, chapter 3 for details.)

(519) Vessels en route Wrangell meet the pilot boat about 1 mile NW of Guard Islands Light (55°26.8'N., 131°52.9'W.).

(520) The pilot boat, a tugboat, can be contacted by calling "WRANGELL PILOT BOAT" on VHF-FM channels 16, 13, or 12.

Towage

(521) Tugs up to 1,270 hp operating out of Wrangell and engaged principally in the towing of barges and log rafts are available for assistance in docking and undocking. They are equipped with VHF-FM channels 16, 13, and 9. The tugs are available on a 24-hour basis, and arrangements should be made well in advance through shipping agents.

Quarantine, customs, immigration, and agricultural quarantine

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

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

(524) Wrangell is a **customs port of entry**.

Harbor regulations

(525) The **harbormaster** at Wrangell assigns berths and controls the use of the grid in the inner basin. He maintains an office on the trestle connecting Shakes Island to Wrangell Island. The harbormaster's office monitors 2182 kHz and VHF-FM channel 16.

Wharves

(526) All of the piers and wharves at Wrangell are privately owned and operated with the exception of the City Pier and the State Ferry Pier, which are owned by the City of Wrangell and the State of Alaska, respectively. The alongside depths given for each facility described are reported; for further information on the latest depths, contact the individual operators.

(527) State of Alaska, Wrangell Ferry Terminal Dock (56°28'28"N., 132°23'23"W.): 1,140 feet (347 m) of berthing space with dolphins; depths of 24 feet (7.3 m) alongside; owned and operated by the State of Alaska.

(528) Wrangell City Pier (56°28'14"N., 132°23'07"W.): 0.3 mile SE of the Alaska State Ferry Pier; faces SW with 750 feet (228 m) of berthing space, depths of 24 to 35 feet (10.6 m) alongside; two forklifts for containerized cargo; 4,800 square feet of covered storage; general cargo and passengers from cruise vessels; owned and operated by the City of Wrangell.

(529) City of Wrangell Barge Ramp; immediately SE of Wrangell City Pier; 140-foot (43 m) face; 72-ton capacity; raises and lowers by compressed air, using a large floating tank; designed for Lip Barges, but can adapt to other type barges with advance notice; tractor and forklift equipment are available; 2.3 acres of open storage;

receipt and shipment of containerized, conventional, roll-on/roll-off general cargo; owned by the City of Wrangell and operated by City of Wrangell, Boyer Alaska Barge Line, and Alaska Marine Lines.

(530) City of Wrangell, Seaplane Float (56°28'01"N., 132°22'52"W.): 160-foot float; 10 feet alongside; owned by the state of Alaska and operated by the city of Wrangell.

(531) City of Wrangell, Reliance Harbor Float (56°27'56"N., 132°22'50"W.): 674-foot float; 10 to 15 feet (3.0 to 4.5 m) alongside; mooring commercial vessels and recreational craft; owned by the state of Alaska and operated by the city of Wrangell.

(532) Wrangell Harbor Cannery Float (56°27'56"N., 132°22'50"W.): 674-foot (205 m) float; 10 to 15 feet (3.0 to 4.5 m) alongside; mooring commercial vessels and recreational craft; owned by the state of Alaska and operated by the city of Wrangell.

(533) Delta Western, Wrangell Dock (56°27'53"N., 132°22'52"W.): 90-foot (27 m) float; depth alongside, 10 feet (3.0 m); deck height, 25 feet (7.6 m); pipelines extend to storage tanks, 10,700-barrel capacity; receipt of petroleum products; bunkering vessels; owned and operated by Delta Western.

(534) Wrangell Oil, Wrangell Dock (56°28'54"N., 132°22'54"W.): 100-foot (31 m) float; depth alongside, 10 feet (3.0 m); deck height, 24 feet (7.3 m); pipelines extend to storage tanks, 5,950-barrel capacity; receipt of petroleum products; bunkering vessels; owned by Union Oil Co. of California and operated by Wrangell Oil Inc.

(535) Alaska Pulp Corp., Shoemaker Bay Pier (56°23'50"N., 132°20'35"W.): approximately 5.6 miles S of Wrangell; 300 feet (91 m) of berthing space; depth alongside 33 to 35 feet (10.0 to 10.6 m); 14 acres of open storage; 40-ton, diesel, mobile crane. Owned and operated by Alaska Pulp Corp. The area N and S of the pier is occupied by log booms and small craft; caution is advised.

Supplies

(536) Provisions and fishing and some marine supplies are available in Wrangell. Two oil companies maintain piers and fueling floats in the small-craft basin in the S part of the harbor. Gasoline, diesel fuel, distillates and lubricating oil and greases are available from the fuel facilities. There are no facilities for fueling large vessels at Wrangell. Water is available at the wharves and on the floats in the small-craft basins; ice for fishing vessels is available at the Bar Harbor Seafoods Wharf.

Repairs

(537) There are no drydocking or major repair facilities for large vessels in Wrangell or in southeastern Alaska. The nearest facilities are in British Columbia and the State of Washington. A marine railway that can handle vessels up to 80 feet (24 m) in length and 8 feet (2.4 m) in draft is available in the small-craft basin E of Shakes Island. Another marine railway E of Shakes Island is available for wooden and metal hull repairs for small vessels up to 50 feet (15.2 m) in length and 6 feet (1.8 m) in draft. A machine shop for limited shaft repairs to small craft is adjacent to this small-craft basin.

Small-craft facilities

(538) The City of Wrangell operates about 3,300 feet (1,006 m) of float space in the mooring basin in the S part of the harbor, and about 1,900 feet (579 m) of float space in the inner basin E of Shakes Island. Fresh water and electric power are available on all floats. A 65-foot (19.8 m) grid is in the mudflats on the W side of the trestle connecting Shakes Island to Wrangell Island.

(539) Two fuel facilities are on the SSW side of the harbor. Also on the SSW side of the harbor are sections of a float maintained by the State Fish and Wildlife Service and the U.S. Forest Service for their own use. A seaplane float is on the NE side of the channel leading to the S mooring basin about 200 yards (183 m) 109° from the Wrangell Harbor Breakwater Light 2.

(540) Limited boat-launching facilities are available at the S end of the S basin and close S of the ferry terminal.

(541) **Shoemaker Bay Boat Harbor**, about 3.5 miles SSE of Wrangell, had a least depth of 13 feet (3.9 m) in May 2001. The entrance channel is marked by lights. The stalls can accommodate 230 small craft, ranging from 20 to 62 feet (6.1 to 19 m) with a 10-foot (3.0 m) overhang. A new pier allows for small, tide dependent, hull repairs. Metered electricity is available upon request, and fuel can be obtained in Wrangell. A motel, restaurant and lounge, telephone service, and a large vehicle parking area are available in the immediate vicinity.

Communications

(542) Wrangell has regular passenger, express, and freight service to Puget Sound ports, British Columbia, and other Alaska ports by water and air. The Alaska State Ferry System operates daily service during the summer months to Prince Rupert, B.C., Sitka, Ketchikan, Petersburg, Juneau, Haines, and Skagway; weekly service is available to Seattle; this schedule is less frequent during the winter.

(543) Scheduled airlines and charter air services operate daily from Wrangell.

(544) Telephone and radiotelephone communications are maintained with the other States and other parts of Alaska.