



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.

(2) **<Deleted Chart Header>**

- (3) **Clarence Strait** extends in a north direction from Dixon Entrance for 45 miles to Guard Islands and the west entrance to Tongass Narrows and Behm Canal, and thence in a northwest direction for 67 miles to Sumner Strait. From its south 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 east of the island, called Stikine Strait, is the route taken by vessels to Wrangell and Wrangell Narrows; that west of the island, called Snow Passage, is used by vessels bound to Wrangell Narrows or west through Sumner Strait because it is more direct.

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

- (5) **Voluntary vessel traffic procedures** have been adopted for gillnet vessels and deep-draft vessels transiting the north 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:

- (6) **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;
- (7) **333°** to a point about 56°15.9'N., 132°57.0'W., thence around the east side of Bushy Island to about 56°17.2'N., 132°58.0'W., thence;
- (8) **299°** to a point about 56°18.6'N., 133°04.9'W., thence;
- (9) **315°** to a point about 56°21.0'N., 133°09.5'W., thence;
- (10) **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;

- (11) **204°** to a point abeam of Calder Rocks in about 56°15.1'N., 133°45.7'W.

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

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

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

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

- (16) Gillnet vessels should:

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

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

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

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

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

(22)

Currents

- (23) The current has a maximum velocity of 4 knots in Clarence Strait from the south entrance to the vicinity of Zarembo Island. At Cape Chacon, the flood current sets northeast around the cape and the ebb southwest. South of the line of Cape Chacon the tidal currents are much confused.

- (24) 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 east of Point Stanhope and is confined to the bay and the immediate vicinity of the shore southeast. (See the Tidal Current Tables for daily predictions of places in Clarence Strait.)

(25)

Weather

- (26) 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 northwest. 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 south part of the strait is more exposed here; poor visibilities are most likely in late summer and early fall.

(27)

Cape Chacon to Kendrick Islands

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

- (29) 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 north from the cape in depths of 18 to 20 fathoms. A 2-fathom shoal is about 2.3 miles north-northeast from the cape, and about 900 yards offshore from **Huaji Cliff**.

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

- (31) **Stone Rock Bay**, about 4.5 miles north from Cape Chacon, is an open bight with deep water and irregular bottom. Foul ground extends off the entrance points, and there is a 3½-fathom shoal midway in the entrance. Small fishing craft anchor close to shore, but the use of the bay as an anchorage is not recommended.

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

- (33) Fair weather anchorage for smaller vessels may be had near the head of the bay which is just over 0.1 mile with sandy bottom in 15 fathoms. Favor the north shore of the bay when entering. The channel between the shoals making out from the north and south shores is narrow, about 0.1 mile wide.

- (34) **McLean Arm** is a narrow inlet about 6.5 miles above Cape Chacon. **McLean Point**, the south entrance point, is marked by **McLean Point Light** (54°47'30"N., 131°57'24"W.), 58 feet 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 north entrance point, is a wooded island close to the main shore. A bare rock, 22 feet high, is 100 yards south of the point.

- (35) The head of the arm has two branches. The west and larger branch affords anchorage in its widest part in 18 fathoms, sticky bottom, with swinging room for small vessels. A flat extends 0.1 mile from the head of this branch and sailing beyond 0.6 mile into the western

branch is not advised as it becomes increasingly narrow. Anchorage can be selected in about 22 fathoms 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 east from the point dividing the two branches. An obstruction lies 2¼ fathoms below the surface in the center of the arm just 0.45 mile into the northern branch, and vessels should take care to avoid sailing more than 0.35 mile into the branch. The williwaws come down from the adjacent mountains with considerable force. Water can be obtained from several streams.

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

- (37) A group of islands choke the entrance to the inner bay. The channel north of the islands is narrow and crooked; its use is not recommended. The channel south is about 200 feet wide and has a least depth of 4 fathoms. About 0.1 mile into the channel entrance is a 1½-fathom spot marked by kelp about 100 feet off the southern coastline. Water may be obtained from several streams.

- (38) Fishing vessels and small craft frequently use the channel south of the outer islands and rocks. Midchannel courses suffice. Caution should be exercised when entering, because the dangers are unmarked. Anchorage in 13 fathoms, 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.

- (39) **Kendrick Bay** is about 10 miles above Cape Chacon. The entrance to the bay is hazardous to larger vessels, with a rock covered 6¼-fathoms about 1.5 miles from the entrance and a rock covered 3¼-fathoms about 1.8 miles from the entrance.

- (40) Three arms lead south and west from Kendrick Bay. **South Arm** is relatively flat, clear, and shoals to 8 fathoms near its head, affording good anchorage for small craft. **Short Arm** is clear of off-lying dangers except for a 4¼-fathom spot in the center of the arm, about 0.6 mile inside the entrance. **West Arm** is foul for a distance of 0.5 mile inside the entrance and should be entered preferably at low water. Enter south of the islets and proceed with caution. Good anchorage for small craft in 10 to 19 fathoms is available just before the head and at the head of the arm. However, during the colder winter months this area has ice and cannot be used as an anchorage.

- (41) **Kendrick Islands**, on the north 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 southeast of the main islands of the group. Small craft with local knowledge can enter Kendrick Bay from north by passing north of all the islands, between them and the main shore. In the center of the channel,

about 1.1 miles into the northern entrance, are rocks covered 1 fathom. Vessels should favor the northern shore of Prince of Wales Island for the initial 2 miles of the channel. For the remaining 0.6 mile where the channel turns southeast, maintaining a course through the center of the channel is preferred, as the channel shoals to 3½ fathoms. Good anchorage and shelter for small craft can be found among the islands.

(42)

Local magnetic disturbance

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

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

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

(46)

Hidden Bay to Whiterock Island

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

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

(49) 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 south back of the islands. The bay is suitable for small craft only.

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

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

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

(53) To enter the north arm, pass south of the two groups of rocky islets off its entrance. A narrow channel extends into the north arm. A shoal with a depth of 3¼ fathoms extends from the west shore to the middle of the channel.

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

(55) To enter the south arm, the small wooded islet, 200 yards north of the long, wooded tongue that marks the southeast point of the entrance to this arm, is left about 100 yards to the south. The channel leads between this islet and the long reef, 200 yards to the west, that parallels the shore.

(56) The south arm is characterized by numerous rocks and reefs; the controlling depth in the entrance is 3 fathoms. With local knowledge 4 fathoms may be carried to the head where anchorage may be found for small craft in depths of 2 to 10 fathoms, with excellent holding ground in mud bottom. The chart should be the guide.

(57) **Ingraham Point**, the northwest 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.

(58) **Polk Island** is about 1.3 miles north 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 north end of the channel is obstructed by rocks and islets. There is a controlling depth of 2 fathoms in the narrow crooked section at the northeast end. Small craft with local knowledge can work their way through.

(59) A small rocky islet with a prominent tree is close to the southeast end of Polk Island. It is noticeable from the north or south for a distance of 2 miles.

(60) **Chichagof Bay** is about 2.5 miles north from Ingraham Point. It is about 0.3 mile in length and width and has varying depths from 2¾ fathoms in the entrance to 4 fathoms near the shore. A reef extends 0.1 mile in a north direction from the south shore, 0.2 mile from the entrance point. A narrow inlet, with depths of 4 to 7 fathoms, extends 0.3 mile in a south direction from the southwest corner of the bay. A depth of 1 fathom is in the middle of the entrance to the inlet.

(61) **Rip Point**, about 3.2 miles north 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 high in the center of the flat area and several hummocks with an elevation of 200 feet or less. Foul ground extends 0.3 mile southeast from the point.

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

(63) A small cove is 0.3 mile southwest from Rip Point. Rocks are on both sides of the entrance about 50 yards offshore. A rock is about 50 yards off the middle of the northwest shore. Depths in the middle of the cove range from 9 to 21 fathoms; small-craft anchorage in 5 to 6 fathoms, fine sand bottom, may be had in the arm that extends south from the center of the cove.

(64) **Moira Sound** indents the west shore of Clarence Strait, about 25 miles north 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 north entrance point, is low and wooded. Near the extremity is a knob about 350 feet high. Rocks extend about 0.2 mile off the east shore of the point. The general direction of the sound is southwest, and within the entrance it divides into three separate arms.

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

(66) **Moira Rock Light** (55°04'58"N., 131°59'54"W.), 40 feet 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 over it is 1 mile east-northeast of Moira Rock. **Moira Island**, 0.6 mile long and wooded, is about 0.9 mile to the south-southwest of Moira Rock. The channel between Moira Rock and Adams Point has depths ranging from about 26 to 189 fathoms.

(67) A small islet is about 0.2 mile east-northeast of the north 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.

(68) **Kegan Cove** is about 2.8 miles southwest of Black Point. The outer cove has a fair anchorage in about 6 to 15 fathoms, rocky bottom. The inner cove entrance is 50 yards wide and can be entered by boats drawing 5 feet, on the upper half of the tide. The west shoreline should be

favorable when entering. Excellent shelter and anchorage in 6¾ fathoms, mud bottom, can be had inside. **Kegan Creek**, outlet from **Kegan Lake**, flows into the head of the cove. A marker on the east side of the stream indicates the end of a trail paralleling the creek to the shore of the lower part of the lake.

(69) **Whiterock Island**, about 0.3 mile southeast of Moira Island, is irregular in shape and wooded. A large grayish-white, conical-shaped rock is on the southeast side of Whiterock Island. South is a smaller rock with the same general features. The small cove on the northwest shore of Whiterock Island is foul. Midway between the south ends of Moira and Whiterock Islands is a reef that uncovers 11 feet. A clear channel, about 250 yards wide, favoring Moira Island, is west of this reef. The channel between Whiterock Island and the reef is foul. Foul ground extends off the north and east shores of Whiterock Island for about 0.2 mile and off the south shore for about 0.5 mile.

(70) **Menefee Anchorage to Wedge Islands**

(71) **Menefee Anchorage**, about 1 mile west 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, mud and rock bottom, with 200 yards of 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 south part of the anchorage, with depths of 25 fathoms in the center and shoal water near the east shore, is entered west of the midchannel islet.

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

(73) A bight is about 1.5 miles to the west 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 is about 0.2 mile west from the rock. There are numerous rocks and islets along the south shores. The small cove on the northeast shore of the bight might furnish anchorage for small vessels in 10 to 13 fathoms.

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

(75) **Niblack Anchorage**, just west of the Egg Islands, affords good protection in depths of 6 to 20 fathoms, mud bottom. **Clare Island** is on the north side of the entrance

to Niblack Anchorage. **Safety Rock**, grass covered and about 15 feet high, is in midentrance. A ledge that uncovers 5 feet is 400 yards south of Clare Island and 250 yards off the south shore. A rock, covered 9 feet, is 0.5 mile from the head of the anchorage and 0.1 mile from the south shore. Vessels entering Niblack Anchorage usually pass north of Moira Rock, Safety Rock, and the ledge south of Clare Island near the south shore of the anchorage.

- (76) From Adams Point to **Point Halliday**, the north point of the entrance to North Arm, the shoreline is broken and there are many rocks close to shore. A 5-foot spot is about 0.4 mile east from Point Halliday. A shoal making south from Point Halliday has a depth of $3\frac{1}{2}$ fathoms about 0.25 mile off the point.

- (77) **North Arm**, about 4 miles long and 0.3 mile wide at the entrance, is in the northwest side of Moira Sound about 2.8 miles west of Moira Rock. There is a $3\frac{3}{4}$ -fathom spot in the center of the entrance about 0.3 mile south of Point Halliday. A secure anchorage can be found inside near the east shore, in the cove about 1 mile from the entrance directly south of the small cedar-covered island, in 6 to 10 fathoms, mud bottom. There is a rock awash near the middle of the cove.

- (78) **Deichman Island**, 2 miles inside the entrance of North Arm, has foul ground between it and the east shore, and foul ground extends about 400 yards southeast and 300 yards south from it. In passing beyond Deichman Island, the south shore should be favored until past **Beck Rock**, about 700 yards to the west, which uncovers 12 feet. Then a midchannel course will pass 200 yards northeast of **Cannery Rock**, about 0.8 mile west-northwest of Beck Rock, which uncovers 9 feet.

- (79) At the head, North Arm divides into two fingers. The north finger, **Nowiskay Cove**, affords good small-craft anchorage in about 8 fathoms. The west finger extends to **Clarno Cove** and **Aiken Cove**. Craft entering this finger should favor the south shore, taking care to avoid the rock awash that is 240 yards southeast of the small islet off the north point at the entrance. By passing about 50 yards off the south beach, a least depth of $10\frac{1}{4}$ fathoms can be carried into Clarno Cove, where good all-weather anchorage is available in about 12 fathoms, soft mud bottom.

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

- (81) From Clarno Cove a narrow channel continues west 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. Favor the north shore in entering from Clarno Cove.

- (82) **Cannery Cove**, just northwest of **Cannery Point** ($55^{\circ}06.7'N.$, $132^{\circ}08.3'W.$), affords good anchorage in 13 fathoms, and the small bight on the northwest side of the cove has small-craft anchorage in $1\frac{1}{2}$ fathoms.

- (83) **Port Johnson**, a narrow deep inlet that extends about 3.5 miles in a west direction, is on the west side of Clarence Strait, between Adams Point and Wedge Islands. From the entrance, midchannel courses hold good. There is good anchorage in 15 fathoms about 2.4 miles above the entrance. Water is available from a stream on the north shore about 0.2 mile below the head of the inlet. Anchorage in about 11 to 14 fathoms, 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.

- (84) **Scraggy Point** and **Inner Point**, on the north and south sides, respectively, at the entrance to Port Johnson, present no characteristics of interest to the navigator.

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

- (86) **Paul Lake**, about 0.9 mile north-northwest 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.

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

- (88) **Wedge Islands** are a group of low islands and rocks 2 miles northeast of the entrance to Port Johnson. From the larger island, rocks, bare and awash, extend for about 0.6 mile to the south; shoal and irregular bottom extends about 1 mile to the southwest. A 2-fathom spot is 1 mile to the south-southwest of this island. Rocks awash, marked by kelp, are 0.5 mile northwest from the north end of the larger island. A submerged rock with a least depth of 3 feet and marked by kelp is 0.2 mile north of these rocks. A shoal with $7\frac{1}{2}$ fathoms over it is 0.8 mile to the north of the north end of large Wedge Island. A channel 0.3 to 0.5 mile wide, with a least midchannel depth of 30 fathoms, is about 0.6 mile west 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.

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

(90) Windy Point to Chasina Point

- (91) **Windy Point** ($55^{\circ}13.0'N.$, $131^{\circ}58.8'W.$), low and wooded, is between two small exposed coves with an island close-to on each side. The south cove has midchannel depths of 5 to 9 fathoms but is foul to the west of the small island and near the north shore. The north cove has midchannel depths of $1\frac{3}{4}$ to 10 fathoms

but is foul toward the head. Rocks extend off the point for about 240 yards.

- (92) From **Scraggy Point** (55°07.6'N., 132°02.0'W.), the north entrance point to Port Johnson, to Chasina Point, which is the point about 4.5 miles north 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 southeast cove range from 5 to 10 fathoms, shoaling to 4 fathoms near the head. The northwest cove has depths in the middle of 5 to 14 fathoms; the west bight has depths of 3 to 5 fathoms; the south bight is foul.

- (93) 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 north of Wedge Island in the vicinity of Windy Point. (See the Tidal Current Tables for daily predictions in this area.)

- (94) **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.

- (95) **Chasina Point**, about 36 miles north of Cape Chacon and the south 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.

(96) **Chasina Island**

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

- (98) **Chasina Anchorage**, to the west of Chasina Island, affords a lee only from east to south winds. Anchorage may be obtained on a rocky patch in about 9 fathoms with the northwest corner of Chasina Island bearing about 042° and Skin Island Light bearing about 338°; swinging room is about 250 yards. Anchorage in 17 fathoms, with the light on the same bearing, may be obtained farther offshore.

(99) **Pilotage, Chasina Island**

- (100) Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the waters of the State of Alaska.

- (101) Chasina Island is served by the Southeastern Alaska Pilots Association. (See **Pilotage, General** (indexed), chapter 3, for the pilot pickup station and other details.)

(102) **Skin Island to Clover Point**

- (103) **Skin Island**, 0.8 mile off the northwest point of the entrance to Cholmondeley Sound, is wooded and about 170 feet high on the southeast side. A reef that uncovers 10 feet is about 450 yards to the southwest of the island. A sunken wreck, with less than 11 fathoms over it and a danger to navigation in this area, is about 200 yards southwest of the south 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 west side of the island. **Skin Island Light** (55°18'05"N., 132°04'22"W.), 33 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the northeast point of the island.

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

- (105) **Hump Island**, 3.5 miles inside the entrance to Cholmondeley Sound, about 4 miles south-southwest of Skin Island, is timbered and about 400 feet high and presents a conical appearance.

- (106) **Lancaster Cove**, about 1 mile southeast of Hump Island, is the north one of two coves east of an island on the east side of Cholmondeley Sound. It affords good anchorage in 13 to 14 fathoms. It can be entered on either side of the wooded island in its entrance. A bare rock is 0.1 mile north of the northwest end of the island. An islet is close southwest of the island, and a rock with a least depth of 3 fathoms is close east of the island about 55°13'04"N., 132°05'13"W. In 1959, a survey vessel used an anchorage about 150 yards south of the wooded island, in 12 to 20 fathoms, mud bottom, good holding ground. There were no dangers in the anchorage or approach.

- (107) **Kitkun Bay** has its entrance west of **Babe Islands**, about 6 miles southwest of Chasina Point, and extends in a general southwest direction from the south side of Cholmondeley Sound. The area was surveyed in 1961. Entrance to the north part of the bay should be made through the west of two channels. The least depth in midchannel is 3½ fathoms. Entrance to the south part of the bay can be made through a narrow channel about halfway down the east shore of the north 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.

(108) **Dora Bay**, on the south 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 $7\frac{1}{4}$ fathoms, in the middle of the bay about 1.1 miles inside the entrance.

(109) **Sunny Cove** is on the north side at the head of the main part of Cholmondeley Sound, about 8 miles west 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 east side of the entrance to the cove.

(110) The head of Cholmondeley Sound is divided into two arms known as South Arm and West Arm. West Arm has a straight unbroken north shoreline. Its south 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. The second indentation in the south shore is south-southwest of the most east of the chain of small wooded islets. Anchorage with ample swinging room may be had here behind the islet in 7 to 15 fathoms, soft bottom. Enter the small bay from West Arm by keeping west of the islet. Anchorage may also be had in 7 to 15 fathoms, soft bottom, at the head of West Arm. This anchorage is exposed to strong winds drawing through the low pass from Hetta Inlet.

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

(112) **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, soft bottom. Strong winds from Klakas Inlet draw through the low pass at the head of South Arm.

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

(114) To enter Cholmondeley Sound, from a position 0.5 mile northwest 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 north of the chain of wooded islets.

(115) **Clover Bay** has its 0.2-mile-wide entrance between Clover Point and **Anderson Point**, the south entrance point, about 1.5 miles west of Skin Island. A bare rock is about 120 yards north of Anderson Point, and a rock with a depth of $\frac{1}{4}$ fathom 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 east from Anderson Point. An area, small in extent with a least depth of $1\frac{1}{2}$ fathoms, is about 0.9 mile within the entrance and about 125 yards from the south shore; otherwise depths within the bay range from $7\frac{3}{4}$ to 41 fathoms.

(116) The head of the bay is blocked by small islands. A small cove with depths of 12 to 21 fathoms, except for lesser depths along the edges, is to the north of **King Island**, the largest of the group. A bar with a midchannel depth of $1\frac{3}{4}$ fathoms stretches across the entrance to the cove from King Island to the rock off the point on the

north shore. A ledge extends 50 yards northwest of King Island within the cove.

(117) **Clover Point**, a narrow wooded neck of land about 100 feet high, projects north-northeast 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 $6\frac{1}{4}$ fathoms over it, is 0.6 mile northeast from Clover Point.

(118) The cove to the west of Clover Point is blocked by rocks and islets. The open bight 1 mile northwest of Clover Point is deep. A small $2\frac{1}{2}$ -fathom patch is in midentrance. The cove that is 1.6 miles northwest from Clover Point has depths of 11 to 12 fathoms until near the head. Rocks extend off the south point of the entrance for 500 yards, and a rock that uncovers 3 feet is in midentrance. A flat area with depths of 11 to 20 fathoms extends about 1.5 miles in a northwest direction from the north entrance point of the cove.

(119)

Sealed Passage to Moss Point

(120) The east shore of Clarence Strait from Dixon Entrance to Vallenar Point, at the west 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.

(121) **Sealed Passage** is an approach to Felice Strait from Clarence Strait and is between Duke Island on the east and Percy Islands and Hotspur Island on the west. On the southeast side of the south end of the passage about 5.2 miles southwest of **Point White**, the west extremity of Duke Island, there are numerous rocks, submerged and awash, of which Hassler Reef and the Bee Rocks are the outermost.

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

(123) **Bee Rocks**, about 3.7 miles southwest 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 southwest, and Point White to the northeast, is not recommended without local knowledge.

(124) A shoal with $1\frac{3}{4}$ fathoms over it is about 2.8 miles south of Point White.

(125) **Percy Islands** are a large number of low wooded islands on the northwest 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 northeast or southwest of the southernmost island.

(126)

Local magnetic disturbance

(127) Differences of as much as $17\frac{1}{2}^{\circ}$ from the normal variation have been observed in the vicinity of the southernmost island at $54^{\circ}56.0'N.$, $131^{\circ}35.5'W.$

(128) **Sealing Reef** is a double-headed rock awash about 1 mile east-southeast from the south extremity of Percy Islands.

(129) A pinnacle rock, not marked by kelp, with a least found depth of 4¾ fathoms, is 1.5 miles east-southeast from the south extremity of Percy Islands. The depth may be less. A group of rocks, some of which are 6 to 8 feet high, are 1.5 miles west-northwest of Point White.

(130) **Hotspur Island**, on the northwest side of Sealed Passage northeast of Percy Islands, is heavily wooded and has its greatest elevation near the north side.

(131) **Werlick Island**, south of Hotspur Island, is low and heavily wooded.

(132) **Vegas Islands**, 1.2 miles east of the south extremity of Hotspur Island and about 0.5 mile off the Duke Island shore, are 160 feet high and heavily wooded. Between them and Duke Island are several rocks.

(133) **Felice Strait** extends from Sealed Passage to Revillagigedo Channel, between Duke Island, Dog Island, Cat Island and Mary Island on the southeast, and Annette Island on the northwest. It offers the most direct route for vessels from the south 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 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.

(134) **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.)

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

(136) From Percy Point northeast to Harris Island, the shore is free from dangers except close-to. **Cow Island** is a small, wooded island 100 feet high, north of the Percy Island Group. North of Cow Island are two wooded islets; between the islets and Cow Island are two reefs that bare.

(137) **Point Davison** and the west 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 east or west. **Point Davison Light** (54°59'39"N., 131°36'50"W.), 33 feet 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 south end of the point.

(138) **Harris Island** is a small wooded island 90 feet high northwest of Hotspur Island. Along the north shore of this island are considerable quantities of kelp that should be given a berth of at least 150 yards in rounding the island. Fair anchorage in 6 to 12 fathoms, sandy bottom, can be

had 0.2 mile northeast of Harris Island. A light is on the north end of the island.

(139) A group of wooded islets are 0.2 to 0.8 mile off **Sextant Point**, the first point northeast of Point Davison. Foul ground extends about 500 yards north and about 700 yards south of these islets. Between the islets and Sextant Point is a clear, deep channel, about 400 yards wide. The main channel into Felice Strait and Tamgas Harbor passes east of the islets and midway between them and Harris Island.

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

(141) **Tamgas Harbor**

(142) **Tamgas Harbor** has its entrance about 1.5 miles north 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 northeast to south have been experienced when anchored off **Creek Point**. The depths are generally good except near the southwest shore, which is shoal.

(143) **Survey Point**, east of the entrance to Tamgas Harbor, is indefinite; both it and the southeast 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**.

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

(145) **Grass Rock**, 0.3 mile off **Grey Point** on the west side of the entrance, is 15 feet high and grass covered. A rock, bare at low water and marked by kelp, is about 200 yards south-southeast from Grass Rock.

(146) **Mule Rock**, 0.2 mile from the east 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 above the water is shown from a small house on a skeleton tower with a red and white diamond-shaped daymark on the rock.

(147) **Prominent features**

(148) About 1.7 miles northwest of Crab Point is a microwave tower, 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.

(149) **Anchorage**

(150) The best anchorage is in 6 fathoms in the middle of the basin, about 0.5 mile north of Crab Point, taking care to avoid the 2½-fathom spot 0.4 mile northwest of the point.

(151)

Weather

(152) 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 80s, a 90°F reading is unlikely. Storms moving east 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 the north. Winds blow out of the east-southeast through south-southeast. 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.

(153)

Routes

(154) In entering Tamgas Harbor, pass about 500 yards west of Tamgas Harbor Entrance Light and keep the east shore close aboard, distant not over 300 yards 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.

(155)

Caution

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

(157)

Quarantine, customs, immigration and agricultural quarantine

(158) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

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

(160)

Wallace Reef to Smuggler Cove

(161) **Wallace Reef**, 2 miles east from Ajax Reef and about 0.5 mile off the Annette Island shore, has a least depth of $\frac{3}{4}$ fathom over it and is surrounded by kelp.

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

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

(164) **Indian Rock**, 2 miles northeast 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 west side of the shoal.

(165) **Bestwick Reef** is 1 mile east-northeast of Indian Rock; it is of considerable extent, marked by kelp, and has a least found depth of $1\frac{1}{2}$ fathoms near its northernmost end.

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

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

(168) **Niquette Harbor**, east of Ryus Bay, is on the northwest side of Duke Island and is about 0.3 mile wide at the widest part. It extends about 0.5 mile in a southwest direction, narrowing to an inlet that dries, about 0.5 mile long. A submerged rock is 100 yards off the east shore of the narrowest part of the entrance to the harbor, and a rock awash is opposite close to the west shore. Favor the west shore in entering. Anchorage for very small craft may be had in 4 to 6 fathoms in the bight within the entrance. Two rocks, awash, extend about 150 yards north from the point on the south side of the west shore of the bight.

(169) **Dog Bay**, about 1.4 miles east-northeast of Niquette Harbor, is a small open bight with 33 fathoms at the entrance, 17 fathoms near the head, and 13 to 15 fathoms in the southeast corner. Rocks are off the east and west shores, as shown on the chart.

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

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

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

(173) **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.

(174) **Pond Bay**, southeast 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, west of Dog Island, bares about 2 feet. A 6-fathom passage leads north of Dog Island into Pond Bay, but it is obstructed by rocks and requires local knowledge to enter safely.

(175) The best approach to Pond Bay is from Revillagigedo Channel through **Cat Passage** between Grave Point and three islets off the southeast point of Cat Island. The best water leads about 0.3 mile north of Grave Point until up to a reef that extends southwest from a group of small highwater islands off the northeast 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 have been reported in the west end of Cat Passage.

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

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

(178) **Giant Point**, the north extremity of Mary Island, has reefs that extend 200 yards north from it.

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

(180) **Nichols Passage** is between **Annette Island** on the east and **Gravina Island** on the west and connects Clarence Strait with the southeast end of Tongass Narrows. It offers the shortest route for vessels from Dixon Entrance and the south 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 west of Warburton Island and Kelp Rocks. Most small craft when entering or leaving Clarence Strait from the north, or from Moira Sound, use the narrow channel that passes between the Bronaugh Islands and Gravina Island into Nichols Passage.

(181) **Currents**

(182) 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 north 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.)

(183) The southwest end of Annette Island on the east side of Nichols Passage, from Point Davison to Yellow Hill, is about 200 feet 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 south from Metlakatla. The summit is formed by several bare, rounded knolls of approximately equal elevation.

(184) **Hid Reef** is about 2 miles off the west shore of Annette Island at the south 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 southwest from **Cedar Point** (55°05.8'N., 131°36.4'W.) and is marked by a lighted whistle buoy.

(185) **Canoe Cove** indents the west shore of Annette Island about 3 miles south of Cedar Point. The cove is used by small boats and is entered through the north passage.

(186) **Smuggler Cove**, immediately south of Cedar Point, is open and exposed. In the upper part of the cove is a beach of fine clear sand 200 yards long. The microwave tower close east-southeast of Smuggler Cove is prominent from the cove and Nichols Passage.

(187) **Dall Head to Dall Bay**

(188) **Dall Head**, the south extremity of Gravina Island, is the west headland at the south entrance to Nichols Passage. It is low and wooded. At a distance of 1.5 miles north of Dall Head the land rises rapidly to the high mountains of **Dall Ridge**, with its high and remarkable peaks, and forms a conspicuous landmark from Clarence Strait and Dixon Entrance in clear weather. The south 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 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 south end of Dall Ridge are two large landslides facing south.

(189) **Bronaugh Islands**, which 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 McCartney**, is bare on the south and east edges. It is marked by **Point McCartney Light** (55°06'49"N., 131°42'26"W.), 44 feet above the water and shown from a skeleton tower with a red and white diamond-shaped daymark.

(190) A rock, bare at half tide, is 0.7 mile southwest of Point McCartney Light. Several other similar rocks are between this one and the Bronaugh Islands. A rock, which uncovers 2 feet and has deep water close to it, is about 0.3 mile east-southeast from Point McCartney. This rock is marked by a buoy. A shoal, covered 25 feet, is about 0.5 mile southeast of Point McCartney Light.

(191) Banks and broken ground, with least found depths of 7 to 15 fathoms, are about 0.9 mile northeast from Point McCartney. This area should be avoided.

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

(193) **Dall Bay**, on the west side of Nichols Passage, about 1.5 miles north of Dall Head, has many dangers that are shown on the chart. It offers good anchorage in 8 fathoms, mud bottom, between the two islands well inside the bay. There is also small-craft anchorage farther in, depth 3 fathoms, 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.

(194)

Warburton Island to Sylburn Harbor

(195) **Warburton Island** is about 2.8 miles northeast of Point McCarty and 1.4 miles from the west shore of Annette Island. It is about 0.1 mile in diameter, 130 feet high and round topped, and has steep, rocky shores. A rock with 1½ fathoms over it is about 200 yards northwest of the island.

(196) **Warburton Island Light** (55°07'56"N., 131°38'01"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 east side of the island.

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

(198) **Port Chester** is an extensive bay indenting the west shore of Annette Island, east 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 high and wooded. About 0.4 mile west-southwest of Gull Island is a rock awash at highest tides. Surrounding it and extending to the islet east are extensive ledges with bare heads; the west extremity of these ledges is marked by a lighted buoy. Another ledge with bare heads extends about 0.6 mile east 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 east side of the 1¼-fathom rock lying about 0.7 mile east-southeast of Gull Island. **Village Point**, on the south side of the entrance to Port Chester, is low and sandy, with a gravel beach on the east side. West of Village Point are extensive reefs that bare to a distance of 0.2 mile offshore. A light is on the pier on the west side of Village Point.

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

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

large white church with two square towers are prominent from Nichols Passage.

(201) The waters surrounding Annette Island, including islands off the eastern shore—Ham Island, Walker Island, Lewis Island, Spire Island—and Hemlock Island off the western shore, are included in the **Annette Islands Reserve**. The reserve is part of the Metlakatla Indian Community and extends outward 3,000 feet from the shoreline of the islands. Commercial, subsistence, and sport fishing are restricted to members of the community—see **25 CFR 241.1** through **241.6**, for limits and regulations. These regulations are not carried in this Coast Pilot.

(202)

Pilotage, Metlakatla

(203) 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.)

(204) Vessels en route Metlakatla meet the pilot boat about 1 mile east of Point McCarty Light (55°06.8'N., 131°40.5'W.).

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

(206)

Quarantine, customs, immigration and agricultural quarantine

(207) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

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

(209)

Wharves

(210) 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.

(211) **Annette Island Packing Company Wharf** (55°07'48"N., 131°34'19"W.): about 300 yards southeast of Village Point; 390-foot face, southwest side 70 feet long, northeast side 120 feet long; 23 feet alongside; deck height, 26 feet; a 1-ton derrick, ten forklifts up to 3 tons; ice for fishing vessels and water are available; receipt of seafood; owned by the City of Metlakatla and operated by the Annette Island Packing Company.

(212) **Metlakatla City Dock** (55°07'42"N., 131°34'07"W.): about 200 yards southeast of Annette Island Packing Company Wharf, close east and parallel to the breakwater protecting the small-craft basin to the west; 400-foot face; southeast side 70 feet long, northwest side 55 feet long; 35 feet alongside; deck height, 26 feet; water and electricity are available; mooring cruise ships; owned and operated by the City of Metlakatla.

(213) **Metlakatla City Barge Ramp**: close south of the City Dock; adjustable transfer bridge; 15 feet reported

alongside the outer end of the ramp and the inshore is dry; 22½-ton and 9-ton forklift trucks; water and electricity are available; receipt and shipment of containerized and roll-on/roll-off general cargo; owned by the City of Metlakatla and operated by Boyer Alaska Barge Line, Inc.

- (214) **City of Metlakatla Fuel Transfer Dock** (55°07'27"N., 131°33'27"W.): about 800 yards southeast of the City Dock; three dolphins providing 200 feet of berthing space; 15 feet alongside; receipt of petroleum products by barge; owned by the City of Metlakatla and operated by Annette Island Gas Service and Metlakatla Power and Light.

- (215) **State of Alaska, Metlakatla Ferry Terminal Dock** (55°07'05"N., 131°32'49"W.): about 1 mile southeast of the City Dock; steel transfer bridge with five dolphins providing 280 feet of total berthing space; 24 feet alongside; passenger and vehicles; owned and operated by the State of Alaska.

(216)

Supplies

- (217) 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 north.

(218)

Repairs

- (219) 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 north.

(220)

Small-craft facilities

- (221) A small-craft basin, protected by a breakwater, is close southwest of the City Pier. In 2010, the controlling depth was 10 feet in the entrance channel and basin with lesser depths in the southwest corner of the basin and along the edge of the basin about 100 yards southeast of the entrance light. The entrance is marked by a light on the northwest 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 northeast side of Village Point.

- (222) Another small-craft basin, protected by breakwaters, is 0.3 mile west of Village Point. In 2010, the controlling depth was 13 feet in the entrance, thence 12 feet in the west section of the basin and 9 feet in the east section except for lesser depths along the edges. The entrance is marked by a light on the end of the northwest breakwater and daybeacons just off the end of the southeast breakwater.

(223)

Communications

- (224) 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.

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

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

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

- (228) **Murdo Island**, about 1.1 miles north of Village Point, and locally known as **Battleship Island** from its former vegetation, is covered with grass and numerous trees. Extensive ledges extend south, west and north from the island. A daybeacon is 0.8 mile northwest of Murdo Island.

- (229) **Fillmore Rock** is about 0.3 mile north-northwest of Murdo Island and bares 1 foot at lowest tides.

- (230) **Lively Rock** is about 0.5 mile north from Murdo Island and has 5 feet over it at low water. It is marked by a lighted buoy close northeast of the rock.

- (231) **Hemlock Island**, close to the north shore of Port Chester, is wooded and fringed with reefs. During lowest tide, it is connected at its north corner with Annette Island.

- (232) Leading to Port Chester are three channels, of which the south 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.

- (233) The north entrance leads from off Driest Point to midway between Hemlock Island and the lighted buoy marking Lively Rock, then south-southeast passing east of Scrub Island Light 7, then south-southwest to Port Chester.

- (234) Port Chester does not afford good anchorage. During southeast 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, mud bottom, about 0.5 mile east of the Packing Company Wharf.

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

- (236) **Sylburn Harbor** is a small bay north of Driest Point, the south end of which affords fair anchorage for small craft in 7 to 18 fathoms. 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 astern and the middle of the south bight ahead, leads midway between the foul ground off Driest Point and the rock in the middle of the outer entrance.

(237)

Seal Cove to Annette Bay

(238) **Seal Cove** (55°11'N., 131°43'W.) is on the west side of Nichols Passage, 4 miles north of Point McCarty. It has depths of about 30 to 40 feet 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 north one has a depth of 8 feet and width of 75 yards, but it is full of boulders and dangerous. The south entrance is generally used. It is close to the south shore and has a depth of about 3 to 11 feet. The channel is narrow and has thick kelp and strong currents. Caution is advised when entering Seal Cove by the north or south entrance. **Seal Cove Rock**, covered 1¼ fathoms and surrounded by kelp, is about 0.4 mile east of the highest part of the reef in the entrance to Seal Cove.

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

(240) **Blank Inlet**, about 4 miles north of Bostwick Inlet and west of Gravina Point, the east extremity of Gravina Island, extends 3 miles northwest 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.

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

(242) **Walden Rocks** are a group of bare rocks at the north entrance to Nichols Passage. The group at its east end shows about 10 feet at high water, and at that time the smaller rocks are covered. About 150 yards west of the group is a rock, covered 0.8 fathom and showing kelp. The rock is marked by a light. Kelp-marked rocks are north of the group. A rock, covered 0.8 fathom, is in about

55°16'29"N., 131°36'35"W. and about 500 yards north of the tallest rock. Another rock that uncovers 6 feet is about 475 yards north-northwest of the tallest rock in about 55°16'26"N., 131°36'44"W. About 0.6 mile south of Walden Rocks is a rocky ledge that uncovers 12 feet; between it and Annette Island are a number of rocks that bare.

(243) **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 south of Walden Point.

(244) **Annette Bay**, at the northwest 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. **Race Point**, the north extremity of Annette Island, and the northeast point at the entrance to the bay, is wooded and has a height of about 150 feet. A ledge with a rock awash extends 450 yards northwest of the point. The point should be given a berth of over 0.3 mile.

(245)

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(246) The west 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 curve is from 0.5 to 1 mile offshore, and it is advisable to give the coast a berth of that distance.

(247) 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. West of Bronaugh Islands moderate tide rips are set up on a flood current with a north 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. West 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 southeast storm.

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

(249)

Nehenta Bay

(250) Rocks and islands extend about 0.6 mile offshore for a distance of 1.2 miles northwest from Dall Head. A small open bight, foul near the head, with depths of 6 to 7 fathoms in the entrance, is 1.4 miles northwest from Dall Head. A small rocky islet is off the south shore of the entrance. A rock awash is 400 yards off the wooded islet south of the entrance; it is 1.5 miles west-northwest of Dall Head.

(251) **Nehenta Bay**, open to the south, is 2.5 miles northwest of Dall Head. Depths of 12 to 16 fathoms were obtained in the channel west 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 north from the island at the south entrance point. Foul ground extends 0.1 mile from the head of the bay, and a 6-foot spot is 650 yards 212° from the midchannel rock. Depths of 7¾ to 14 fathoms were obtained in the middle of the bay, while depths of 14 fathoms were obtained in the small bight east of midchannel rock. The narrow arm, 0.4 mile long in a northwest direction on the northwest side of the bay, has a depth of 3½ fathoms at the entrance and 2¼ fathoms halfway to the head. A reef extends from the northeast shore to within 50 yards of the southwest shore of this arm.

- (252) **Phocena Rocks**, the highest 25 feet, are 275 yards offshore, west of the northwest point of the entrance to Nehenta Bay.

(253)

Phocena Bay to Vallanar Bay

- (254) **Phocena Bay** (55°10.8'N., 131°48.5'W.), 3.6 miles northwest from Dall Head, open to the south, has a 5¼-fathom spot about midentrance and depths of 9 to 17 fathoms just within the entrance. Foul ground extends about 350 yards off the north entrance point. The north end of the cove is foul for about 0.1 mile from the shore, to the south is an area approximately 200 yards wide, with depths of 1 to 3 fathoms, where fishermen find fair-weather anchorage. The bight to the east of the south entrance point has 7 fathoms at the entrance and shoals rapidly to the head. The small cove immediately west of the north entrance point to the cove is foul.

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

- (256) **Grant Cove**, about 14.5 miles north-northwest of Dall Head and 1.7 miles south-southeast of South Vallenar Point, is exposed to the west. The cove shoals from depths of over 20 fathoms at the entrance to depths of 10 fathoms at the edge of the flat 300 yards from the head. Give the shore south of the south 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.

- (257) The small cove 0.8 mile north-northwest of Grant Cove is open, exposed, shallow, and foul. A rock with a depth of about 1 fathom is about 300 yards west of the north entrance point to the cove. Another rock, which uncovers 3 feet, is about 200 yards south of the north entrance point; the area north of this rock should be avoided. The small cove 1.1 miles north-northwest from Grant Cove bares at low water, with the exception of a very narrow opening 200 yards long midway in the entrance that has depths of about 2 fathoms. A large kelp-marked shoal is about 0.5 mile west-southwest of the cove. A rock with a depth of about 3 feet is near the south end of this shoal.

- (258) **South Vallenar Point**, about 1.7 miles north of Grant Cove, is near the northwest end of Gravina Island on the northeast side of Clarence Strait.

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

- (260) **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 north from the south shore of Vallenar Bay about 0.2 mile east of the 5-foot high rock north of South Vallenar Point. A mudflat that dries extends about 0.4 mile from the head of the bay. Anchorage in about 14 fathoms can be found 0.7 mile from the head of the bay about 350 yards off the east shore.

- (261) Vallenar Point is described in chapter 4.

(262)

Kasaan Bay to Harris River Bay

- (263) **Kasaan Bay**, 47 miles north of Cape Chacon, has its entrance on the west side of Clarence Strait, between Island Point and Grindall Island, where it is about 4.0 miles wide. It extends about 17.5 miles northwest 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 north shore of the bay almost to the head. Fog often prevails in the south part of Clarence Strait, while it is clear in Kasaan Bay. During southeast stormy weather, clouds and mist travel low along the north shore, while the south shore is generally free from low-flying scud. During southeast 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 south-southwest from Grindall Point in depths of 8 to 14 fathoms. All known dangers are shown on the chart. Midchannel depths are generally good.

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

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

- (266) The small cove to the west of Island Point has depths of 22 fathoms at the entrance shoaling to 6 fathoms near the head. It is used as an anchorage by fishing boats but is exposed to the north.

- (267) **Twenty Fathom Bank** is 2 miles east-southeast of Island Point. The bottom is rocky and has a least depth of 17 fathoms. The bank is used extensively by fishermen engaged in trolling.
- (268) **High Island**, about 1.4 miles north of Island Point, is wooded. From the south there appears to be twin summits on the island, but they merge into one from the east and again become visible from the northwest. The slope of the island is uniform. The northeast and south shores are abrupt and consist of gray rock, 20 to 40 feet high.
- (269) **High Island Light** (55°24'03"N., 132°09'51"W.), 40 feet above the water, shown from a skeleton tower with a red and white diamond-shaped daymark on the northeast side of the island, marks the entrance to Kasaan Bay. A rocky islet, 43 feet high and with a few trees on it, is off the southeast end of the island.
- (270) **Patterson Island**, about 100 yards west of High Island with foul ground between, extends west about 1.3 miles. The island is timbered and has three summits; the highest is at the east end. A bight makes into the south shore of the island near the west end in the depression between the west summit and the east ridge. It is used as an anchorage during north weather but affords no protection during southeast weather. Several rocks that cover at high water are at the entrance. The outermost rock, which bares at half tide in 55°23'38"N., 132°11'57"W., is about 0.25 mile east-southeast from the west point of the entrance to the bight. A house is at the head of the bight.
- (271) A rock with 1 fathom over it in 55°23'38"N., 132°10'51"W., is about 0.4 mile south-southwest from the easternmost point of Patterson Island, and it is not always marked by kelp; otherwise the passage south of the island is clear.
- (272) **Grindall Island**, the north point of the entrance to Kasaan Bay, is about 4.2 miles north-northeast from Island Point. It is heavily wooded and has two knobs near the southwest end; the west knob is the highest. The east part of the island is low. **Approach Point** is the east extremity of the island.
- (273) **Local magnetic disturbance**
- (274) Differences of as much as 5° from the normal variation have been observed on Grindall Island in the vicinity of Approach Point.
- (275) **Grindall Point**, the southeast 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.
- (276) **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 wide in the narrowest part. Islets and rocks, some that bare, extend about 825 yards west of the southwest side of Grindall Island to 55°26'39"N., 132°09'34"W. A rock with a depth of 2½ fathoms is in the middle of the passage in about 55°27'01"N., 132°09'07"W., 250 yards north-northwest of the wooded islet off the west end of Grindall Island. A patch of foul ground is on the west side of the south entrance to the passage. This foul ground will be cleared by keeping east of the range formed by two prominent points, one on either side of the cove on the west side of the passage. The north point has a wooded islet close by that should not be mistaken for the point. Pass close to the south point of the cove to avoid the 2½ fathom spot in the middle of the passage. The north entrance is clear.
- (277) A good anchorage for small vessels in north 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, soft bottom. In south 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 east through Grindall Passage, ebbs west, and is of moderate strength.
- (278) **Trollers Cove** is back of a chain of islands about 1.4 miles west from Island Point. The cove has depths of 4 to 6 fathoms. 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 east 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 2½ fathoms. The channel west of the island is best.
- (279) Round the west island at a distance of about 125 yards and then follow a midchannel course to the south of the islands. Pass about 50 yards south of the south shore of the east island to avoid a rock awash that is about 100 yards south of the island. When abeam the southeast end of the island, anchor in about 4 fathoms.
- (280) The small cove west of the west island has three rocky islets and several rocks marked by kelp in the center. It is not recommended as an anchorage.
- (281) **Skowl Arm** and Polk Inlet, its west 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, though the intervening land is high. **Skowl Point**, the south point at the entrance to Skowl Arm, is the northern-most tip of **Skowl Island**.
- (282) **Skowl Point Light** (55°25'39"N., 132°16'11"W.), 15 feet 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 north of the point at the entrance to Skowl Arm. Fishing boats find good protection close to the shore immediately west of Skowl Point during southeast storms.
- (283) On the north 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 offshore.

(284) **Smith Cove**, the large bay east of Old Kasaan village site and about 2 miles west of **Kasaan Point**, affords good anchorage in 10 to 20 fathoms, 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 1998, a dangerous rock was reported in the east part of Smith Cove on the west 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 northwest side of Smith Cove.

(285) **Saltery Cove** is a small bay, about 1 mile long, in the southeast shore of Skowl Arm, about 2.5 miles west of Skowl Point and close east of McKenzie Inlet. A group of islands, surrounded by foul ground, is on the east side of the cove; this foul ground extends into the cove about 0.5 mile from the east shore. The channel east 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, mud bottom, is near the head of the cove. Numerous floating docks and a ¾-fathom rock in about 55°24'06"N., 132°19'43"W., are at the west side of the head of the cove.

(286) **McKenzie Inlet**, the south branch of Skowl Arm, has its entrance about 3.7 miles west of Skowl Point. The inlet extends about 5 miles in a south direction. **McKenzie Rock**, bare, is about 0.5 mile west of **Khayyam Point**, the east point at the entrance; there is no safe channel between. A dangerous submerged rock is immediately north of McKenzie Rock. A rock that uncovers 4 feet in about 55°24'11"N., 132°21'59"W., and a rock awash immediately to the northwest are about 400 yards from the east shore, 0.5 mile south of McKenzie Rock. The only good anchorage in Skowl Arm for vessels of any size is in McKenzie Inlet, about 500 yards north of East Sentinel Island, in 28 fathoms, mud bottom.

(287) 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. A careful midchannel course between the islands leads through safely; south of the islands the inlet is clear. There is good anchorage near the head of the inlet on the northwest side of **Peacock Island**, in depths of 7 to 11 fathoms, soft bottom.

(288) **Paul Bight**, on the west side of the entrance to McKenzie Inlet, affords anchorage for small craft in 3 to 5 fathoms. A group of bare rocks is off the north point at the entrance. In entering, favor the south point. A depth of 3 feet is available in the entrance.

(289) **Polk Inlet**, the west arm of Skowl Arm, is entered about 4.7 miles above the entrance to Skowl Arm and extends west and south 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.

(290) **Black Rock** bares 12 feet and is about 1 mile north from Kasaan Point in 55°27'36"N., 132°17'08"W. The range formed by the northeast tangent of **Daisy Island**, 1.3 miles northwest of Black Rock, and the rocky islet southeast of Daisy Island clears Black Rock by a distance of about 0.1 mile.

(291) **Kasaan Island**, low and wooded, and **Round Island**, a small wooded islet northwest of Kasaan Island, are the most noticeable of the islands in the middle of Kasaan Bay. A reef that uncovers 4 feet is about 0.6 mile 162° from the west end of Kasaan Island in 55°29'36"N., 132°22'33"W. The channel south of this reef and south of Kasaan Island has been found clear of dangers. The entrances at both ends of the channel are clear, with the exception of a 2½-fathom shoal extending about 260 yards northwest of **Berry Island** to 55°30'31"N., 132°23'44"W. and a 5-fathom shoal about 0.8 mile 125° from the east end of Kasaan Island in 55°28'56"N., 132°18'05"W.

(292) Anchorage for small boats is to be found in the landlocked inlet on the northeast side of Kasaan Island in 7 to 10 fathoms, soft bottom. This is called **Happy Harbor** locally. The entrance is 2 feet deep, and caution is necessary in entering. A shoal, covered 1¼ fathoms and marked by kelp, extends 300 yards north of a rock awash off the northeast entrance point. After entering the narrow channel, favor the east side until through the entrance.

(293) The lagoon on the south side of Kasaan Island is sheltered but subject to strong winds drawing through from the north. The channel is very narrow and has a controlling depth of 4 feet.

(294) A small cove, known locally as **Linney Bay**, 0.6 mile west 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 rock with 1¼ fathoms over it in about 55°28'30"N., 132°20'35"W., is just east of the center of the entrance, but depths throughout the greater part of the bay are 10 to 24 fathoms with no known dangers.

(295) The small bay about 1.7 miles south of the west end of Kasaan Island affords anchorage for small boats in depths of 8 to 12 fathoms. A reef, which bares, extends about 200 yards southeast from the small island in 55°28'42"N., 132°32'46"W., at the southwest side of the entrance, and another reef with a dangerous rock at its end extends about the same distance to the northeast. When entering the bay, favor the east point. A least depth of 3½ fathoms was obtained in the entrance.

(296) **Kasaan** is a village on the north shore of Kasaan Bay about 10 miles northwest of Grindall Island. The former cannery wharf here has a face 125 feet long with a depth of 32 feet 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 of berthing space, is about 25 yards north of the cannery wharf. In 1976, 10 to 25 feet was reported

alongside the float. The state-operated radio station in Kasaan maintains radiotelephone communications with Ketchikan. **Kasaan Light** (55°32'05"N., 132°23'46"W.), 12 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on shore, south of the cannery. The point west of the village is foul and should be given a berth of at least 150 yards.

(297) **Coal Bay**, on the south shore of Kasaan Bay about 3.8 miles southwest of Kasaan and 1.5 miles southeast of Outer Point, affords good anchorage in 15 fathoms except in north weather. It is probable that winter gales from the northwest blow hard into the bay. A reef that bares extends about 0.3 mile in a north direction off the west point of the entrance to the bay. A rocky shoal, with 1¾ fathoms over it in about 55°30'35"N., 132°29'24"W., is about 0.4 mile east-northeast from the same point.

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

(299) **Karta Bay**, at the head of Kasaan Bay about 2 miles northwest of Sandy Point, affords good anchorage in 10 to 12 fathoms, with a clearance of about 430 yards. **Mound Point** (55°34.6'N., 132°34.0'W.), on the north side of the entrance to Karta Bay, is prominent. A shoal with a depth of 2.7 fathoms in 55°33'59"N., 132°32'11"W., is about 1.1 miles east-southeast from the point. A number of shoals with less water over them are farther inshore in the direction of Sandy Point.

(300) 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. In heavy southeast weather the northeast part of this inner bay affords the only secure anchorage in 7 to 12 fathoms, soft bottom. The best entrance is between the fourth and fifth islands counting from east. This passage is 225 yards wide, but the channel is less than 50 yards wide between the 3 fathom curves, with a depth of 4 fathoms midchannel.

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

(302) **Sandy Point** (55°33.2'N., 132°31.4'W.), the north point at the entrance to Twelvemile Arm on the west shore, is low and wooded. A reef about 300 yards wide extends off the point in a southeast direction for about 500 yards. The approximate center of the reef is marked by a flat islet 5 feet high. The immediate vicinity of this reef is shoal and rocky. For 1 mile to the southwest, 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 **Pellet Point**, 2.4 miles southwest of Sandy Point.

(303) **Outer Point** is a rocky, wooded promontory, on the south shore at the entrance to Twelvemile Arm. A small island with a lone tree on it is just off the point to the

northeast in Kasaan Bay. Reefs extend about 150 yards offshore on the Twelvemile Arm side. A 4-fathom spot is about 300 yards northwest of the point.

(304) **Jarvis Island** is about 1.1 miles southwest of Outer Point along the southeast shore of Twelvemile Arm. The shoreline is abrupt like the general shoreline. About 0.3 mile northeast of Jarvis Island is a small grass-covered rock about 0.3 mile from shore. A rock with ½ fathom over it is in about 55°30'44"N., 132°32'44"W., and about 250 yards northwest of this rock. About 1.5 miles southwest of Outer Point and 0.2 mile west of Jarvis Island is a small island, with a reef about 50 yards in diameter, just off the northwest shore. It is wooded and about 200 feet 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 above the water, is shown from a spindle with a green square daymark on the north side of the reef.

(305) **Loy Island** is to the northeast of the entrance to Hollis Anchorage on the west 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.

(306) A ferry terminal is in **Clark Bay**, about 0.4 mile north-northwest of the northeast point of Loy Island. The terminal has berthing space, with dolphins, of about 235 feet and a reported depth alongside of about 25 feet.

(307) **Hollis Anchorage**, on the west side of Twelvemile Arm, affords good anchorage in 3¾ to 9½ fathoms. The anchorage is somewhat constricted by a rocky ledge that extends west about 200 yards from the west end of the island on the north side of the entrance and by the extensive flat in the northwest part of the anchorage that extends off the mouth of **Maybeso Creek**. In entering Hollis Anchorage, avoid the gravel reef that uncovers 9 feet making off from the south shore to the center of the channel and the rock that uncovers 3 feet in about 55°28'48"N., 132°39'11"W., and about 80 yards off the north shore opposite the reef.

(308) The approach channel to Hollis Anchorage has a depth of 3.8 fathoms. The small arm of Hollis Anchorage that extends northeast has been cleared by wire drag to a depth of 2 fathoms. The usable area of the arm is very limited and is suitable only for small vessels. The 2-fathom area is only 45 yards wide at the entrance to the arm. The shoal area on the northwest side of the arm extends with depths of 5 to 10 feet for two-thirds of the distance across the entrance.

(309) **Hollis** is on the peninsula on the north side of the anchorage. A small-boat float, with a seaplane float at its southwest end, and a surfaced launching ramp are near the southeast end of the peninsula.

(310) **Althouse Point** is the south point at the entrance to Hollis Anchorage. A rocky shoal with ¾ fathom over it is in about 55°28'03"N., 132°38'39"W., and about 550 yards south of the point and 250 yards offshore.

- (311) **Harris River Bay**, at the mouth of **Harris River**, is bare, but at high tide small craft can cross into the river.
- (312) Midchannel courses lead in good water through Twelvemile Arm. Numerous rocky reefs at the points do not extend more than 60 yards offshore with the exception of a rock awash about 200 yards off the west shore in about 53°23'26"N., 132°42'40"W. A log boom is east of the rock. An islet and foul area, in 55°22'26"N., 132°43'44"W., are near the center of the arm near the head. Numerous islets and rocks are about 300 to 600 yards southwest of the islet.

(313)

Caamano Point to Cabin Cove

- (314) **Caamano Point**, marked by a light (55°29.9'N., 131°58.9'W.), is the south extremity of Cleveland Peninsula and the west point at the west entrance to Behm Canal; ledges extend southeast from the point. Caamano Point and light and Behm Canal are described in chapter 4.
- (315) The west 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.
- (316) Launches may find anchorage in any of the several shallow bights that indent the west 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.
- (317) **Lee Rock** (55°42.2'N., 132°14.2'W.), close off the west coast of Cleveland Peninsula, about 15.9 miles and 6.4 miles north of Caamano Point and Ship Island, respectively, is about 20 feet 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. Passage can be made between Lee Rock and the two east islands in 7 to 9 fathoms. There is no safe passage between the two east islands or between the islands and the shore. A reef 200 yards. South of the easternmost island and 100 yards offshore bares 10 feet.
- (318) **Cabin Cove**, indenting the west coast of Cleveland Peninsula, about 3.2 miles north of Ship Island, is shoal and should not be entered.
- (319) 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 north of Ship Island. Midchannel depths between the rock and the shore are 8 to 14 fathoms (14.6 to 25.5 m).

(320)

Niblack Point to Ship Island

- (321) **Niblack Point** (55°33.1'N., 132°07.1'W.) is 5.5 miles northwest of Caamano Point.
- (322) **Ship Island**, 0.3 mile offshore on the east side of Clarence Strait, is about 4 miles northwest of Niblack Point and 14.5 miles above Guard Islands. The island is 35 feet high and has a few scraggy trees on it. A ledge extends a short distance from the south end. **Ship Island Light** (55°35'56"N., 132°12'11"W.), 40 feet 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 midway between the island and the mainland.

(323)

Meyers Chuck to McHenry Ledge

- (324) **Meyers Chuck**, a good anchorage for small craft, is about 1.6 miles southeast of **Lemesurier Point** (55°45.9'N., 132°16.9'W.) and immediately east of **Meyers Island**. A light is on the north side of the island. The harbor is entered between the light and a buoy; the buoy marks the end of a reef extending southeast of a small island north-northwest of Meyers Island. Meyers Chuck is a small settlement along the east shore of the harbor. A lighted microwave tower at the settlement is visible from Clarence Strait.
- (325) A state-operated float with about 384 feet of berthing space and a reported depth of 12 feet alongside the northeast end, and 25 feet alongside the rest is at the northeast side of the harbor; a seaplane float extends northwest from the float near the approach pier. Care should be taken to avoid the reef that bares about 25 feet northwest of the head of the approach pier. A private float, south of the state float, has water available during the summer. A 56-foot boat grid is available just inside the state-operated float.
- (326) Mail and supplies are received weekly by seaplane from Ketchikan. Seaplane transportation to Ketchikan is available upon request.
- (327) 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.
- (328) To enter, give the west point of Meyers Island a good berth to avoid a submerged rock with 4 to 6 feet over it, which is reported to be about 150 yards off this point. Pass midway between the light and the daybeacon and turn southeast into the harbor.
- (329) **Misery Island** is 0.5 mile northwest from Meyers Chuck. The west shore is faced by almost perpendicular cliffs about 40 feet high. Two rocks, marked by a buoy, are south from the island; the outermost, distant about 300 yards, bares 4 feet, and the inner rock bares 9 feet. A small rock, marked by kelp, two rocks awash, and a reported submerged rock with about 4 feet over it extend

from about 300 to 600 yards east from near the south point of Misery Island. There is reported to be 3 to 4 fathoms in the passage between the north end of Misery Island and the mainland. Favor the mainland shore.

(330) **Lemesurier Point**, the south point at the entrance to Ernest Sound, and also the southwest 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.

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

(332) **McHenry Ledge**, with a depth of $\frac{1}{4}$ fathom and showing kelp, is 0.7 mile 320° from Lemly Rocks; it is marked by a lighted bell buoy 0.1 mile northwest 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.

(333)

Streets Island to Windfall Harbor

(334) The west shore of Clarence Strait along the east 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.

(335) **Streets Island** is a low rocky islet, 0.4 mile from the west shore of Clarence Strait and about 2.3 miles north-northwest from Approach Point, Grindall Island. Kelp extends a short distance from the ends of the island. A shoal area, with a depth of $3\frac{1}{2}$ fathoms near its outer end and with lesser depths inside, extends east-northeast for about 0.3 mile from the east side of Kasaan Peninsula towards Streets Island. A narrow channel with a controlling depth of 15 fathoms is between the outer end of this shoal and the island. However, this passage is not recommended without local knowledge.

(336) **Lyman Anchorage** is on the southwest shore of Clarence Strait about 6.5 miles northwest 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 southwest from the head of the main bay, is about 200 yards wide and has a controlling depth of $\frac{1}{2}$ fathom in its narrow approach. It offers excellent shelter in all weather for small craft in 4 to 5 fathoms, mud bottom.

(337) **Lyman Point** is the east point of the entrance. Rocky shoals are north and northeast of the point.

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

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

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

(341) **Windfall Harbor**, about 4 miles northwest of Lyman Anchorage, is a narrow, crooked inlet that extends southwest 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.

(342)

Tolstoi Point

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

(344)

Local magnetic disturbance

(345) Differences of as much as $3\frac{1}{4}^\circ$ from normal variation have been observed at Tolstoi Point.

(346)

Tolstoi Bay

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

(348) On the west side of Tolstoi Bay about 1.2 miles south of the entrance is a small harbor marked by a wooded islet 150 yards offshore. The entrance is obstructed by an islet in midchannel and a rock that shows at low water off its east side, leaving a clear channel less than 100 yards wide on the northeast side of the islet. The anchorage is in about $7\frac{1}{2}$ fathoms near the middle. In entering, pass south of the outlying wooded islet.

(349) There is no safe passage inside the group of small islands close to the west point at the entrance to Tolstoi Bay, although entering from southeast, between submerged rocks, one can find a constricted anchorage for small craft in 6 to 7 fathoms.

(350)

Thorne Bay to Narrow Point

(351) **Thorne Bay** (55°39'54"N., 132°29'32"W.) has its navigable entrance on the north side of a large island obstructing its mouth, 2.5 miles west of Tolstoi Point. The entrance is marked by lights and daybeacons. A shoal area is close to the north shore of the channel leading into Thorne Bay, north 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 southeast and a larger arm that extends about 2 miles northwest. In rounding the north point, between the entrance channel and Thorne Bay proper, follow a course slightly south of midchannel to avoid a gently sloping sandbar that extends southwest from the point. After this point is cleared, Thorne Bay is clear and has depths of 4¼ fathoms or more to a line running southwest from the lumber camp float in the small cove in the north shore of the bay. Midbay, on a line with the float bearing 052°, is a shoal with a least depth of 1 fathom. Northwest 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.

(352) 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.

(353) A municipal harbor is on the north side of the bay about 1.5 miles above the mouth. A smaller harbor is on the south side of the bay approximately 1 mile above the entrance.

(354) The bight south of the large island in the entrance to Thorne Bay affords a good anchorage in 14 to 20 fathoms; the channel to it favors the main south shore. A large reef, covered with kelp, extends almost midway into this channel from the large island. The small cove in the north shore of the bay, about 2.3 miles west-northwest of the island in the entrance, has depths of 2 to 3 fathoms. In 2002, a small-craft harbor, seaplane floats, fuel floats and a transfer bridge were along the north side of the Bay. Boyer Alaska Barge Line and Petro Alaska, Inc., operate the steel transfer bridge; 200 feet with dolphins; 10 feet reported alongside; receipt and shipment of conventional and containerized general cargo, receipt of petroleum products; owned by Boyer Towing, Inc.

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

(356) **Snug Anchorage** is about 1 mile west 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 south of the islands off the entrance, then favor the west shore to avoid the rock awash that is about 300 yards south of an island off the north point of the entrance. The channel passes to the southwest of the small islets that are close to the north shore. Depths of 4 to 5 fathoms were obtained in the narrowest part of the channel, and depths of 3 to 16 fathoms were found at the head of the cove. In the small cove east of Snug Anchorage, depths of 12 to 15 fathoms were found. Rocks are along the west side and near the head of this cove. Irregular depths indicate the necessity for caution in Snug Anchorage and the cove to the east.

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

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

(359) **Narrow Point**, about 7.5 miles north-northwest 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.

(360) A small cove, open to the southeast, is 5.5 miles northwest of Narrow Point. It is rocky in the north part.

(361)

Ratz Harbor

(362) **Ratz Harbor**, about 7 miles north-northwest 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 north to northeast, and these probably blow home with some force. Williwaws from the southeast at times strike with great force in this anchorage. The northwest point at the entrance is a ledge with an islet near the shore and two heads, each with a single scrubby tree, near its southeast end, all connected at low water. **Ratz Harbor Entrance Light** (55°53'16"N., 132°35'53"W.), 20 feet 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 southeast point at the entrance, a ledge covered only at high water extends 175 yards northwest and has two rocky heads. The width of the channel between is about 230 yards.

(363) A careful midchannel course carries in clear. Depths of 4 to 11 fathoms were found at the entrance and 4 to

13 fathoms inside. The usual anchorage is in the middle of the south part of the harbor. There is a flat in the west indentation of the harbor and a few stub pilings on the southeast side of the harbor.

(364)

Luck Point to Etolin Island

(365) The shoreline from Ratz Harbor northwest to **Clear Creek**, a distance of 6.3 miles, is practically straight. A small rock, 20 feet high, is 450 yards to the northeast of the mouth of the creek.

(366) **Luck Point** (55°59'N., 132°44'W.), on the west side of Clarence Strait opposite Point Stanhope, is a rounding point without marked features. Here the shoreline turns west-northwest and changes from a steep, rocky formation to a boulder beach about 100 yards wide. About 0.4 mile west-northwest from Luck Point, a narrow ledge extends offshore for about 0.3 mile. From about 0.7 mile northwest 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.

(367) **Etolin Island**, on the northeast 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.

(368)

Onslow Island to Stone Islands

(369) The Onslow Islands, on the north 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 high.

(370) The west 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 south and extending east, is about 1.8 miles from Ernest Point. It is unsurveyed, but it is reported that 8 feet can be carried through the narrow neck near high water and that 4 fathoms, mud bottom, are obtained within. Rocks awash and kelp are in the entrance, and tide rips extend off the point.

(371) **Ernest Point** (55°51.1'N., 132°22.1'W.) is the southernmost point of Onslow Island and is the northwest point to Ernest Sound. Foul ground extends for 0.5 mile south-southeast of the point.

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

(373) **Muffin Islands** are a group of four small wooded islands about 0.4 mile east of Eagle Island. The channel between Eagle Island and Muffin Islands is clear. Reefs extend offshore about 0.6 mile to the north and northwest of the Muffin Islands.

(374) The southeast and east shores of **Stone Islands**, about 0.6 mile north 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 southeast of the wooded island in the entrance. Anchorage may be obtained in 5 fathoms, mud bottom; the channels leading to it are tortuous. The cove in the north shore of the larger Stone Island is completely filled by flats. No fresh water was found here.

(375) 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 north from the south end of Eagle Island. The end of each reef is marked by a rock; the rock on the east side of the channel uncovers 8 feet, and the rock on the west side uncovers 6 feet. Midchannel courses are good, but, when passing between the two rocks, slightly favor the east side. The cove on the west side of the channel to the south of the north end of Eagle Island has depths of 3½ fathoms in the middle and 12 fathoms, mud bottom, at the entrance. Water may be obtained from a small stream at the head.

(376) The channel between Onslow and Stone Islands is irregular, depths of 6 fathoms being found near the south end. A wooded island is in the passage with deep water between it and the larger Stone Island. Rocks awash are 0.1 mile east and 0.2 mile southeast, respectively, of the wooded island. In passing, favor the larger Stone Island. The channel between Onslow Island and Carlton Island to the north is foul and bares. The passage north of Carlton Island has depths of 5½ to 7 fathoms and from the south passes east of the rock that uncovers about 8 feet and is 500 yards east of Carlton Island.

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

(378) 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.

(379)

Dewey Anchorage

(380) **Dewey Anchorage**, on the northeast 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 northwest extremity of Onslow Island, is the southeast point at the entrance. A rock awash is about 200 yards northwest of the point, and a reef, marked by kelp and covered by 1½ feet of water, is 0.6 mile southwest of it. **Carlton Island**, flat and timbered, is the larger island northeast of Gull Point; a shoal extends

350 yards southwest from its west end. **Mabel Island**, about 0.2 mile in diameter, is about 0.8 mile northwest of Gull Point; a reef covered at half tide and without kelp is 0.6 mile south-southwest of the island; two reefs that bare are about 0.8 mile to the northwest. The channel between the reefs to the northwest has a least depth of 17 feet; a rock awash is 0.1 mile south of the east reef. A 9-foot spot is 1.3 miles northwest of Mabel Island. **Center Island**, about 0.1 mile in diameter, is about midway between Mabel Island and the north shore of Dewey Anchorage. A shoal with a least depth of 23 feet is between Center and Mabel Islands. A reef extends about 75 yards off the northeast side of Center Island; a rock awash is just off the end of the reef. A shoal with a least depth of 20 feet is 0.5 mile southeast of Center Island. The area between Center Island and the north shore of Dewey Anchorage is shoal and has a least depth of 21 feet.

(381)

Caution

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

(383) **Split Island**, small and wooded, is 0.3 mile to the south of the south extremity of **Kelp Point**, the northwest entrance point of Dewey Anchorage. A reef is close to the east end of the island. **Double Island**, small and wooded, is about 0.2 mile south of Split Island. A small wooded islet is 0.1 mile southeast of Double Island, and foul ground extends to the northeast; the channel between is foul.

(384) To enter Dewey Anchorage from south, stand in on the line of the east 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 shoal 0.5 mile northwest of Carlton Island. Anchor 0.4 to 0.5 mile north-northwest of Carlton Island in 15 to 18 fathoms.

(385) From west, pass 0.5 mile south of Double Island and head for the north end of Center Island. When abeam the west end of Mabel Island, proceed with caution to the anchorage. The chart is the guide.

(386) Small craft can find better anchorage 0.5 mile east of Carlton Island in 6 to 8 fathoms, hard sand bottom. This anchorage can be entered from west, passing north of Carlton Island, or from southeast, using one of the passages described previously.

(387)

McHenry Anchorage to Quartz Rock

(388) **McHenry Anchorage**, about 7.5 miles north of Ernest Point (55°51'N., 132°22'W.), has a clear width of about 700 yards and a length of about 1 mile from Avon Island to a small island at its head. It is sheltered except from west, and small vessels can anchor in the southeast part of the harbor with shelter from all winds. **Avon Island**, on the north side of the entrance, is small, wooded, and close to shore; it should be given a berth of over 250 yards. A reef extends about 400 yards in a southeast direction from the southeast side of Avon Island.

A rock, with 14 feet over it, is 0.5 mile west-southwest of Avon Island in 55°58'14"N., 132°28'30"W.

(389) To enter McHenry Anchorage, keep Avon Island aboard, distant 450 yards (411 m), and anchor in the middle in about 8 fathoms (14.6 m). A small vessel can follow a midchannel course and anchor 250 yards (229 m) west of the wooded island in the southeast end of the harbor in 5 to 7 fathoms (9.1 to 12.8 m).

(390) **Quartz Rock** is the extremity of the reef, awash at high water, about 0.3 mile west from the point northwest of McHenry Anchorage.

(391)

McHenry Inlet to Kashevarof Passage

(392) **McHenry Inlet** has its entrance 5 miles east of Point Stanhope (56°00.9'N., 132°36.5'W.) and 2.5 miles north 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 west direction from the southeast entrance point. **Range Island**, the small wooded island in midchannel at the entrance, is the most north of the group off this point and is about 0.4 mile to the southwest of a small rocky islet off the northwest point of the entrance, with a clear channel between. A 2-fathom spot is 1.2 miles 310° from Range Island. A long narrow ridge, with depths of 3¼ to 10 fathoms with deep water on each side, is in midchannel in the direction of the channel, 0.6 mile east-northeast of Range Island.(393) **McHenry Islet**, a small rocky islet, is 1.6 miles 082° from Range Island. Foul ground extends in a southwest direction from this islet for about 0.1 mile and to the northwest extends to the north shore of the bay.(394) **Nut Rock** is about 700 yards 220° from McHenry Islet. A rock awash is 550 yards 073° from McHenry Islet.

(395) In entering, pass about 0.1 mile north of Range Island, then turn between McHenry Islet and Nut Rock, favoring Nut Rock, and follow the trend of the channel favoring the southeast shore until past the rock awash northeast of McHenry Islet; then follow midchannel courses. Anchorage may be had in 12 to 19 fathoms beyond the turn in the channel. Foul ground extends about 0.3 mile from the head of the inlet.

(396) **Jadski Cove**, on the north side of McHenry Inlet, has its entrance about 1 mile northeast of Range Island. A depth of about 10¼ fathoms was found in the bight in the northwest end of the cove, but the approaches are foul.(397) **Burnett Inlet**, about 5 miles northeast of Point Stanhope, extends in a north direction for about 7 miles, with an average width of 0.2 mile. **Fawn Island**, wooded, is on the west side of the channel at the entrance. Three small wooded islands and some rocks extend 0.2 mile off the north shore of Fawn Island. A small wooded islet, with a rock awash 150 yards off its north end, is 0.3 mile west of Fawn Island. A 3¼-fathom spot is 0.8 mile southwest and a 2¼-fathom spot is 0.5 mile southeast of Fawn Island close to the east shore. A midchannel entrance between Fawn Island and the east shore is safe from hazards. There

is an anchorage for deep-draft vessels off the small cove on the east side of Burnett Inlet about 0.7 mile due east of Fawn Island. To safely reach this anchorage area, approach from the south on a course that is tangent to the east 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, mud bottom.

(398) Rocks extend from 50 to 100 yards off the east and south shores of **Cannery Point**, the west point of the entrance. A reef, bare at low water, is about 300 yards 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 are almost in midchannel between Cannery Point and South Burnett Island. The north shoal, about 300 yards long in a north direction, has a least depth of 1¼ fathoms near its north end; the south shoal, about 100 yards to the south, is narrow and has a least found depth of 6¼ fathoms. The 1¼-fathom spot is marked by a buoy. The channel between the shoals and the reef to the west has depths of 10 to 37 fathoms.

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

(400) **North Burnett Island** and **South Burnett Island** are close to the east shore of Burnett Inlet near the entrance. The passage between the midchannel shoal and South Burnett Island has a least depth of 17 fathoms. **Deadman Island**, about 0.4 mile north-northeast of Cannery Point, is at the north end of the bight off the northwest shore near the entrance. A narrow shoal with depths of 6¼ fathoms is midway between Deadman Island and North Burnett Island. The channel west of this shoal has depths of 10 to 27 fathoms but leads over a 4¼-fathom spot and probably less water. The channel east of this shoal has depths of 20 fathoms.

(401) The depth of the inlet remains greater than 10 fathoms until about 1 mile south of the narrows. There are minimum depths of 1 fathom 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 with an even muddy bottom. There is a prominent waterfall on the east shore 3 miles above the entrance. The inlet is too deep for secure anchorage.

(402) **Mosman Inlet**, about 4 miles northeast of Point Stanhope, makes north-northwest into Etolin Island for about 6 miles, with an average width of about 0.2 mile. A depth of 4 fathoms is on the east side of the entrance, about 0.5 mile south-southeast of **Marble Point** in 56°03'50"N., 132°31'190"W. There are two rocks on the east side about 0.8 mile above Marble Point, the east point at the entrance. A reef extends from the north end of the islet lying 1 mile north-northwest of Marble Point to the west shore. This reef obstructs the north approach to the coves on the west side of the entrance to the inlet. Above this area, the inlet is deep and free of obstructions.

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

(404) **Rocky Bay**, to the north 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 on it is 2.5 miles 060° from Point Stanhope in 56°02'07"N., 132°32'31"W.

(405) **Point Stanhope** is the south extremity of a group of islands. A rock with a depth of 1.3 fathom over it, marked by a buoy, is 0.8 mile south-southwest 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 northwest of Point Stanhope, is the best. It has a depth of about 2½ fathoms, is narrow, leads close to several dangers and requires local knowledge for its safe navigation.

(406) Anchorage may be obtained by small craft drawing less than 4 feet in the channel just east of Three Way Passage. The widest part of the channel is about 150 yards and is entered by way of Three Way Passage. There is an anchorage for very small craft in the cove, 2.6 miles northwest 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, with local knowledge and making passage at high water only.

(407) The Etolin Island shore from Point Stanhope north-northwest 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 high with a rock 12 feet high that marks the south-southeast 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 west of Lincoln Rock West Light. The passage east of the islands may be used by small craft. The chart shows the known dangers.

(408) **Lincoln Rock West Light** (56°03'24"N., 132°41'51"W.), 58 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on **Lincoln Rock**. A 35-foot 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.

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

(410) **Johnson Cove**, to the east of the north end of Screen Islands, offers anchorage for two or three small craft of less than 4-foot draft to those with local knowledge. Strangers should not attempt entrance. Swinging room is limited by ledges and rocks on the west side of the cove, rocks and pilings to the northeast and shoal water toward its head. Several islands are off the entrance, all connected by ledges and foul areas. Entrance should only be made

south of the rock, awash, 150 yards off the southeast end of the large island near the entrance and east of the rock, awash at high water in midchannel at the entrance. Water may be obtained from streams that empty into the cove.

- (411) **Steamer Bay**, east of **Point Harrington**, affords anchorage at its head, but the holding ground is not good and southeast winds draw with considerable force through **Porcupine Creek**. It is open to northwest. 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 northwest of the east shore near the U.S. Forest Service cabin, approximately 1.2 miles from the head.

(412)

Local magnetic disturbance

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

- (414) 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 east shore, in about 16 fathoms. Small craft may find better bottom by anchoring in 10 fathoms close to the east shore in a cove, just past the Forest Service cabin on the beach and south of **Independence Island**. A bare rock, 12 feet high is near the shore on the northeast side of the basin.

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

- (416) **Kindergarten Bay**, the deep cove 2 miles north 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 north side of the bay appeared to be clear. Enter midchannel, passing south of the wooded islet, and anchor in 5 to 7 fathoms, soft bottom. Mariners are cautioned to avoid a large rock, covered 4 to 6 feet at high tide, that was reported close southwest of the largest islet near the head of the bay.

- (417) **Steamer Point**, 3 miles north of Point Harrington, is bold, steep, and heavily wooded. Deep water extends close to the point. **Steamer Point Light** (56°13'23"N., 132°42'49"W.), 30 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on a small wooded islet close north of the point.

- (418) **Kashevarof Passage** and **Snow Passage** form the head of Clarence Strait and are the two passages connecting with Summer Strait west 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.

- (419) See the Tidal Current prediction service at tidesandcurrents.noaa.gov for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(420)

Coffman Cove to Keg Point

- (421) An unnamed cove (56°01'N., 132°49'W.), on the west side of Clarence Strait about 2.3 miles southeast of Beck Island, is noticeable for its low-water area at the head and a sand beach about 600 yards 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.

- (422) **Coffman Cove**, protected on the north by Coffman Island, is close west of the unnamed cove and about 1.5 miles south-southeast of Beck Island. The northwest 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 southeast part of the cove in 8 to 10 fathoms, mud bottom, and a midchannel course will carry in safely. The passage into the southeast part of the cove east of Coffman Island is marked by lights and lighted buoys. The outermost dangers in the southeast part of the cove are a 2½-fathom spot in about 56°01'09"N., 132°50'22"W., and a rock awash in about 56°01'07"N., 132°50'25"W., about 500 yards and 600 yards south-southwest of the southernmost tip of Coffman Island, respectively. A flat extends about 0.2 mile from the southeast end of the cove.

- (423) In 1976, a logging camp was operating in Coffman Cove. There are remains of log storage booms scattered along the beaches in the southeast part of the cove.

- (424) In the southeast part of the cove is a ferry terminal. Ferry service to Wrangell and South Mitkof Island is available through the Inter-Island Ferry Authority from May through September. Just south of the ferry terminal is a boat ramp and a city pier. Three rocks are along the west side of the channel west and southwest of the city pier. 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 south-southeast of Coffman Island. Water and gasoline are available only in an emergency. Radiotelephone communications are maintained with Ketchikan.

- (425) **Lake Bay** is on the south 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 northeast between Beck and Coffman Islands, staying north of Gull Rock.

- (426) **Beck Island**, small and wooded, is about 0.8 mile northwest of Coffman Island. **Beck Island Light** (56°02'51"N., 132°51'45"W.), 27 feet above the water, is shown from a skeleton tower with a red and white

diamond-shaped daymark on the north side of the island; it marks the entrance to Kashevarof Passage.

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

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

(429)

Point Barnes to Point Colpoys

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

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

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

- (433) **Whale Pass** leads south and west of Thorne Island. Daybeacons mark the north entrance of the pass. When inbound, favor the right center channel to avoid several uncharted rocks covered 1.5 fathoms. Additional rocks covered 0.5 to 1 fathom are south toward the center of the pass. A reef extends south of the large unnamed island on the west side of the pass; daybeacons mark the best water. Mariners without local knowledge can more easily enter the pass through the southern entrance with fewer obstructions than the north entrance. The center of Whale Pass is open with relatively flat bottom. The bay to the northwest has excellent anchorage for small craft in flat, soft bottom. A seaplane harbor facility with a harbormaster operating out of Ketchikan is at the bay as well as several lodges. However, there is no reliable source of services in Whale Pass.

- (434) **Kashevarof Islands**, on the northeast 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.

- (435) The **Blashke Islands** form a group of islands at the southeast 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 southeast.

- (436) The islets and bays at the northwest end of Kashevarof Passage are described with Snow Passage following.

- (437) The currents at the northwest 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.

- (438) 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 from 2000 to 2002 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.

- (439) **Kashevarof Passage Light** (56°10'47"N., 133°01'18"W.), 27 feet above water, is shown from a skeleton tower with a red and white diamond-shaped daymark, on the west side of a small islet off the West Island.

- (440) **Exchange Cove**, on the northwest side of Kashevarof Passage about 2 miles northwest 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 at the entrance, shoaling gradually toward the head. Exchange Island forms the east shore of the north part of the cove.

- (441) To pass through the north part of Kashevarof Passage, West Island should be left about 0.5 mile to the east to avoid a 2.4-fathom spot. Pass midway between West Island and Kashevarof Passage Light; thence about 0.2 mile to the east of the small rocky wooded islet that is about 0.8 mile east of the south end of Exchange Island; thence in midchannel between Exchange Island and the small double island to the north. Continuing northward, travel midchannel between Prince of Wales Island and Fire Island, avoiding the kelp-covered rocks that are 0.5 mile due north of this pass, just 0.2 mile east of Prince of Wales. After Fire Island, the channel splits with passage between Tide and Bushy Islands, or Rookery and Tide Islands. A 2¾ fathom shoal exists 1 mile south-southeast of Tide Island.

- (442) There is another channel between **Fire Island** and **Echo Island**. Echo Island, about 150 feet high and wooded, has foul shores with the outermost danger extending about 800 yards south-southwest. A rock awash, marked by a daybeacon, is in the channel about 1.1 miles south of Echo Island; the channel west of Fire Island is preferred. This channel can be transited by keeping the daybeacon 0.2 mile to the east and the foul shores that extend off of Echo Island 0.3 mile to the east. There are a few 3½-fathom shoals on the outer limits of this channel and a rock that 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 south 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 $\frac{3}{4}$ -fathom shoal at the northeast entrance to this channel.

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

(444) On the south side of the last described channel, between the 240-foot island and the larger island southeast of it, is a shelter for small craft in all weather.

(445) **Key Reef** is an extensive reef about 1.8 miles east from the Kashevarof Islands. The north end of the reef, about 3.5 miles west of Point Harrington, usually shows at high water as two rocks about 5 feet high and about 100 yards long, but they are awash at extreme high tides. **Key Reef Light** ($56^{\circ}09'37''\text{N}$, $132^{\circ}49'47''\text{W}$.), 43 feet 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 east side of the reef. A number of low water rocks are near Key Reef. **Key Reef Rock** about 0.7 mile southeast uncovers 10 feet.

(446) **Bluff Island** is a small wooded island about 1.8 miles to the west-northwest of Key Reef. Islets extend about 250 yards from the north and south ends of the island. The east and west shores are clear.

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

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

(449) **Nesbitt Reef** is a dangerous reef that extends 0.8 miles south from Point Nesbitt. Near the outer end of the reef is a rock that uncovers 12 feet. 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 4.8 fathoms extend 1.6 miles east and southeast of the reef. **Nesbitt Reef Light** ($56^{\circ}13'13''\text{N}$, $132^{\circ}51'50''\text{W}$.), 27 feet above the water, shown from a pile with a red and white diamond-shaped daymark, is on the south end of Nesbitt Reef.

(450) From Point Nesbitt northwest 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 south from MacNamara Point.

(451) From MacNamara Point northeast 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.

(452) **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 $4\frac{1}{2}$ fathoms in the middle of the channel at the north end, 0.7 mile east-northeast of Round Island. The shoal is marked on its west 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 and 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.

(453) **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.

(454) **Bushy Island Light** ($56^{\circ}16'35''\text{N}$, $132^{\circ}57'35''\text{W}$.), 22 feet 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 northeast end of Bushy Island and marks Snow Passage. From points to the northwest the light appears well off the Bushy Island shore. Just south of Bushy Island Light are bare rocks that extend 0.2 mile east of Bushy Island. The submerged rocks in this region are covered by kelp.

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

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

(457) The currents of Snow Passage somewhat resemble those of Seymour and Sergius Narrows in their peculiarities. The flood or southeast current has a velocity of 1.4 to 3.4 knots and the ebb or northwest 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 north end of Bushy Island; west of the last named point they are very much lessened. Particularly steep waves exist at both entrances to Snow Passage during strong south winds with contrary currents. (See the Tidal Current Tables for predictions of times and velocities of the current in Snow Passage.)

(458) **Ossipee Channel** is between Shrubby and Bushy Islands with the channel becoming more constricted toward the west. An examination by shallow water multibeam indicates depths ranging from 5 to 9 fathoms in the midchannel. A dangerous submerged rock with a least depth of 0.8 fathom extends 0.14 mile into the channel from the northwest shore of Shrubby Island, and an area foul with rocks lies 0.1 mile from the southwest 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.

(459) The current sets fair with the channel in Ossipee Channel. When the current runs north in Snow Passage, its direction in Ossipee Channel is west, and when south in Snow Passage, its direction in Ossipee Channel is east.

(460) **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 west-northwest of Bushy Island. Rocks, marked by kelp and bare at low water, are to the southeast and southwest, close-to.

(461) **Rookery Islands**, three in number and wooded, are in midchannel near the northwest end of the passage and 1.8 miles southwest of MacNamara Point. Between the islands are bare rocks and ledges that cover, and close west of west Rookery Island are two islets, each with a clump of trees. **Rookery Islands Light** (56°18'51"N., 133°06'21"W.), 40 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the northeast side of **Round Island**, the easternmost island of the group.

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

(463) A line of detached rocks about 1.4 miles long in a north-northwest to south-southeast 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 northwest end, 0.7 mile northeast of Bay Point. The channel leading along the shore west of them is clear.

(464) The bays and coves to the south 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 make the passage from Salmon Bay to the first bay to the south through the salt marsh.

(465) **Point Colpoys**, about 4.5 miles west of MacNamara Point, is low and wooded and is marked by **Point Colpoys Light** (56°20'11"N., 133°11'54"W.), 19 feet 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 north.

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

(467)

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(468) 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 west of Lemesurier Point are about 52, 50 and 60 miles, respectively.

(469)

Ernest Sound

(470) **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 north-northeast for about 25 miles to Point Warde; from this point, under the name of Bradfield Canal, it extends about 17 miles in a general east 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.

(471) From Ernest Sound two arms extend north-northwest and join north of the northernmost extremity of Wrangell Island near the mouth of Stikine River. The west arm is called Zimovia Strait. The south part of the east arm is called Blake Channel and the north part Eastern Passage. A passage to Wrangell through Ernest Sound, Blake Channel, and Eastern Passage is practicable and is used as an alternate route for ferries and other large vessels. Small craft use Zimovia Strait frequently.

(472) 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 rock about 2.2 miles northeast of McHenry Ledge off the entrance to Union Bay. A shoal area with a least depth of 13 fathoms 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 north end of Deer Island, vessels should pass 0.6 mile west of Eaton Point; thence 1.2 miles west of Point Peters, the south extremity of Deer Island; thence in midchannel between Deer and Niblack Islands; thence 0.6 mile west of the north end of Deer Island.

(473) Lemesurier Point, Lemly Rocks, McHenry Ledge, the Onslow Group, on the north 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.

(474)

Currents

(475) The currents in Ernest Sound follow the general direction of the channel. The flood current sets north with an average velocity of about 1.7 to 2.1 knots. The ebb current sets south 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 prediction service at tidesandcurrents.noaa.gov for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(476)

Union Bay to Vixen Harbor

(477) **Union Bay** is east 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 south, on the east side of the head of the bay, in about 18 fathoms. The southwest 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 in the middle of the entrance and about 2.5 miles north-northeast 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 above high water and are not readily distinguished. Anchor in 18 fathoms, about 0.4 mile offshore, on the east side of the head of the bay, with the northeast point at the entrance to the lagoon bearing about 140°.

(478) 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 north of the islet.

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

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

(481)

Local magnetic disturbance

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

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

(484)

Vixen Inlet to Olive Cove

(485) **Vixen Inlet**, about 6.5 miles northeast of Lemesurier Point and south 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 west side of Vixen Point and extends south about 1.2 miles. A reef with a least depth of ¾ fathom, not marked by kelp, is in the middle of the entrance, 1.2 miles 284° from Sunshine Island.

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

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

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

(489) **Petersen Islands**, separated by a narrow channel with a depth of 3 fathoms and having the appearance of a split island, are about 4.6 miles west of Easterly Island Light and 3 miles south-southwest of Brownson Island.

(490) **Westerly Island**, small and wooded, is about 1.4 miles south of Brownson Island. The channel between it and Brownson Island is clear, except for the rocks north and north-northeast of Petersen Islands.

(491) **Brownson Island**, on the west side of Ernest Sound 7 miles northeast of Onslow Point, is cut almost in two by a large lagoon. A group of small islands is separated from the south end of the island by a channel about 0.1 mile wide, suitable for small vessel traffic that may also find anchorage in the area. Any vessel transiting the area should be aware of numerous rocks and shoals.

(492) An island, small and wooded, is 0.7 mile southeast of Brownson Island. A large cluster of rocks is about 0.2 mile east of the north end of the island. About 0.2 mile east of these rocks is a cluster of rocks awash and a submerged ledge which are marked by a daybeacon. These constitute a danger and should be avoided.

(493) A small, narrow island, with rocks off its north and south ends, is close to the east shore of Brownson Island, near the south end. The channel separating the two is extremely narrow and deep. A submerged ledge extends westward from the island creating a potential hazard for any vessels transiting the narrow passage.

(494) **Canoe Passage** separates Brownson Island from Etolin Island. It runs in a north direction, with depths too great for anchorage, until the narrows are reached about 2 miles from the north end, where the channel dries and in places is 100 yards wide. Pass east of a small islet at

the north end of the narrows. A shoal makes out about 150 yards from the west shore, 0.4 mile south of the north end of the passage. Beyond this point midchannel depths are the greatest. At the north end of Brownson Island, the passage turns east, increases in width and affords anchorage in 13 fathoms, sand bottom.

(495) **Deer Island**, east of the north part of Brownson Island, is on the east side of Ernest Sound. There are a number of islands and rocks close to the west shore of the island.

(496) Two coves indent the west shore of the south part of Deer Island. The more south cove is entered from the south just west of **Point Peters**, the south point of Deer Island. The cove's west shores are formed by two islands. There are two shoals at the narrowest part of the entrance. A 1.6-fathom shoal extends northward from the exposed rocks just off the eastern shore, and a 1.4 fathom shoal extends 246 yards east from the western shore. Depths inside the cove range from 1.5 to 43 fathoms. There are two narrow small-boat passages. The first is between the two western islands and the second is between the north island and Deer Island. The small inlets inside the cove have potential to be good small boat anchorages. The more north cove, about 2 miles north of Point Peters, has a wide accessible entrance. Rocks are 0.5 mile inside the entrance, 0.1 mile from the west shore. A 2.8-fathom shoal extends 355 yards south from the rocks. The channel leading northwest from the northwest end of the cove bares in places, contains many rocks and is not fully navigable at low water. The north entrance of this channel is blocked by numerous rocks and reefs. The channels between the islands west of the north cove are suitable for small boats only.

(497) **Kuakan Point** is the north point of Deer Island. A 3½-fathom spot is 0.2 mile north of the point, and a small cove southeast of the point is found to have depths of 16 to 22 fathoms with a muddy bottom and may be a possible anchorage site.

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

(499) **Santa Anna Inlet** is on the east side of Seward Passage about 2.7 miles north-northeast of Point Peters. A shoal area extends about 200 yards off the southwest shore about 0.5 mile from the entrance. From 1 mile within the entrance the midchannel depths decrease gradually from 18 to 9 fathoms near the head. Small craft will find good anchorage in 9 fathoms near the head of the inlet.

(500) **Frosty Bay** is on the east side of Seward Passage near the north end. Two rocks, bare at half tide, are about 150 yards north of the south point of the entrance. Fishing craft anchor in 7 fathoms in the southwest part of the bay. The head of the bay narrows, then widens, forming a bight

with depths less than 1 fathom. A large stream empties at the head of the bay.

(501) **Niblack Islands** are a cluster of small islands between Brownson and Deer Islands. The passage on the east side is deep and clear. **South Niblack Islands Light** (56°00'23"N., 132°05'28"W.), 24 feet above the water, is shown from a square frame structure with red and white diamond-shaped daymarks on the east side of the largest of the southernmost Niblack Islands.

(502) **Bold Island**, with a conspicuous cliff 100 feet high on the west shore, is at the entrance to Menefee Inlet about 3.6 miles north-northwest of South Niblack Islands Light. A channel with a depth of 7 fathoms separates Bold Island from a group of small islands to the south.

(503) **Menefee Inlet**, on the west 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, sand and mud bottom. Mariners should use caution when approaching Menefee Inlet from the south as there is a dangerous submerged rock 0.9 mile east-southeast of Menefee Point in about 56°02'32"N., 132°08'35"W.

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

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

(506) **Found Island**, at the south entrance to Zimovia Strait and about 3.2 miles northeast of Bold Island, is rectangular in shape and wooded, with ledges that extend about 100 yards off the north shore. **Found Island Light** (56°06'11"N., 132°04'46"W.), 34 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the southwest side of the island. A grass-covered rock, 12 feet high, is 0.2 mile west of the north 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 north of Found Island. **Blanche Rock**, 7 feet high, about 1.1 miles south-southwest of Found Island off the south point of the entrance to Zimovia Strait, is conspicuous because of its white color.

(507) **Southeast Cove**, about 1.5 miles northeast of Found Island has mostly steep shoreline on the west side of the cove and gravel beaches on the east side. It does not afford anchorage.

(508) **Fools Inlet** is about 5 miles northeast 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 south of the south islet.

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

(510) Foul ground extends about 75 yards off the north shore of the cove, 1 mile south of Point Warde. The cove has depths of 18 to 38 fathoms in the middle. It shoals gradually to the north shore. In the small bight on the north side of the cove, depths range from 6 to 9 fathoms.

(511) **Bradfield Canal** extends approximately 16 miles east of Point Warde and is connected to the southern entrance of Blake Channel. A shoal with a depth of 2.5 fathoms in 56°12'07"N., 131°41'42"W., and about 2.7 miles west of Duck Point marks the high point of a ridge that extends the width of the canal. About 12 miles east of Point Warde, the canal narrows due to shoaling from creek sediment north of **Duck Point**. The small cove west of the point affords protection for small craft. The best anchorage is at the head of the cove in depths of 10 to 15 fathoms with a soft bottom.

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

(513) **Anan Bay**, about 2.3 miles east of Point Warde, is an open bight on the south shore of Bradfield Canal. A large salmon stream empties into Anan Bay and offers a good shelter and anchorage for small craft during south weather in 5 to 10 fathoms, mud bottom. A mooring float is on the east side of Anan Bay in about 56°11'10"N., 131°53'26"W. About 450 yards southwest of the mooring float, shoaling to ¾ fathom has been reported in about 56°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.

(514) **Zimovia Strait**, between Etolin Island and Wrangell Island, connects Ernest Sound with the east 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.

(515)

Currents

(516) The flood current enters Zimovia Strait from both the north and south 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 south and out through Chichagof Pass with a velocity of about 1.7 knots and the flood sets north with a velocity of about 1.7 knots. (See the Tidal Current Tables for daily predictions.)

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

(518) 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 south entrance, has depths of 7¼ fathoms 0.3 mile from the head, shoaling to 6 fathoms at the head.

(519) **Thoms Place**, a cove on the Wrangell Island side of the channel, about 3.5 miles from the south entrance, has two small wooded islets in the entrance. A group of islets is near the head close to the southwest shore, and another close to the northeast shore. A ledge surrounding the southwest islets extends east 100 yards towards the channel. The islet close to the northeast shore is surrounded by a ledge on the north and south and a rock awash at low water at the southwest corner of the islet.

(520) In entering, pass between the entrance islets, where soundings vary from 6 to 12 fathoms. The channel between the east islet and the Wrangell Island shore is foul. The southwest 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 west side of the entrance to Thoms Place.

(521) A lagoon, about 0.8 mile long, is west of Thoms Place. Rocks are off the entrance, and the channel is narrow, with a controlling depth of ½ fathom. A small bight just inside the entrance has depths of 6 to 10 fathoms. 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.

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

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

(524) A small islet, 125 feet high, is about 0.4 mile north from Trap Rock. Small vessels anchor in the vicinity.

(525) **Whaletail Cove**, west of Trap Rock, has two branches; the entrance has a rock awash 6 feet in

56°11'19"N., 132°14'32"W., and then partially bares to the split. The west branch, which dries almost entirely, has a small island at its entrance. Depths of 1 to 7½ fathoms are found in the east branch the greater depths are near the south shore. This branch shoals rapidly near the head.

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

- (527) A light is on the Wrangell Island shore 0.2 mile north of Button Island.

- (528) **Double Rock** uncovers 11 feet, is marked by a daybeacon, and is close to the Wrangell Island shore about 0.2 mile west of the light. A rock, with ½ fathom over it and marked on its south side by a buoy, is about 0.25 mile south of Double Rock.

- (529) **Midchannel Rock**, which uncovers 3 feet and is marked by a daybeacon, is 0.4 mile west of Double Rock. A ½-fathom shoal in 56°12'08"N., 132°16'01"W., is about 0.15 mile east-southeast of the daybeacon. A deserted village is on the point about 0.3 mile north of Midchannel Rock.

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

- (531) **Village Islands Light 13** (56°12'48"N., 132°18'06"W.), 17 feet above the water, is shown from a pile structure with a square green daymark on a rock off the northeast shore of the largest island of the group.

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

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

- (534) **Olive Cove** is south-southwest 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 3 to 11 fathoms.

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

(536)

Anita Bay to Young Rock

- (537) **Anita Bay**, on the west side of Zimovia Strait, about 13 miles from the north entrance, is deep and clear

inshore on both sides, except for a shoal that extends east about 0.2 mile from the point of the cove on the south side of the bay, 3.7 miles from the entrance. A floating pier is 0.2 mile southwest 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 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 south point of the entrance, rounded, wooded and indefinite, may be passed at a distance of 0.2 mile. The bight in the northwest shore of the bay near the entrance dries about 50 yards offshore. A group of rocks is in the entrance to the bight in the northwest shore, 1 mile west of Anita Point. A cabin is on the north shore of the bight. Anchorage may be had near the head of the bay in 10 to 13 fathoms, 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 northwest shore of Anita Bay, 1.2 miles northwest 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 offshore of the log boom.

- (538) **Turn Island** is close to the Wrangell Island shore about 1.4 miles northeast from Anita Point. **Nemo Point** is about 2.8 miles north of Turn Island.

- (539) The east 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**, with a depth of 2 fathoms, is not marked by kelp. The rock is in the center of the strait at its junction with Chichagof Pass in 56°21'29"N., 132°23'20"W.

(540)

Blake Channel to Mill Creek

- (541) **Blake Channel**, locally called **Back Channel**, having its entrance 3 miles northeast of Point Warde (56°10.5'N., 131°58.1'W.), connects Ernest Sound with **Eastern Passage** and through it with the east end of Summer Strait. **Blake Channel Light 1** (56°12'36"N., 131°55'20"W.), 28 feet above the water, is shown from a skeleton tower with green square daymarks on the west side of the channel entrance.

- (542) Deposits from the Stikine River at the north end of Eastern Passage cause shoaling at the mouth of the river from **Gerard Point** (56°30.8'N., 132°19.6'W.) to Kadin Island. The mud flats 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. 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.). The deepwater passage north of Highfield Anchorage, 1.7 miles southwest of Gerard Point, has been narrowed to a width of less than 0.3 mile by the encroachment of the shoaling from sedimentation on its north side. It is recommended that ships using Eastern

Passage favor Deadman Island that is on the north side of Highfield Anchorage, passing a safe distance off. A light is shown from the north side of Deadman Island.

(543)

Currents

(544) In Blake Channel the flood current sets north-northwest 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.

(545) In Eastern Passage northwest of The Narrows, the flood current sets southeast and the ebb sets northwest 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.)

(546) **Blake Island**, locally called **Ham Island**, is at the south entrance, with a narrow channel on each side. A pinnacle rock, not marked by kelp, with a depth of 1¼ fathoms, is about 0.3 mile north of the southeast end of Blake Island. A 5-fathom spot is southwest of Blake Island near the entrance about 150 yards from the Wrangell Island shore. If the west channel is used, avoid the rocks off the point of the cove on the west side of the channel when turning in from Bradfield Canal.

(547) The channel east of Blake Island passes east of a reef that extends northwest from the northwest 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 east side of Blake Island. The tidal currents have considerable velocity in this vicinity, and a midchannel course should be followed through either channel.

(548) **Neptune Island**, about 7.5 miles north-northwest of Blake Island, is low and wooded and marked at its west end by a light. The lagoon with its entrance east of Neptune Island shoals too rapidly for good anchorage. The greater part of the lagoon bares at low water. **Aaron Creek** empties into the head of the lagoon.

(549) **Berg Bay**, north of Neptune Island, has depths of 5 to 11 fathoms to near its head and affords the best anchorage for small vessels in Blake Channel. Vessels should enter on the east side of the island, due to shoaling on the west side of the island. Also, vessels should give the island a good berth to avoid a reef that extends 0.1 mile north of the inner end of the island. A mooring float is on the east 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.

(550) Between Neptune Island and The Narrows, the south shore should be favored to avoid dangers that are off the north shore.

(551) **The Narrows**, about 12 miles north-northwest of the entrance to Blake Channel, is about 1.5 miles long and about 250 yards wide at its narrowest part and connects Blake Channel with Eastern Passage. The only dangers are a reef off the north point at the east entrance and

a rocky area with 3 to 4 feet over it at high water and marked by a light (56°21'49"N., 132°06'43"W.), on the south side of the channel just west of the narrowest part of the channel.

(552) **Channel Island**, about 100 feet high and wooded, is in midchannel in Eastern Passage, about 1.3 miles west of The Narrows. The island, marked near its north end by a light, can be passed on either side but the channel north is more direct. An 8¾-fathom shoal is in 56°21'32"N., 132°08'44"W. and about 0.5 mile east of the south tip of Channel Island. The small cove southeast of Channel Island is used as an anchorage by very small craft. Southeast of Channel Island, on the shore of Wrangell Island, is a boat ramp connected via road to the city of Wrangell.

(553) **Point Madan**, on the east side of Eastern Passage, about 2 miles west-northwest of The Narrows, is high and wooded; a shoal covered 2¼ fathoms is 0.2 mile southeast of the point. **Madan Bay**, east of Point Madan, is deep and clear of dangers. It offers excellent anchorage for small craft north of the projecting point near its head on the west side in 7 fathoms, soft bottom.

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

(555)

Stikine Strait to Hat Island

(556) **Stikine Strait** connects the north part of Clarence Strait with the east 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.

(557)

Currents

(558) In Stikine Strait the flood current sets north through the strait until met by the current from Stikine River west 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.

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

(560) **King George Bay**, on the west side of Etolin Island about 6.5 miles north-northeast of Quiet Harbor, dries at low water. Anchorage is not recommended.

(561) **Round Point**, the southeast 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°16'40"N., 132°39'27"W.), 24 feet above the water, is shown from a spindle with a red and white diamond-shaped daymark on the point.

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

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

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

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

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

- (567) **Woronkofski Island**, east 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. The shoreline is generally rocky, with off-lying rocks close-to.

- (568) **Reef Point**, low and wooded, is the southwest extremity of Woronkofski Island. Rocks and kelp extend offshore for about 300 yards. A rock, with 1¾ fathoms on it, is about 0.6 mile north-northwest from this point.

- (569) **Drag Island**, about 250 yards in diameter and about 150 feet high, is 0.2 mile south of the point.

- (570) **Point Ancon** is on the west side of Woronkofski Island. **Point Ancon Light** (56°24'18"N., 132°33'19"W.), 20 feet 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.

- (571) **Wedge Point**, about 1.1 miles north-northeast of Point Ancon, is a low, thickly wooded point that shows prominently.

- (572) **Elephants Nose** is a knob on a ridge near the north end of Woronkofski Island.

- (573) **Woronkofski Point**, the north point of the island, is low and rounding without any marked characteristics. A daybeacon marks the northeast end of the point. The shore southeast 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.

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

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

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

(577)

Highfield Anchorage to Shoemaker Bay Boat Harbor

- (578) **Highfield Anchorage** is at the north end of Wrangell Island, about 1.5 miles from Wrangell Harbor. The anchorage is in 4 to 15 fathoms, fine sand and mud bottom, extending east from **Point Highfield** to Polk Point and north to **Deadman Island**, which is marked on its north side by **Eastern Passage Light** (56°29'38"N., 132°22'12"W.); the light is 13 feet 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.

- (579) The mud flats north 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.

- (580) **Airport Runway Rock Light** (56°29'06"N., 132°21'16"W.), 15 feet above the water, is shown from a spindle with a red and white diamond-shaped daymark and marks a bare rock, 10 feet high and about 0.7 mile southeast of Deadman Island.

- (581) **City of Topeka Rock**, in 56°29'14"N., 132°22'27"W., and south of Highfield Anchorage, is awash at low water.

- (582) **Wrangell Harbor** is on the west side of the north 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 northwest direction from the island. A breakwater 100 yards long extends from the north extremity of Point Shekesti and affords protection for small craft in the south part of the harbor. **Wrangell Harbor Breakwater Light 2** (56°28'01"N., 132°23'09"W.), 21 feet above the water, is shown from a skeleton tower with a red triangular daymark on the outer end of the breakwater.

- (583) **Wrangell** is a city on the north side of Wrangell Harbor, 89 miles from Ketchikan and 148 miles from Juneau. The deepest draft commercial vessel calling at Wrangell was 32 feet in 2000. Wrangell has a cannery, a cold storage facility, large lumber mills and two oil company facilities.

(584)

Prominent features

(585) An 80-foot high standpipe, on a low ridge immediately east 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.

(586)

Channels

(587) A federal project provides for a mooring basin within the protected area in the southeast part of the harbor and a breakwater on the west side of the entrance; an inner basin on the tidal flat area east of Shakes Island is accessed by a connecting channel marked by daybeacons. Depths of 8 to 11 feet are available.

(588)

Anchorage

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

(590)

Dangers

(591) The approach to Wrangell Harbor is clear of dangers. A shoal of 2.8 fathoms in 56°28'03"N., 132°23'10"W., is about 55 yards north-northwest of the breakwater. A submerged dolphin is along the eastern side of the entrance channel, approximately 200 yards east-northeast of the breakwater in 56°28'03"N., 132°22'59"W. Submerged piles in 56°27'50"N., 132°22'50"W. are about 33 yards northwest of a floating dock.

(592)

Tides and currents

(593) 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.

(594)

Pilotage, Wrangell

(595) 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.)

(596) Vessels en route Wrangell meet the pilot boat about 1 mile northwest of Guard Islands Light (55°27.5'N., 131°53.9'W.).

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

(598)

Towage

(599) 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.

(600)

Quarantine, customs, immigration and agricultural quarantine

(601) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

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

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

(604)

Harbor regulations

(605) 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.

(606)

Wharves

(607) 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 were reported in 2002; for further information on the latest depths, contact the individual operators.

(608) **State of Alaska, Wrangell Ferry Terminal Dock** (56°28'27"N., 132°23'30"W.): 626 feet of berthing space; 24 feet alongside; owned and operated by the State of Alaska.

(609) **Wrangell Cruise Vessel Wharf** (56°28'15"N., 132°23'19"W.): 0.3 mile southeast of the Alaska State Ferry Pier; faces southwest with 720 feet of berthing space; 35 feet alongside; mooring cruise and transient vessels; owned and operated by the City of Wrangell.

(610) **City of Wrangell Barge Ramp**; immediately southeast of Wrangell City Pier; 140-foot 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 Boyer Alaska Barge Line, Inc.

(611) **City of Wrangell Cargo Wharf** (56°28'05"N., 132°23'02"W.): 400 yards southeast of the Cruise Vessel Wharf; 480-foot face; 32 feet alongside; 150-foot outside; 20 feet alongside; deck height, 24 feet; 5 to 42-ton forklifts; receipt and shipment of containerized

cargo. Owned by the City of Wrangell and operated by Alaska Marine Lines and Northland Services, Inc.

- (612) **Wrangell Seafoods Wharf:** immediately southeast of the Cargo Wharf; 115-foot face; 10 feet alongside; deck height, 24 feet; receipt of seafood and icing fishing vessels; four derricks. Owned and operated by Wrangell Seafoods, Inc.

- (613) **City of Wrangell, Seaplane Float** (56°28'01"N., 132°23'00"W.): 160-foot float; 10 feet alongside; owned by the state of Alaska and operated by the city of Wrangell.

- (614) **Delta Western, Wrangell Dock** (56°27'51"N., 132°22'58"W.): 90-foot float; 10 feet alongside; deck height, 25 feet; pipelines extend to storage tanks, 10,700 barrel capacity; receipt of petroleum products; fueling vessels; owned and operated by Delta Western.

- (615) **Wrangell Oil, Wrangell Dock** (56°27'53"N., 132°23'00"W.): 100-foot float; 10 feet alongside; deck height, 24 feet; pipelines extend to storage tanks, 5,950-barrel capacity; receipt of petroleum products; fueling vessels; owned and operated by Wrangell Oil, Inc.

- (616) **Breakwater Seafoods Wharf** (56°27'58"N., 132°23'09"W.): northwest side of entrance to Wrangell Inner Harbor; 35-foot face; 4 feet alongside; deck height, 22 feet; receipt of seafood and icing fishing vessels; owned and operated by Breakwater Seafoods.

- (617) **Sea Level Seafoods, Wrangell Wharf** (56°27'30"N., 132°23'00"W.): East side of Zimovia Strait, approximately 0.5 mile south of Wrangell; 90-foot face, 6 to 12 feet alongside; deck height, 22 feet; receipt of seafood; icing fishing vessels; owned and operated by Sea Level Seafoods, Inc.

- (618) **Silver Bay Logging, Shoemaker Bay Wharf** (56°23'50"N., 132°20'34"W.): approximately 4.2 miles south of Wrangell; 320 feet of berthing space; 32 to 40 feet alongside; 14 acres of open storage; 40-ton diesel, mobile crane. Owned and operated by Silver Bay Logging, Inc. The area north and south of the wharf is occupied by log booms and small-craft; caution is advised.

(619)

Supplies

- (620) 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 south 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.

(621)

Repairs

- (622) 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 in length and 8 feet in draft is available in the small-craft basin east of Shakes Island. Another marine railway east of Shakes Island is available for wooden and metal hull repairs for small vessels up to 50 feet in length and 6 feet in draft. A machine shop for limited shaft repairs to small craft is adjacent to this small-craft basin.

(623)

Small-craft facilities

- (624) The City of Wrangell operates about 3,300 feet of float space in the mooring basin in the south part of the harbor and about 1,900 feet of float space in the inner basin east of Shakes Island. Fresh water and electric power are available on all floats. A 65-foot grid is in the mudflats on the west side of the trestle connecting Shakes Island to Wrangell Island.

- (625) Two fuel facilities are on the south-southwest side of the harbor. Also on the south-southwest 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 northeast side of the channel leading to the south mooring basin about 200 yards 109° from the Wrangell Harbor Breakwater Light 2.

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

- (627) **Heritage Harbor** is north of Cemetery Point and about 0.5 mile south of Wrangell. The entrance is marked by breakwaters and lights.

- (628) **Shoemaker Bay Boat Harbor**, about 3.5 miles south-southeast of Wrangell, had a least depth of 15 feet in 2002. The entrance channel is marked by lights. The stalls can accommodate 259 small craft, ranging from 20 to 62 feet with a 10-foot 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.

(629)

Communications

- (630) 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, BC, Sitka, Ketchikan, Petersburg, Juneau, Haines and Skagway; weekly service is available to Seattle; this schedule is less frequent during the winter.

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

- (632) Telephone and radiotelephone communications are maintained with the other states and other parts of Alaska.