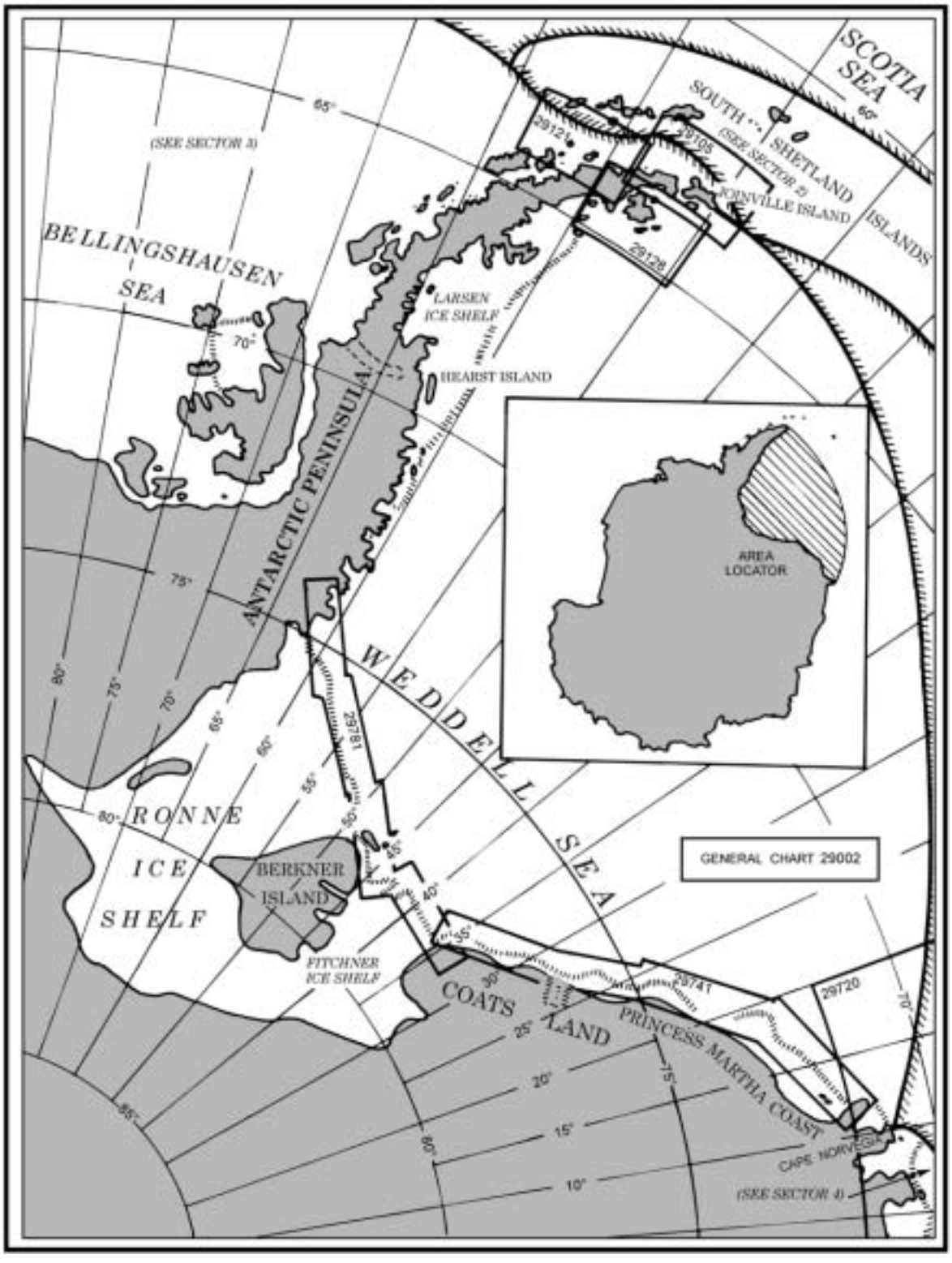
Click on "See Sector" to be hotlinked to that Sector.




**Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.**

SECTOR **1** — CHART INFORMATION

**Table of Contents**

Table of Contents

# SECTOR 1

## THE WEDDELL SEA—CAPE NORVEGIA TO JOINVILLE ISLAND

**Plan.—**This sector describes the Weddell Sea, on the N coast of Antarctica. The descriptive sequence is E to W along the coast from Cape Norvegia to Joinville Island.

## General Remarks

**1.1** The **Weddell Sea** (72˚00'S., 45˚00'W.), which indents the coast of Antarctica between Cape Norvegia and the Antarctic Peninsula, is one of two great seas in Antarctica. Backed in many areas by mountains, ice shelves and glaciers line most of the coast. The shoreline is relatively smooth, except on the W side, where many small islands lie scattered along the coast.

The sea is covered with drift ice which extends outward or shrinks back with the seasons, varying by as much as 30 miles, daily.

The Continental Shelf extends seaward for about 45 miles from the ice shelf fronting the E side of Weddell Sea, and, at one point on the S side, it extends about 340 miles N from the Filchner Ice Shelf. On the W side, the Continental Shelf lies beneath the ice shelf, except at the N end of the Antarctic Peninsula, where it extends about 45 miles seaward.

Entrance to the Weddell Sea is best gained along a route running parallel to the 10˚W meridian. Once along the coast, the route leads in a SW direction and parallel to the ice front. In summer months, the belt of sea ice is relatively narrow in this area and there is not the influence of ice pressure produced by currents and topographic projections which exists in the W part of the sea. Departure from the Weddell Sea is best accomplished by reversing the route of entry.

Due to ice conditions, the W part of the Weddell Sea is impassable.

Meteorological conditions are variable in the Weddell Sea, often hindering vessel operations.

**Winds—Weather.—**The N limit of the drift ice, which varies from year to year, profoundly influences the climatic conditions of the Weddell Sea. Other contributing factors are the continent and its source of cold air, the warm seas from the N, and the extent of the sea ice. Temperatures are particularly affected by the drift ice density and winds.

In winter, temperatures drop rapidly and usually remain between 0˚ and -15˚C, occasionally dropping into the -30˚ to -40˚C range. The lowest temperatures in the winter normally occur in clear, calm weather.

Wind, weather, and temperature changes are more rapid and violent in the winter months.

During the summer, mean temperatures are at or about 0˚C for 1 to 4 months, at times rising to between 5˚ and 10˚C on the Antarctic Peninsula. The highest temperatures for the continent occur along the N fringes of the Antarctic Peninsula and the neighboring islands.

The average wind velocity is 16 knots, ranging in summer from calm to 30 knots. Winds are strongest during spring, particularly in September. Clouds and precipitation occur with N winds, and clear skies and a drop in temperature accompany S winds. In summer, if light winds are combined with a drop in temperature, rapid freezing will result. Also, in summer, surface water temperatures are generally below 0˚C, with isothermal and isohaline conditions existing to great depths. The layer of relatively warm water that exists in other areas is noticeably absent.

A semipermanent low over the Weddell Sea, combined with a semipermanent high centered over the continent, causes E winds along the coast.

A succession of depressions moving W to E and then N, with well-defined cyclonic ridges between them, characterizes the area's circulation patterns. Depressions enter the Weddell Sea along three main routes, as follows:

1. Between the NE tip of the Antarctic Peninsula and the South Orkney Islands.
2. Across the Antarctic Peninsula with their centers lying to the N of Marguerite Bay.
3. Across the Antarctic Peninsula with their centers lying S of Marguerite Bay.

If the edge of the drift ice lies farther S than usual in a particular winter, depression tracks may occur farther to the S.

Along the narrow, high-pressure wedge of the Antarctic Peninsula, the atmosphere is unstable; hence, abrupt changes and irregularities in all climatic elements are characteristic of the W part of the Weddell Sea.

Precipitation generally occurs as ice or snow. In summer, measurable amounts of rain are recorded at the Antarctic Peninsula. Blizzards occur infrequently in December and January, and more often in February and March.

**Ice.—**Ice conditions in the Weddell Sea are generally unfavorable. Drift ice is composed of fragments of level ice, hummocky floes, and icebergs. The N limit varies as much as 300 miles in different years. This limit exceeds that of other Antarctic areas and fluctuates as much as 30 miles daily.

About 85 per cent of the drift ice melts each year. The following year, the drift ice is predominantly first-year replacement ice with a thickness of only 1.5m. Constituents of the drift ice are influenced unequally by wind and current, resulting in differential movement that has a decisive effect on the composition and stability of the ice cover.

Prevailing E winds prompt a W current with a velocity of less than 1 knot. The current sets SW at the E entrance and flows parallel to the coast and along the Filchner Shelf before being deflected N. Farther out in the Weddell Sea, the current changes direction. The wind and current force the ice to the W, along the E coast of the Antarctic Peninsula. The ice jams along the coast, being subjected to great pressure from the current, and eventually works its way N.

Floes are more heavily compressed here than elsewhere along the Antarctic coasts, rendering the SW part of the Weddell Sea unapproachable in any season. In late summer, the NE and E central parts of the sea are most likely navigable, but ice conditions are extremely variable.

Table of Contents

Katabatic winds, caused by surface cooling pushing outward from the land, carry drift ice away from the immediate vicinity of the ice shelves.

Icebergs, the products of numerous glaciers and ice fronts, may be encountered in all parts of the Weddell Sea. In 1969, two giant icebergs, one 25 miles wide and 55 miles long and the other 38 miles wide and 62 miles long, were reported in the Weddell Sea.

**Tides—Currents.—**The tides in the Weddell Sea, as in the rest of the Antarctic Ocean, are predominantly diurnal, characterized by one HW and one LW each tidal day. At the N extremity of the Antarctic Peninsula, mixed tides are present. The range of tide varies from 0.6m in the N limits of the sea to 3m in the W part of the sea.

The tidal currents tend to flood in a counterclockwise direction and ebb in the reverse.

A belt of clockwise eddies, known as the Antarctic Circumpolar Current or West Wind Drift, transports large volumes of water E and NE around Antarctica. Along the coast of the continent, E or SE winds prevail, resulting in a W current known as the East Wind Drift. Since these are associated with clockwise eddies they eventually turn N.

One clockwise eddy is a semipermanent feature of the Weddell Sea. Its rotation sets W and is then forced N, due mostly to the configuration of the W coast of the Weddell Sea, specifically the protuberance of the Antarctic Peninsula. The current sets W and is then directed between NE and E, joining with the Antarctic Circumpolar Current in the N part of the Weddell Sea. A small branch of the current leads NW through Joinville Strait, eventually becoming part of the current system of the Bellinghausen Sea.

**Depths—Limitations.—**Depths in the Weddell Sea are generally greater than 3,600m. The 500, 800, and 1,000m curves extend from the Antarctic Peninsula to Coats Land, between 72˚S and 73˚S. The 900m curve is irregular, extending S at one point to the E limit of the Filchner Ice Shelf, between 35˚W and 40˚W. To the E of this area, the bottom shoals gradually to Coats Land, where the continental shelf is comparatively narrow and irregular, with the 500m curve lying close to the coast. On the W side of the Weddell Sea, soundings indicate the existence of a broad shelf. To the S of the 500m curve, a series of level terraces occur, with depths of 270 to 475m. The bottom is composed mostly of blue glacial mud approximating red clay.

**Caution.—**The charted areas of the Weddell Sea have not been completely surveyed and most of the data is of reconnaissance nature only.

When approaching the NW and W parts of the sea from high latitudes, ice may trap a vessel and subject its hull to regions of high pressure. Therefore, mariners must use extreme care when navigating in these waters.

## Cape Norvegia to Filchner Ice Shelf

**1.2** The E coast of the Weddell Sea includes Queen Maud Land, which extends W from Cape Norvegia to the E end of the Filchner Ice Shelf, in Coats Land.

**Cape Norvegia** (71˚20'S., 12˚18'W.), on the E side of the Weddell Sea, is prominent; the land rises to a height 500m close SE of it. Stranded icebergs have been reported stretching to the SW of the cape in depths of up to 221m, but greater depths lie E of this area.

The cape is fronted by an ice shelf, about 50 miles wide, which is called Riiser-Larsen. An angle is formed at the cape and a large bight is contained SW of Seal Bay. Two small islands lie at this point and may best be seen on the chart.

The **Princess Martha Coast** (72˚00'S., 7˚30'W.), in Queen Maud Land, is fronted by a cliffed ice face, 21 to 36m high. The W part of the coast consists of the Riiser-Larsen Ice Shelf, an extensive ice mass. The shelf leads SW from Cape Norvegia to Lyddan Island. An inlet, extending 8 miles S, indents the shelf 20 miles SW of Seal Bay. Depths within the inlet are unknown and two islands lie at the head.

The **Kraul Mountains** (73˚20'S., 14˚10'W.), standing 60 miles from the coast, are surrounded by the Riiser-Larsen Ice Shelf. They form a chain of peaks and nunataks, rising to an elevation of 1,199m.

**Lyddan Island** (74˚25'S., 20˚45'W.), ice-covered, lies at the SW end of the Riiser-Larsen Ice Shelf, about 25 miles from Queen Maud Land. It is about 45 miles long and has three narrow arms.

**Coats Land** (77˚00'S., 27˚30'W.) encompasses the E coast of the Weddell Sea, between 20˚W and 36˚W, where it joins the E end of the Filchner Ice Shelf. Contained within Coats Land are the Caird Coast and the Luitpold Coast, presenting a near continuous ice cliff to the sea.

**Stancomb-Wills Glacier** (75˚18'S., 19˚00'W.) leads NE from Coats Land, becoming the extensive Stancomb-Wills Glacier Tongue (75˚00'S., 22˚00'W.) to the SW of Lyddan Island.

The **Caird Coast** (76˚00'S., 24˚00'W.) leads SW to the W limit of Hayes Glacier. Within this coast are the Brunt Ice Shelf, Dawson-Lambton Glacier, and Hayes Glacier.

**Brunt Ice Falls** (75˚55'S., 25˚00'W.) extends 50 miles along the Caird Coast to where the steep, ice-covered shore descends to the **Brunt Ice Shelf** (75˚40'S., 25˚00'W.). This shelf borders the coast between the Stancomb-Wills Glacier Tongue and the NE end of Dawson-Lambton Glacier.

**1.3** **McDonald Ice Rumples** (75˚28'S., 26˚18'W.) is a severely disturbed glacial area lying on the N side of the Brunt Ice Shelf. It descends from ice-covered hills, 305 to 610m high, and terminates at the sea in perpendicular ice walls, 120 to 153m high. Crevasses and pressure ridges are present within the area. A small bay lies N of the glacier and is open to N winds. Within the bay, the glacial ice descends to about 1m above sea level. The seaward end of the glacial face extends about 17 miles SW. A sounding of 146m found in this bay indicates that the glacier is aground and is moving upward.

**Halley Bay** (75˚24'S., 26˚30'W.) indents the ice shelf to the W of McDonald Ice Rumples, 18 miles SW of Lyddan Island. A least depth could not be determined (1984) in the bay because, like much of the coast, it had not been accurately surveyed. Halley, a permanently-manned station of the British Antarctic Survey, is situated in the vicinity of the bay. This station is continually moving due to the motion of the ice.

Tottan Hills, standing more than 200 miles E of Halley Bay, were reported (1981) to be visible from the station.

**Dawson-Lambton Glacier** (76˚08'S., 26˚45'W.) is a huge glacial out-flow lying about 30 miles SSW of Halley Bay. It is

heavily crevassed and broken, rises to elevations of 900 to 1,200m, and forms a 30-mile front with a floating tongue.

**Hayes Glacier** (76˚16'S., 27˚54'W.), discovered in 1967 and charted as part of Dawson-Lambton Glacier, leads SW to the border of the Luitpold Coast.

The **Luitpold Coast** (77˚30'S., 32˚00'W.) is that part of Coats Land lying between Hayes Glacier and the E end of the Filchner Ice Shelf. The coast attains a height of 610m and slopes gradually to an unbroken ice cliff, 9 to 30m high. About 25 miles SW of Hayes Glacier and about 0.4 mile seaward of the ice front, an angle (76˚41'S., 30˚25'W.) of the ice wall exists in a depth of 114m. Many large icebergs, showing tidemarks, have been reported grounded in this area.

An inlet, 12 miles long, indents the ice shelf, 55 miles SW of the Dawson-Lambton Glacier. In 1984, depths within this inlet were unknown.

From this point, the ice shelf leads SW for 60 miles to **Vahsel Bay** (Duke Ernst Bay) (77˚49'S., 35˚07'W.). The E side of this bay is bounded by nunataks and glaciers.

Schweitzer Glacier and Lerchenfeld Glacier, which lead W, join with Penck Glacier, which descends to the N. These glaciers then extend 8 miles NW as an ice tongue into Vahsel Bay. Two huts are reported to stand in an indentation on the N side of Schweitzer Glacier.

**1.4** General Belgrano II is a base station surmounting a small rock outcrop with an elevation of 50m. It is situated at the junction of Schweitzer Glacier, Lerchenfeld Glacier, and Penck Glacier, and overlooks Vahsel Bay.

Littlewood Nunataks are a group of four lichen-covered rock outcrops, each about 45m wide and brick-red in color, which are located between Schweitzer Glacier and Lerchenfeld Glacier. Bertrab Nunatak is a bare rock, 530m high, standing SW of Lerchenfeld Glacier.

The coast leads W for 5 miles from the ice tongue formed by the glaciers and then S for about 10 miles to Wiedenmann Glacier. Moltke Nunataks, forming a chain standing in a N/S line, rise along this stretch of coast, 8 miles SW of the ice tongue.

A glacier, 15 miles long, lies S of Moltke Nunataks and extends to the E end of the Filchner Ice Shelf.

The coast in the vicinity Vahsel Bay is reported to be unstable and calving of ice occurs.

A glacier was reported (1955) to be in motion in the vicinity of Vahsel Bay. Deep fissures and deformations were noted in the ice shelf, which was 41m high. Many tabular icebergs were also reported in this area.

## The Filchner Ice Shelf to the Bowman Peninsula (The Lassiter Coast)

**1.5** The S coast of the Weddell Sea extends W from the E end of the Filchner Ice Shelf and encompasses Berkner Island and the Ronne Ice Shelf.

The **Filchner Ice Shelf** (79˚00'S., 40˚00'W.) extends about 130 miles in a general W and WSW direction, between Vahsel Bay and Berkner Island, and S for over 200 miles. It is fed by Slessor Glacier, Recovery Glacier, and Support Force Glacier.

Slessor Glacier and Recovery Glacier lie on either side of the **Shackleton Range** (80˚30'S., 25˚00'W.). This mountain range, standing on the SE side of the Filchner Ice Shelf, rises to an elevation of 1,875m and extends in an E/W direction for about 100 miles.

Slessor Glacier, about 75 miles long and 50 miles wide, flows W into the Filchner Ice Shelf, on the N side of the range. Recovery Glacier, about 60 miles long and 40 miles wide at its mouth, flows W into the Filchner Ice Shelf, to the S of the range. Support Force Glacier, a major glacier in the Pensacola Mountains, flows N into the ice shelf.

The **Pensacola Mountains** (83˚45'S., 55˚00'W.), rising on the S side of the ice shelf, is a range which extends about 280 miles in a NE/SW direction. This range is located in the E part of **Edith Ronne Land** (83˚00'S., 60˚00'W.), which forms the inland border of the Filchner and Ronne Ice Shelves.

The huts of the former Shackleton Station are reported to stand about 34 miles W of Vahsel Bay.

The General Belgrano Station, an Argentinean base now reported closed, is situated about 20 miles W of the former Shackleton Station. A beacon, 42m high, and a flagpole stand at the site. The beacon consists of an iron tripod with a slatted yellow and black topmark. A black wooden tripod, with a black square topmark, was reported (1962) to stand about 1 mile W of the station.

About 60 miles W of Vahsel Bay, the ice shelf projects N in a promontory that is 30 miles wide and 15 miles long. The NE side of this promontory is indented by a crevasse that extends about 18 miles S. The site of the former Ellsworth Station, marked by huts, is situated on the E side of the entrance to the crevasse. The W side of the promontory trends 27 miles S and SW to Gould Bay.

**Gould Bay** (78˚00'S., 45˚00'W.) lies at the junction of the Filchner Ice Shelf and Berkner Island. It is the S part of the Weddell Sea that is accessible to ships. The bay is about 20 miles wide and is reported to offer a suitable place to land a wintering party.

**Berkner Island** (79˚30'S., 47˚30'W.), lying at the W end of the Filchner Ice Shelf, is ice-covered, about 200 miles long, and about 85 miles wide. It rises to an elevation of 975m.

**General Belgrano III** (77˚54'S., 45˚59'W.), a base administered by Argentina, was reported to have been deactivated in 1983.

**Hemmen Ice Rise** (77˚57'S., 49˚46'W.), 11 miles long and 2 miles wide, extends from the NW extremity of Berkner Island in the Ronne Ice Shelf.

**1.6** The **Ronne Ice Shelf** (78˚30'S., 61˚00'W.) is the larger of the two major ice shelves located at the head of the Weddell Sea. It extends NW from Berkner Island to the S end of the Antarctic Peninsula. The shelf is bordered to the W by Ellsworth Land and covers an estimated area of 329,914 square kilometers.

A penguin rookery lies about 34 miles NW of Gould Bay, N of Berkner Island. Close W of the rookery, an inlet indents the ice shelf and extends 2 miles S.

The Ronne Ice Shelf leads NW for about 60 miles, where it is fronted by numerous ice peaks, and then trends NW for 180 miles to the Bowman Peninsula.

The **Orville Coast** (75˚45'S., 65˚30'W.) is the land bordering the W side of the Ronne Ice Shelf between Cape Adams, at the

Table of Contents

S end of the Bowman Peninsula, and Cape Zumberge, to the S. The coast is entirely icebound within the ice shelf.

**Cape Zumberge** (76˚14'S., 69˚40'W.), a steep and rocky cape, is located on the W side of the Ronne Ice Shelf.

Information for this part of the Weddell Sea is limited as it is the least accessible by vessels due to the concentration of drift ice.

## The Antarctic Peninsula

**1.7** The **Antarctic Peninsula** (69˚30'S., 65˚00'W.) is the area at the NW end of the Ronne Ice Shelf where the coast turns sharply N. It is the major peninsula of the continent, extending from Prime Head, at its N extremity, to a line between Cape Adams and a point located on the mainland coast, S of the Eklund Islands.

The peninsula consists of a snow-covered plateau, 1,067m high, in its N part and gradually increases to an elevation of 3,658m in its S part. The plateau is broken occasionally by snow-covered peaks. The cliffs on the W side of the plateau are dissected by numerous glaciers and icefalls which descend to the coastal limits. Numerous bays and indentations form the W shore which, for the greater part, is covered by piedmont ice. Many islands, islets, and rocks lie seaward of the cliffs. The E coast is broken by valley glaciers that fill long fjords, the seaward approaches of which are inaccessible by vessels due to an extensive shelf ice formation fringing the greater portion of the E shore.

## Palmer Land—West Coast

**1.8** **Palmer Land** (71˚30'S., 65˚00'W.) is that part of the Antarctic Peninsula lying S of a line joining Cape Joremy and Cape Agassiz. It includes the Lassiter Coast, the Black Coast, and the Wilkins Coast between Cape Adams and Cape Agassiz.

The **Lassiter Coast** (73˚45'S., 62˚00'W.) is that part of the E coast of Palmer Land extending between Cape Adams and Cape Mackintosh. Glaciers are an integral part of the terrain in this vicinity, with many leading E into the Weddell Sea.

**Bowman Peninsula** (74˚47'S., 62˚22'W.), located at the S end of Palmer Land, is 25 miles long and 15 miles wide in its N and central portions. It leads in a N/S direction, is ice-covered, and narrows toward the S, where it terminates at Cape Adams.

Cape Adams marks the N entrance point of Gardner Inlet, at the N end of the Ronne Ice Shelf.

**Mount Austin** (74˚53'S., 63˚10'W.), a conspicuous rocky mass, stands at the head of Gardner Inlet and rises to an elevation of 955m.

**Nantucket Inlet** (74˚35'S., 61˚45'W.), ice-filled, is 6 miles wide and 13 miles long. It is bounded on the S side by the Bowman Peninsula and on the N side by the Smith Peninsula. This inlet is fed from the NW by Johnston Glacier. Mount Owen, 1,105m high, stands at the head of this inlet. The S side of the entrance to the inlet is formed by the ice-free face of the coastal piedmont. Open water leads, bordering the fringing coastal ice, reportedly appear less frequently to the S of the inlet.

**Smith Peninsula** (74˚25'S., 61˚15'W.), ice-covered, is a dog-legged peninsula which is 10 miles wide and 25 miles long. Cape Fiske forms the easternmost extremity of this peninsula.

Keller Inlet, ice-filled, is 10 miles wide at its mouth. This inlet lies N of Smith Peninsula and indents the coast for about 12 miles in a NE direction. Like many inlets along this peninsula, it is glacier-fed.

**Mount Nash** (74˚14'S., 62˚20'W.), 1,295m high, stands 13 miles WNW of Keller Inlet and 12 miles NNE of Mount Owen.

Wright Inlet, lying between Cape Little and Cape Wheeler, is engulfed with ice that is fed by Swann Glacier and Waverly Glacier.

**Mount Tricorn** (73˚58'S., 61˚45'W.), a distinctive massif, has a vertical rock face, 1,610m high, and stands at the head of Wright Inlet. It is generally snow-free, while the interior land in the vicinity is completely snow-covered.

**Howkins Inlet** (73˚40'S., 60˚54'W.) lies 18 miles N of Cape Wheeler. Arctowski Peak, standing 8 miles WSW of the head of this inlet, is isolated, snow-covered, and 1,410m high.

Howkins Inlet is entered between Lamb Point and Cape Brooks. It was reported (1973) that an ice front extended into the Weddell Sea at this point and completely encompassed all the inlets in this area. Lamb Point is low and ice-covered. Cape Brooks is fronted by steep, conspicuous walls which rise to a height of 465m.

**1.9** **New Bedford Inlet** (73˚22'S., 61˚15'W.), located N of Howkins Inlet, is a large, pouch-shaped and ice-filled bay. It is 10 miles wide, 13 miles long, and extends between Cape Brooks and Cape Kidson. The N and S shores of this inlet present almost vertical and ice-free piedmont cliffs; the head is fed by glaciers. The rock walls of the glaciers are evenly cut and, to a large degree, are ice-free. The head of the inlet is marked by a distinctive and isolated massif. This massif is entirely snow-covered and rounded on its W side, but rocky and snow-free on its E slopes, where it terminates in a sharp, projecting cape. The ice in the inlet is undulating, with many rifts and crevasses.

**Court Nunatak** (73˚22'S., 61˚36'W.), which is 3 miles long and 685m high, stands close E of a glacier, on the W side of New Bedford Inlet. Mount Barkow rises at the E end of the ridge that separates the glaciers near the head and rises to an elevation of 1,390m.

**Mount Grimminger** (73˚18'S., 62˚18'W.), rising NE of Mount Barkow, is cone-shaped, mostly ice-covered, and 1,680m high.

The high, rocky coastal piedmont extends to the S of New Bedford Inlet and loses its cliff-like face, assuming the aspect of a continuous slope. Widely scattered peaks rise in the interior and areas of level country lie between them.

Cape Kidson, located on the N side of New Bedford Inlet, is an abrupt rock scarp, 300m high.

Mossman Inlet, narrow and ice-filled, recedes 10 miles N between Cape Kidson and Cape Deacon, on the S side of Kemp Peninsula.

The **Kemp Peninsula** (73˚08'S., 60˚15'W.) is that part of the mainland extending E at the N limit of the Lassiter Coast. This irregular, ice-covered peninsula extends 26 miles in a N/S direction and is 5 to 12 miles wide. It projects E between the heads of Mason Inlet and Mossman Inlet and rises to an

elevation of 305m. Cape Deacon, ice-covered, is located at the S end of the peninsula. The N end of the peninsula is low, ice-covered, and known as Cape Mackintosh.

On the N side of the Kemp Peninsula, E of Cape Mackintosh, Mason Inlet indents the coast and extends 15 miles in a SW direction. This inlet is ice-filled and fed by Clowes Glacier which enters from the W. Cape Mackintosh marks the N limit of the Lassiter Coast and the S limit of the Black Coast.

The **Black Coast** (71˚45'S., 62˚00'W.) extends 130 miles N from Cape Mackintosh to Cape Boggs. Glaciers are common along the S part of this coast, with very few glaciers in the N part.

**Violante Inlet** (72˚35'S., 61˚05'W.), large and ice-filled, is 16 miles long and 12 to 15 miles wide. It is entered between Cape Fanning, on the N side, and Cape Herdman, on the S side. Maury Glacier, 4 miles wide, and Defant Glacier, 2 miles wide at its mouth, flow, respectively, ENE and ESE into the inlet.

On the S side of this inlet, close E of Maury Glacier, Mount Reynolds rises to an elevation of 1,130m. It is snow-capped and marked by a large massif. The walls of the massif are composed of a series of aretes, having bare rock on the steep lower slopes and snow on the heights. They are surmounted by a network of connecting sharp peaks and ridges. Inland from this massif, numerous glaciers descend from the high interior and flow between the mountain masses of the coastal range.

**Pullen Island** (72˚35'S., 60˚57'W.) is snow-covered, 5 miles long, and rises to a height of 495m at its N end, about 5 miles E of the glacial wall in the inlet. This island is distinctive because of its precipitous, ice-free cliffs on the N side and its gentle slopes on the S side. The slopes terminate in a long, low terrace which extends S close to the piedmont shores of the inlet.

**1.10 Merz Peninsula** (72˚15'S., 61˚05'W.), irregular and ice-covered, extends about 15 miles in an E/W direction and is 25 miles wide. It lies between Hilton Inlet and Violante Inlet, on the E coast of Palmer Land.

Cape Christmas is abrupt and rises to a height of 320m. Cape Fanning marks the entrance to Wust Inlet.

**Wust Inlet** (72˚20'S., 60˚50'W.) is 2 to 5 miles wide and ice-filled. Schott Inlet leads N and indents Merz Peninsula about 17 miles N of Violante Inlet. Flagon Point marks the S side of the entrance into Schott Inlet and is surmounted by two peaks, 293 and 395m high.

At the E edge of the ice front, about 7 miles E of Flagon Point, Butler Island rises to an elevation of 183m. It is 6 miles wide, circular, and ice-covered.

At the NE end of Merz Peninsula, a smaller peninsula leads N and forms a headland, 271m high. This headland is ice-covered, surmounted by small rock outcrops, and is known as Cape Darlington.

**Hilton Inlet** (71˚57'S., 61˚20'W.) is ice-filled, 12 miles wide, and 22 miles long. It leads between Cape Darlington and Cape Knowles. Gruening Glacier, a broad glacier, descends in a SE direction between steep, rocky walls into the NW part of the inlet. Kellogg Glacier, 9 miles long, leads SE and joins with Gruening Glacier, close inland of the head of Hilton Inlet. Another unnamed glacier flows into the inlet from the S.

**1.11 Condor Peninsula** (71˚46'S., 61˚30'W.) encompasses that part of the Black Coast between Hilton Inlet and Odom Inlet. Cape Knowles, located at the S end of the peninsula, rises to an elevation of 320m.

Cape MacDonald, a distinctive headland, forms the S side of the entrance to Odom Inlet and is composed of a vertical, bare rock wall. It reaches the maximum height of 430m at the N end, where it descends in a perpendicular cliff to the sea ice. A snow-free nunatak, with an identical outline, stands close S of this entrance point.

**Cape Bryant** (71˚12'S., 60˚55'W.) is located about 20 miles N of Cape MacDonald. The coast between is indented by Odom Inlet, Lamplugh Inlet, and Palmer Inlet.

Odom Inlet trends SW for about 10 miles. Many rocky peaks stand at the head of this inlet between which numerous glaciers descend to the sea. This inlet widens as it recedes from the entrance.

**O'Sullivan Peak** (71˚26'S., 62˚06'W.), 1,768m high, stands about 11 miles W of the N arm of Odom Inlet, near the S end of an ice-covered ridge.

**Mount Jackson** (71˚23'S., 63˚22'W.) dominates the upland in the S part of Palmer Land. This remarkable massif is a vast cirque open to the N. From the S and E, it presents a steeple summit, 4,191m high, which stands majestically above the high plateau. On the N side, it is flanked by another peak, about 1,000m lower in elevation. A range of mountains rises E of Mount Jackson and flanks the coast.

Cape Howard is located at the terminus of the Snyder Peninsula, between Odom Inlet and Lamplugh Inlet. The cape is marked by a high, flat-topped, and snow-covered promontory which has steep, snow-free cliffs on its S face and a distinctive, pyramidal-shaped rock at its lowest extremity.

Lamplugh Inlet indents the coast for 7 miles between Cape Howard, to the S, and Cape Healy, to the N. This inlet narrows, from a width of 5 miles at the entrance, to a width of about 1 mile, at the head. Several large, rocky masses, with steep slopes, stand above the piedmont at the head of the inlet.

The Foster Peninsula is high, ice-covered, and protrudes from the coast to the N of Lamplugh Inlet. It terminates in Cape Healy, at the S end, and Cape Musselman, at the N end.

Cape Healy is composed of a prominent, square-shaped rock with a stepped profile on its S face. Cape Musselman is located 4 miles N of Cape Healy, on the S side of the entrance to Palmer Inlet. Between Cape Healy and Cape Musselman, the coastal piedmont has extensive ice falls descending E to the sea ice which is about 15m above sea level.

Palmer Inlet, rectangular-shaped, indents the coast for about 8 miles and is ice-filled. Its shores are formed by almost vertical cliffs of the piedmont, with many bare and rocky walls.

**Marshall Peak** (71˚09'S., 61˚32'W.), standing 6 miles inland of Palmer Inlet, rises to an elevation of 1,205m. This peak is ice-covered, except for its rocky NE side.

Cape Bryant, located at the N side of Palmer Inlet, is a high, snow-covered and dome-shaped cliff with a dimpled skyline.

The Black Coast leads 27 miles NW and N from Cape Bryant to Cape Sharbonneau.

Table of Contents

**1.12** **Mount Hill** (70˚56'S., 61˚42'W.), 945m high, stands 23 miles NW of Cape Bryant and is marked by a thin cap of bare rock at its summit.

Cape Sharbonneau rises 8 miles NE of Mount Hill, at the S entrance to Lehrke Inlet. This cape is formed by a rounded, snow-covered headland.

Morency Island lies offshore, about 10 miles NW of Cape Bryant. This island is 213m high and rocky, with steep cliffs on its E side and gentle slopes on its W side.

Steele Island, 12 miles long and 10 miles wide, lies 8 miles NE of Cape Bryant. It is snow-covered and rises to an elevation of 488m. The deep slopes of the island are crevassed, but no rock outcrops are visible. Like Butler Island, Steele Island lies at the edge of the ice shelf, on the W side of the Weddell Sea.

**Lehrke Inlet** (70˚49'S., 61˚45'W.) is 8 miles wide and recedes SW for 17 miles. It is ice-filled and entered between Cape Sharbonneau, on the S side, and Cape Boggs, on the N. Many massive ridges and peaks stand close inland from the head of this inlet and steep ice falls descend to the coastal low lands. An islet, 12m high, lies off the mouth of the inlet.

The Eielson Peninsula, rugged and mainly snow-covered, borders the NW side of Lehrke Inlet. It is 20 miles long, about 10 miles wide, and terminates at Cape Boggs. This cape is composed of an ice-capped headland, with precipitous cliffs of igneous rock, and is 762m high. It forms the coastal abutment of the Eternity Range foothills.

**Mount Thompson** (70˚40'S., 62˚21'W.), standing at the SW end of the Eielson Peninsula, is 1,692m high. Dolleman Island, 396m high, lies 8 miles E of Cape Boggs. It is rounded and ice-covered.

Cape Boggs forms the N extremity of the Black Coast at its junction with the Wilkins Coast.

**1.13** The **Wilkins Coast** (69˚40'S., 63˚00'W.) extends between Cape Boggs and Cape Agassiz, the N limit of Palmer Land.

The **Eternity Range** (69˚46'S., 64˚34'W.) stands inland of the Wilkins Coast and trends in a N/S direction for about 28 miles. Mount Faith, Mount Hope, and Mount Charity are the three most prominent features of this range.

**Mount Hope** (69˚46'S., 64˚34'W.), 2,859m high, is the central and highest peak of the Eternity Range. It is flanked by Mount Faith, 2,652m high, rising 9 miles N and Mount Charity, 2,682m high, rising 11 miles S.

**Dyer Plateau** (70˚30'S., 65˚00'W.), broad and ice-covered, lies W of the Eternity Range and rises to an elevation of 1,067m. The Eland Mountains, another range, stands at the S end of the Wilkins Coast, to the E of Eielson Peninsula. They extend for about 20 miles in a NE/SW direction and rise to an elevation of 2,440m.

**Smith Inlet** (70˚25'S., 62˚00'W.) indents the coast and extends 15 miles W. Clifford Glacier flows into the E end of this inlet. It is a broad glacier, about 40 miles long, and flows in an ESE direction through the gap lying between the Eland Mountains and Mount Tenniel, which is 1,625m high.

Cape Collier, a broad and ice-covered projection, marks the N side of the entrance to Smith Inlet. Numerous snow-covered nunataks and ridges, up to 762m high, stand on the slopes of the piedmont in this vicinity and rise steeply from the sea ice. At the entrance to Smith Inlet, depths of 36.6m off Cape Collier and 110m off Smith Inlet have been recorded.

The coast trends 17 miles N and NW from Cape Collier to James Nunatak, which is conical and rises to an elevation of 410m. Lewis Point, located 5 miles N of James Nunatak, is marked by rocky exposures on its N side and surmounted by an ice-covered dome, 510m high. This point is located at the S end of the mouth of Anthony Glacier.

**1.14** **Ewing Island** (69˚54'S., 61˚13'W.) lies 20 miles E of Lewis Point at the S end of the Larsen Ice Shelf. This island is ice-covered and dome-shaped. It is 8 miles in diameter and rises to an elevation of 305m.

Anthony Glacier flows in an ESE direction to the coast, close NW of Lewis Point.

**Stefansson Strait** (69˚26'S., 62˚25'W.) is ice-filled, 35 miles long, and 3 to 10 miles wide. It leads between the Wilkins Coast and Hearst Island. The shelf ice in the straight varies. It was reported (1940) that shelf ice in the N part was 146m above sea level, while it was only 15m above sea level in the S part.

The highlands, to the E of the Eternity Range, descend in a maze of lower peaks and an ice-covered plateau which is bordered by hills, up to 1,524m high. A broad coastal piedmont extends to the E of these mountains and reaches the coast in steep ice cliffs, up to 610m high.

Cape Rymill, the NE point of the coastal piedmont, is located 14 miles above the S entrance to Stefansson Strait. It is faced by a steep, metamorphic rock cliff, 457m high, which projects out from the ice cap.

Rhino Rock, black and steep, stands 6 miles SSW of Cape Rymill and rises to an elevation of 1,219m. It forms the E extremity of a rounded and rocky massif, 1,524m high. This massif extends inland for about 7 miles, with its W end buried beneath the continental ice. Rhino Rock is located 4 miles W of the cliffed edge of the piedmont and appears to be separated from its parent mass by a low column.

**Hearst Island** (69˚25'S., 62˚10'W.) lies on the E side of Stefansson Strait, 4 miles E of Cape Rymill. This island is 36 miles long, 7 miles wide, and has no visible rock outcrops. It is ice-covered, domed-shaped, and rises to an elevation of 366m. The W side of the island is steep and crevassed. The sea ice fronting the E side of the island is usually widely broken into pressure ridges and contains many icebergs.

The coast trends NNW for about 9 miles from Cape Rymill to **Cape Reichelderfer** (69˚22'S., 62˚43'W.), a rounded and ice-covered headland. A nearly vertical rock cliff, known as DeBusk Scarp, is located 4 miles W of the cape. It is 2 miles long and rises to an elevation of 300m.

The coast to the N of Cape Reichelderfer is indented by an inlet. The N side of the inlet, which is 5 miles long, is bordered by Finley Heights. Bingham Glacier feeds into the inlet from the W. This glacier crosses Palmer Land, extending from the coast of the Weddell Sea to the coast of Marguerite Bay. It is about 8 miles wide at the E entrance and rises in steep ice falls from the ice shelf, which is 45m above sea level, to an elevation of 2,134m, near the meridian of 64˚30'W. Its N and S flanks are marked by high peaks, with numerous tributary glaciers entering from the bordering highlands.

Finley Heights, to the N of Bingham Glacier, fronts the ice shelf and forms a stretch of rugged coast, about 7 miles long. It rises to a prominent, snow-covered, and rocky mass, 1,070m high.

**1.15** **Cape Hinks** (69˚10'S., 63˚10'W.), located at the NE end of Finley Heights, is formed by a low, dark, and rocky cliff, 222m high.

Lurabee Glacier, lying on the N side of Finley Heights, is about 5 miles wide. It extends in a SW direction for 10 miles where it joins the major transverse rift crossing Palmer Land.

Cape Keeler is located 20 miles N of Cape Hinks. The coast between is distinctive and is formed by a series of low fault troughs which are bordered by vertical rock walls and terminate in low, steep faces.

Scripps Heights surmount the peninsula extending between Lurabee Glacier and Casey Glacier. Its peaks are rugged and largely ice-covered. The heights terminate at Cape Walcott, an ice-covered headland, 625m high.

Casey Inlet, lying close N of Cape Walcott, is fed from the W by Athene Glacier and Casey Glacier. Athene Glacier is 10 miles long and merges with the terminus of Casey Glacier, which is 6 miles long.

From Casey Inlet, the coast extends 7 miles and is formed by Miller Point, Cape Mayo, and Cape Keeler.

Miller Point, low and black, is formed by bare rock. It is 232m high and forms the termination of a rocky and ice-covered mass. Between this rocky mass and Cape Mayo, a small glacier trends NW for about 15 miles and merges with the highland ice which inundates the tableland.

Cape Mayo, a bare and rocky cliff, is the terminus of a flat, snow-covered tableland which is 435m high. A narrow glacier lies between the rocky walls of Cape Keeler and Cape Mayo. It trends NW for about 15 miles and merges with the snow-covered tableland.

Cape Keeler, 518m high, has a flat and tent-shaped summit which slopes gently to the E in slate cliffs. This cape forms the S side of the entrance to Revelle Inlet.

The coast to the N of Cape Keeler trends NW along the inlet and consists of a high, snow-covered tableland. It has steep cliffs through which bare rock is occasionally seen. Revelle Inlet lies between Cape Keeler and Cape Agassiz. It is broad, ice-filled, and 15 miles long.

Cape Agassiz, 130m high, is located at the terminus of the Wilkins Coast and Palmer Land. It is formed by a narrow, ice-drowned spur which extends between Revelle and Mobiloil Inlet.

**1.16** The **Larsen Ice Shelf** (67˚30'S., 62˚30'W.), located in the NW part of the Weddell Sea, is 300 miles long. It extends N along the E coast of the Antarctic Peninsula from close S of Hearst Island to Cape Longing. The ice shelf encompasses the N extremity of Palmer Land and almost the entire length of Graham Land. At one point, this shelf is about 120 miles wide. A protrusion in the ice shelf occurs about 55 miles NE of Hearst Island. At this point, the ice extends E for about 23 miles from the general contour of the shelf.

**Gipps Ice Rise** (68˚46'S., 60˚56'W.) is 10 miles long, 9.5 miles wide, and stands 270m above the ice shelf. It is located on the Larsen Ice Shelf, 35 miles NE of Hearst Island, and is bounded by ice cliffs on all sides. Depths along the edge of the ice shelf range from 610m, at the N end of the protrusion described above, to a least depth of 60m, close E of Cape Longing.

## Graham Land—West Coast

**1.17** **Graham Land** (66˚00'S., 63˚30'W.) is that part of the Antarctic Peninsula lying N of a line between Cape Jeremy and Cape Agassiz. It includes the Bowman Coast, the Foyn Coast, the Oscar II Coast, the Nordenskjold Coast, and the Trinity Peninsula.

The **Bowman Coast** (68˚10'S., 65˚00'W.), the southernmost coast of Graham Land, extends 80 miles N from Cape Agassiz, at the extremity of the Hollick-Kenyon Peninsula, to Cape Northrup. Several inlets mark the shore of the Bowman Coast and are all engulfed by the Larsen Ice Shelf.

Mobiloil Inlet, which is ice-filled, leads SW between the Hollick-Kenyon Peninsula, to the SE, and Rock Pile Point, to the NW. The Hollick-Kenyon Peninsula is 40 miles long, ice-covered, and leads from the main mountain mass of the Antarctic Peninsula. It separates Casey Inlet from Mobiloil Inlet.

Glaciers radiate from a wide roadstead, located to the W of Mobiloil Inlet, into the interior of the Palmer Peninsula. One of these glaciers flows E to the head of the inlet. Along the Bowman Coast, these glaciers are separated by rocky, ice-covered peninsulas. The locus of these glaciers is known as the Traffic Circle. It is located S of Mount Ptolemy and is marked by a conspicuous beehive-shaped nunatak, known as Hub Nunatak.

On the N side of the inlet, a peninsula extends E for 10 miles. It is marked by Rock Pile Peaks, 1,109m high, which consist of many sharp peaks and ridges standing prominently above the ice sheet that envelopes its lower heights. The E extremity of the peninsula is formed by Rock Pile Point, an ice-covered and rocky cape, which has several bare rock faces and is 244m high.

Solberg Inlet lies between Rock Pile Peaks, to the S, and the Joerg Peninsula, to the N. It is 5 to 18 miles wide, ice-filled, and trends about 14 miles in a general W direction to the continental plateau escarpment. A remarkable, cirque mountain stands at the head of the inlet and reaches an elevation of 1,372m. The terrain at the head is composed of a maze of jagged, snow-covered peaks which extend in wild confusion to the summit of the continental plateau. Between these peaks, heavily crevassed ice falls fill the lower slopes. These glacier-filled valleys have steep gradients and trend in a jumbled pattern toward the continental plateau.

Trail Inlet, lying 15 miles N of Solberg Inlet, is entered between Three Slice Nunatak and Cape Freeman. This inlet recedes SW for 15 miles and is ice-filled.

A glacier, about 3 miles wide, lies close W of Solberg Inlet and trends SW in a remarkable series of terraced ice falls to the continental plateau, which is 1,676m high at this point. On the W side of the plateau, similar ice falls descend sharply and extend SW to the NE part of Neny Fjord, on the Fallieres Coast. The S wall of the glacier is formed by a group of rounded ridges, inundated by highland ice, which gradually descends to the coast and forms a peninsula. This peninsula,

Table of Contents

known as the Joerg Peninsula, is about 15 miles long, 3 to 5 miles wide, and projects E toward the Weddell Sea. It is mostly bare on the N side where the rocky faces are too steep for snow to lodge upon them. The N side is indented by a number of small coves at the head of which are many gaps. Small glaciers, widely crevassed, descend from the heights through these gaps. The peninsula is submerged by highland ice which rests as a thin cap on the heights. The seaward termination of the peninsula is formed by a large, rocky mass which attains an elevation of 1,067m. Pylon Point, the E slopes of which are completely glacerized, projects seaward and forms a low, rolling ice cape. The shelf ice at the E side of this point rises 61m above sea level and is heavily crevassed.

**1.18** **Three Slice Nunatak** (68˚02'S., 64˚57'W.), mostly snow-covered, stands 4 miles NE of Pylon Point. This feature, which is about 2 miles long and 1 mile wide, is very distinctive and serves as an excellent landmark. A serrated ridge, with three prominent slices, forms it's long axis.

The shelf ice lying E of this nunatak is badly crevassed and at a distance of 5 miles, attains a height of only 18m above sea level.

Seligman Inlet is broad and extends 6 miles inland. Choyce Point and Cape Freeman form the N and S entrance points, respectively, of this inlet. At the S side of the entrance, three narrow glaciers break through the vertical rock wall in divergent directions. Cape Freeman is formed by a low, ice-covered spur with a prominent, dome-shaped nunatak standing at its E end. Choyce Point, 910m high, is ice-capped and rocky.

Blackface Point, located 3.3 miles NW of Cape Freeman, is a precipitous headland with exposed black rock at it's extremity.

The S side of Seligman Inlet is bounded by steep, rocky cliffs, over 910m high. Lewis Glacier and Ahamann Glacier, separated by Cape Church, flow between the rock walls into this inlet.

Tonkin Island, 518m high, lies about 11 miles NE of Cape Freeman. This island is narrow and ice-capped. Its S end is formed by a bare rock in the shape of a pyramid, about 1 mile long. Close N of the pyramid, a snow-covered ridge, 411m high, extends N for about 2.5 miles.

Francis Island lies 12 miles ENE of Choyce Point and has an irregular shape. This island is 7 miles long, 5 miles wide, and rises to an elevation of 707m. It is mainly ice-covered, but has several rock exposures and rocky peaks. Like Tonkin Island, it is encompassed within the ice shelf.

Tent Nunatak, a conspicuous and pyramidal rock, stands 6 miles N of Choyce Point and marks the S limit of Whirlwind Inlet. It is 0.5 mile in diameter and emerges from the ice shelf, 1 mile from the S entrance of the inlet.

Whirlwind Inlet is wide and consists of two bays. A prominent series of narrow glaciers and broken ice falls, known as Whirlwind Glaciers, descends from the N, W, and SW through its vertical rock walls to the ice shelf.

Cape Northrup forms the N end of the inlet and also marks the N limit of the Bowman Coast. This cape consists of a conspicuous rocky bluff, 1,160m high, which is mostly ice-free and has nearly vertical sides.

The **Foyn Coast** (66˚40'S., 64˚20'W.) trends 87 miles in a NE direction from Cape Northrup. It is marked by a continuous range of sharp, snow-covered peaks with steep slopes and ridges.

Mamelon Island lies 11 miles ENE of Cape Northrup. It is mostly ice-covered, with a smooth and rounded summit.

Hodges Point, located 6 miles ENE of Cape Northrup, is rocky and terminates in an impressive black cliff. This point has twin summits, 940 and 960m high.

Hess Glacier leads E to the ice shelf, 12 miles N of Cape Northrup. It is dominated on the S side by Mount Thorarinsson, a pyramidal peak, 860m high. This peak is one of the most distinctive features along the coast.

**1.19** Mill Inlet, entered between Monnier Point and Cape Robinson, lies 13 miles N of Hess Glacier. Karpf Point, located on the N side of this inlet, is formed by a turret-shaped bluff, 1,503m high, and is mainly ice-free. It marks the termination of the inland plateau escarpment. A small rock nunatak stands 1 mile SSE of this point.

Cape Chavanne, located at the head of the inlet, is a prominent and partly ice-free bluff. It's S extremity stands at the mouth of Breitfuss Glacier and is formed by a conspicuous, elongated dome. The N side of the inlet is flanked by the Cole Peninsula, which is 15 miles long and 8 miles wide. This peninsula is ice-covered, except for several rocky spurs which radiate from Mount Hayes.

Mount Hayes, a plateau-type mountain, rises to a height of 1,140m and stands at the base of the peninsula. Cape Robinson, forming the seaward end of the peninsula, is a rounded and ice-covered promontory.

Between Cape Robinson and Cape Alexander, Cabinet Inlet, which is ice-filled and fed by glaciers, extends NW for about 36 miles. Spur Point, Balder Point, and Cape Casey are headlands projecting from the W side of the inlet.

Stanley Island, 520m high, lies 4 miles NE of Spur Point. Ice-free cliffs descend to the ice shelf from its summit which stands at the W end. The true Antarctic Circle crosses the S extremity of this island in 66˚33'S.

Cape Casey, located 9 miles N of the island, is formed by a prominent, partly ice-free promontory which rises 753m above the level of the ice shelf. An island, 792m high, lies about 3 miles NW of this cape.

Cape Alexander forms the S end of the Churchill Peninsula. This ice-covered peninsula extends about 30 miles in a SE direction.

**1.20** The **Oscar II Coast** (65˚45'S., 62˚30'W.) extends 97 miles NE from Cape Alexander to Cape Fairweather and is indented by several inlets. The Jason Peninsula, a prominent projection, extends E from the coast.

Hektoria Glacier, consisting of a series of long bays, forms the N portion of this coast. The bays are bordered by steep, rugged, and rocky peninsulas. The coast, to the S of the glacier, is formed by the steep slopes of several pyramid-shaped peaks and ridges which front the inland plateau. A few steep glaciers flow from the high interior between these peaks and ridges.

Adie Inlet extends SW for 25 miles at the S end of the Oscar II Coast. It leads between Astro Cliffs, located on the Churchill Peninsula, and Veier Head, located on the Jason Peninsula. Gulliver Nunatak, 575m high, stands on the N side of this inlet and is long and narrow. It has rugged and mainly ice-free sides

and rises steeply to a flattened, ice-free summit. Gemini Nunatak and Borchgrevink Nunatak stand 5 miles and 10 miles, respectively, NNE of Gulliver Nunatak.

**Mount Fritsche** (66˚00'S., 62˚42'W.), 987m high, stands NW of Borchgrevink Nunatak. This mountain is rugged, steep, and marks the N side of Richthofen Pass. The pass is 6 miles wide at its mouth and extends W for about 15 miles. It reduces the width of the peninsula, in the vicinity of Leroux Bay on the W coast, to about 25 miles. The pass is completely filled with glacier ice which flows E from the high plateau between the steep rock walls.

Philippe Rise stands E of this area and extends SE for about 10 miles. It consists of a low, snow-covered promontory, 7 miles wide, which rises to an elevation of 395m at the W end. Medea Dome, snow-covered and 350m high, stands at the E end of this promontory.

**1.21** The Jason Peninsula extends 33 miles E from Philippe Rise and reaches to within 3 miles of the Weddell Sea. The E terminus of this peninsula is formed by Cape Framnes. The current in the vicinity of this cape has been reported to set NNE at a velocity of 1 knot.

Stratton Inlet, which is ice-filled, indents the S side of the peninsula, E of Veier Head. Standring Inlet, which is also ice-filled, indents the N side of the peninsula.

**Chapman Point** (65˚55'S., 61˚20'W.) and Tashtego Point, located 21 miles NW, form the entrance to Scar Inlet, which is 22 miles long and ice-filled.

Cape Disappointment forms the E end of the peninsula that separates Scar Inlet from Exasperation Inlet. This cape is fronted by snow-free cliffs and rises to an elevation of 225m.

Exasperation Inlet, which is ice-filled, is divided by Delusion Point and Caution Point into numerous bays which are fed by glaciers.

Foyn Point, located N of Exasperation Inlet, is surmounted by a peak, 525m high.

Evans Glacier, lying N of Foyn Point, flows between Whiteside Hill and Shiver Point. It forms a bay, about 4 miles wide, which indents the coast and extends about 15 miles to join with Hektoria Glacier. With Flanders Bay on the W side, Evans Glacier reduces the width of the peninsula to about 12 miles at this locality.

Cape Fairweather, 705m high, is located at the N end of the Oscar II Coast and flanked by glaciers. This cape is ice-covered, except for several rocky exposures along its SE and E sides.

The **Nordenskjuold Coast** (64˚30'S., 60˚30'W.) is that portion of Graham Land lying between Cape Fairweather and Cape Longing, 61 miles NE. It consists of a high, ice-covered tableland with steep slopes. This striking tableland is known as the Detroit Plateau.

A group of islands, lying S of the Nordenskjuold Coast, consists mainly of Robertson Island, Lindenberg Island, and the Seal Nunataks.

Robertson Island, the largest and E of the group, lies 32 miles ESE of Cape Fairweather and is about 10 miles long and 7 miles wide. It is dome-shaped and snow-covered with several high, pillar-shaped rock masses. The summit at the S end of the island is 396m high.

Christensen Nunatak, standing within the Seal Nunataks, rises to an elevation of 299m, about 1 mile N of Robertson Island.

Lindenberg Island, with a sugarloaf appearance, lies 11 miles N of Robertson Island. It is about 1 mile in diameter, 200m high, and dark. A number of low, snow-covered rocks extend up to about 1 mile NE of this island. The island is volcanic, although no evidence of volcanic activity has occurred since 1902.

**1.22** The Seal Nunataks is a chain which consists of 14 main islets that extend 30 miles NW from Robertson Island.

Oceana Nunatak, about 1 mile long, lies close off the NW extremity of the island. It is formed by rugged and black lava mass. Castor Nunatak, 1 mile long, lies about 1 mile from the W side of the island and has a high summit on its SE side. Hertha Nunatak, a low and featureless rock, is about 1 mile long and lies 2 miles NW of Castor Nunatak. Arctowski Nunatak, 1 mile long, lies about 2 miles N of Hertha Nunatak and has a high summit at its E end. Gray Nunatak, 0.5 mile long, lies about 1 mile NW of Arctowski Nunatak and has a high summit at its E extremity. Donald Nunatak, lying close W of Gray Nunatak, is lower and has no distinctive features. Bruce Nunatak, lying 1 mile NW of Donald Nunatak, is formed by a dark and high-ridged rocky mass, 3 miles long.

Dallmann Nunatak and Bull Nunatak, both 0.5 mile long, lie 2 miles NW and 3 miles SW, respectively, of the W extremity of Bruce Nunatak. Unnamed rocks lie about 3.5 miles N and 1 mile S of Dallmann Nunatak. Pedersen Nunatak, the westernmost of the group, lies 8 miles NE of Cape Fairweather. All of these nunataks are snow-free and of volcanic origin.

From Cape Fairweather, the Nordenskjuold Coast leads NE for about 45 miles to Sobral Peninsula.

Sentinel Nunatak, standing 16 miles NNE of Cape Fairweather, is high, black, and pyramidal in shape. It marks the S side of Dryglaski Glacier. This glacier is 18 miles long and flows SE from Herbert Plateau.

Tillberg Peak, 610m high, is ice-free and stands on a ridge that runs E from Foster Plateau toward Sentinel Nunatak. Ruth Ridge, black and rocky, runs in a N/S direction to the N of Dryglaski Glacier. It is 1.5 miles long and terminates in a peak at its S end. This ridge forms the S end of the Detroit Plateau and marks the change in direction of the plateau escarpment along the E coast of Graham Land, turning W to form the N wall of Dryglaski Glacier.

Cape Worsley is located E of Ruth Ridge and fronts the ice shelf. This cape is dome-shaped, 225m high, and has snow-free cliffs on its S and E sides.

The Sobral Peninsula trends NE for 20 miles and then extends S from the main coast for 11 miles, terminating at Cape Sobral. This cape is partly ice-free and appears from the air to be an island.

A deep fiord, walled by glaciers, indents the Sobral Peninsula and extends inland for 30 miles into the Antarctic Peninsula.

Larsen Inlet, 11 miles wide at its mouth, recedes for 14 miles and is filled with an ice shelf, broken and crevassed in many places. It is entered between Cape Sobral and Cape Longing, a rocky point. A deep fjord, leading E, indents the middle of this inlet.

Table of Contents

Cape Longing forms the N end of the Nordenskjuold Coast and also the N limit of the Larsen Ice Shelf. A depth of 60m is reported to lie about 4.5 miles E of Cape Longing and is the shallowest depth charted along the Larsen Ice Shelf.

**1.23 Trinity Peninsula** (63˚37'S., 58˚20'W.) is that portion of Graham Land lying N of a line between Cape Longing and **Cape Kater** (63˚46'S., 59˚54'W.).

Cape Dubouzet forms the NE extremity of the peninsula. Between this cape and Cape Roquemaurel, 50 miles SW, the land is comparatively low and covered with a continuous ice sheet, with occasional rock outcrops. Numerous rocky islets and submerged reefs lie offshore and extend up to 10 miles seaward. These waters have not been thoroughly surveyed and caution must be exercised when approaching the coast. The most prominent peaks in this vicinity are Mount Bransfield, 762m high; Mount Jacquinot, 474m high; and Mount D'Urville, 1,083m high.

**Prince Gustav Channel** (63˚50'S., 58˚15'W.) divides the mainland from the Ross Island group. It is about 80 miles long and varies in width from 9 miles, between Bald Head and Vega Island, to 14 miles, between Cape Longing and Nygren Point at the S entrance. Three uncharted islands of considerable size were reported to lie within this channel. The center of the channel can be navigated safely in deep water as far S as 64˚06'S, where passage is blocked by a permanent ice shelf. In January 1985, a vessel secured alongside this ice shelf. Vessels may pass on either side of Carlson Island in safety, but are advised to pass not less than 1 mile off Pitt Point due to the existence of uncharted shoals lying close inshore. It was reported that strong tidal currents, sometimes with rates in excess of 2 knots, set up and down the channel. The N flow was reported to be the most pronounced and in addition, strong eddies were observed in the vicinity of the W side of Carlson Island. Caution should also be taken in the vicinity of Cape Lachman as a drying spit extends about 180m N from the shore, a depth of 37m lies within 1 mile N of the cape and a bank, with a depth of less than 55m, extends 2 miles farther NE into the channel.

On the W side of the channel, Cape Longing forms the end of a large, pear-shaped peninsula. This peninsula is connected to the mainland by Longing Gap, a low valley, which is faced with snow-free cliffs, up to 180m high. On the E side of the peninsula, a small and rocky cliff rises to a summit, 340m high. The remainder of the E side as well as the N side are entirely covered by ice.

Tower Peak, standing 5 miles NW of Longing Gap, is 830m high and has a rocky exposure which stands out clearly from the evenly contoured ice field.

Sjuogren Glacier, lying 19 mile NW of Cape Longing, is about 15 miles long. It flows SE from the Detroit Plateau and enters the channel in the form of a tongue. This glacial tongue is 5 to 7 miles wide and extends E to the vicinity of Persson Island. Mount Hornsby, a prominent and snow-capped mountain, backs the glacier.

Mount Wild, a sharply-defined rocky ridge with several peaks, has a summit, 926m high. A small nunatak stands on the glacial tongue, about 6 miles ENE of this ridge.

From Mount Wild, the coast leads N for about 13 miles to Mount Roberts. This peak is 955m high and has a dark, mostly ice-free summit with a flat, sloping top.

Aitkenhead Glacier lies N of Mount Roberts and leads 10 miles E from the Detroit Plateau to Prince Gustav Channel, close N of Alectoria Island. This latter island is less than 1 mile long, 91m high, low, and nearly ice-free.

Mount Bradley has a pyramidal peak, 837m high. It stands N of Aitkenhead Glacier, at the S end of a ridge which descends from the Detroit Plateau.

A least channel depth of 7.3m is reported to lie close W of Pitt Point.

**Caution.—**Extreme care must be taken when navigating in this area due to the incomplete nature of the surveys.

**1.24 Pitt Point** (63˚51'S., 58˚24'W.) consists of a promontory, 90m high, which is located 40 miles above the S entrance of the channel. Victory Glacier, gently sloping, is 8 miles long and lies close N of the point. Azimuth Hill, standing 6 miles N of Pitt Point, is a low and rocky outcrop, 84m high.

Between Cape Longing and Azimuth Hill, the coast consists of an almost continuous line of ice cliffs backed by an escarpment of rock or ice that rises towards Detroit Plateau.

Russell East Glacier lies on the N side of Azimuth Hill. It is 6 miles long, 3 miles wide, and leads in an E direction. Mount Canicula is formed by two peaks, 825 and 890m high. It stands 3 miles E of Sirius Knoll, on the divide which separates Russell East Glacier from Russell West Glacier.

Long Island, 3 miles long, lies SE of Azimuth Hill. Its summit, 108m high, rises at the N end and is surmounted by a cairn. Cugnot Ice Piedmont is 15 miles long and 3 to 6 miles wide. It leads NE from Russell East Glacier to Eyric Bay and is bounded on the N side by Louis Philippe Plateau.

**1.25** The Louis Philippe Plateau, occupying the central part of Trinity Peninsula, is 11 miles long, 5 miles wide, and rises to a height of 1,370m.

Church Point is located 11 miles NE of Azimuth Hill and S of Cugnot Ice Piedmont. It is surmounted by a dark, distinctive rocky peak, 340m high. Camp Hill, small and ice-free, stands 2 miles E of the point and is 120m high.

Red Island, lying 2.5 miles SSE of Church Point, is prominent, ice-free, and 1 mile in diameter. It is circular, flat-topped, and has reddish cliffs of volcanic rock which rise to an elevation of 496m. An isolated, rocky pillar, 494m high, stands NW of this island. It resembles a monument and is prominent from the NE and SW.

A depth of 66m is charted about 4 miles ESE of Red Island. A depth of 1.1m is reported to lie about 3.5 miles SE of Red Island. A depth of 16.8m was reported (1982) to lie about 1.8 miles SE of Red Island.

Crystal Hill fronts the coast 3.5 miles E of Camp Hill. It is ice-free, 150m high, and forms the summit of the headland lying between Camp Hill and Bald Head. McCalman Peak, standing 3 miles N of Criptal Hill, is 550m high and forms the summit of a ridge.

Bald Head is located 3.5 miles NE of Crystal Hill. This headland is bare, ice-free, and 152m high. Several islands lie off the coast between Crystal Hill and Bald Head, including

Egg Island, Tail Island, Eagle Island, Corry Island, and Vortex Island.

Egg Island, lying 1 mile SE of Crystal Hill, is 442m high. Tail Island, 171m high, lies 1 mile E of Egg Island. Both of these islands are shaped like mounds, surrounded by extensive scree slopes, and almost ice-free.

Eagle Island, the largest of the group, is square-shaped and about 4 miles in diameter. Its NE extremity rises to a flat-topped peak, with an ice-free summit, 560m high. The N side of the island is ice-free, except for a small glacier lying about midway. The S part of the island has an ice cap, 150 to 300m high. Scree cliffs and low rocks border the S side of this ice cap.

Corry Island, 2 miles long and 508m high, is separated from Eagle Island by a channel, 0.3 mile wide. It is rounded, ice-capped, and fringed by cliffs and steep scree slopes which are broken in places by ice falls. Vortex Island is the smallest of the group. It is 0.5 mile long and has a jagged, rocky peak, 244m high. A penguin colony is located on its NE side.

**1.26** The E side of Prince Gustav channel is formed by James Ross Island and Vega Island.

James Ross Island is 40 miles long and 1,629m high. This island, which is part of the James Ross Island group, is separated into two sections by a neck of land extending from the SW corner of Croft Bay to the NE corner of Rohss Bay. The SE portion of the island, which is the larger of the two parts, rises at the center in the form of Mount Haddington. The island rock underlying the ice cap is mainly volcanic and, where visible, appears as dark, wall-like cliffs. There is no dominating ice cap in the NW part, but mountainous masses, known as Massey Heights, rise to elevations of 360 to 940m. Although the defined entrance begins at Nygren Point, for our purposes the description will begin at Cape Foster.

Cape Foster is located at the S end of James Ross Island, 7 miles SE of Nygren Point. Trending NW for 2 miles from this cape, the coast is indented by Carlsson Bay. Tait Glacier backs the head and a prominent, rocky headland projects from the N shore of the bay.

**1.27** **Nygren Point** (64˚23'S., 58˚13'W.), located 3 miles WNW of Carlsson Bay, is rocky and marks the actual S entrance to Prince Gustav Bay. The coast trends 7 miles NNW from this point to Cape Broms. This stretch of the coast appears conspicuous because of the alternating ice falls flowing from the high interior and the bare, rocky cliffs.

A large bay, about 10 miles wide, lies between Cape Broms and Cape Obelisk and is known as Rohss Bay. The W coast of James Ross Island in this vicinity is broken by a series of semicircular valleys with almost perpendicular walls of red and black basalt. The inland ice cap slopes to the sea between projecting rock masses which present vertical faces.

About 7 miles NNW of Cape Broms, Persson Island, 1.5 miles long, rises to an elevation of 213m and marks the E end of Sjuogren Glacier Tongue. Some conspicuous and rocky cliffs, known as Tumbledown Cliffs, front the channel, 3 miles N of Cape Obelisk. Holluschickie Bay, lying 6 miles NNE of these cliffs, is entered between Kotick Point, on the S side, and Matkah Point, on the N.

Lagrelius Point, located 3 miles N of Matkah Point, is long and narrow. It is 48m high, flat-topped, and has vertical sides.

From Lagrelius Point, the coast extends NE for 13 miles to Cape Lachman, the N extremity of James Ross Island. It is indented by a series of bays with variegated, perpendicular cliffs.

Carlson Island, ice-free and less than 1 mile in diameter, lies about 1.5 miles N of Lagrelius Point. Cliffs and scree slopes lead steeply to its summit which is flat-topped and 299m high. The coast trends 4 miles NE from the island and recedes inland for 2 miles between Rink Point and Stoneley Point. Whisky Bay indents the coast, 4 miles NE of Stoneley Point.

Cape Lachman forms the N end of James Ross Island and the W entrance point of Herbert Sound. A small, square-shaped headland is located near the NE end of Prince Gustav Channel. It is 97m high and is separated from the mountains to the S by a low and flat-topped scree spur.

Prince Gustav Channel terminates in the vicinity of Vega Island, close E of the N end of James Ross Island. This channel has never been known to be ice-free. It is reported that three sections lying in this area have been found to be recently frozen over and apparently open during the summer. One section lies in the strait between a group of six islands, located N of Vega Island, and the mainland. Another section lies in the area to the NNW of Cape Lachman while the third section lies within Herbert Sound, between The Naze and Vega Island. The three sections lie where the channel is narrow and strong currents are likely.

Farther S, there is strong indication that the water has remained frozen for several summers.

The Antarctic Peninsula, to the NE of Prince Gustav Channel, is indented by Eyrie Bay and Duse Bay. Eagle Island, Tongue Rocks, a group of volcanic rocks, and Beak Island lie off the entrances to these bays.

**1.28** Beak Island, lying 0.5 mile NE of Eagle Island, is arc-shaped and 4 miles long. This island is 359m high, rocky, and ice-free. Its SE part is separated from the W part by a ridge, 88m high, which rises to a bluff at the S extremity. It was reported that good anchorage, in a depth of 26m, can be taken within a bay on the N side of the island, about 0.2 mile offshore. A good landing was also reported to exist on a sloping beach of volcanic sand.

Eyrie Bay, lying 6 miles W of Beak Island, is entered close N of Jade Point. This bay is 2.5 miles wide at its mouth and recedes for 3 miles. Jade Point is rocky and slopes gently with its lower part covered in greenish-tinged ice.

Cain Nunatak and Abel Nunatak are located W of Eyrie Bay, at the S end of Broad Valley. This valley is glacier-filled and lies on the S side of the Laclavegre Plateau (Laclavere Plateau).

View Point, located E of Eyrie Bay, forms the W entrance point of Duse Bay and rises to an elevation of 150m. The shore in the vicinity of this point consists of steep, dark-colored mountain slopes.

Duse Bay, 7 miles wide, lies between the W side of the Tabarin Peninsula and View Point. This bay recedes about 3.5 miles N and is nearly rectangular in shape. Two islands lie within the bay, close to the S shore, and three other islands of ice-free appearance lie close to the seaward end of the S

Table of Contents

entrance point. Theodolite Hill, 680m high, stands 5 miles W of the NW corner of the bay has a small, rocky outcrop on its summit.

**Tabarin Peninsula** (63˚32'S., 57˚00'W.) is 5 to 12 miles wide and 12 miles long, between Duse Bay and Hope Bay. Along the W side of this peninsula, a series of rock buttresses, known as Seven Buttresses, front the coast and extend for 4 miles. These buttresses are 150m high and separated by narrow ice falls. Buttress Hill, standing 2 miles E of the northernmost buttress in the series, is 690m high, flat-topped, and has steep, rock cliffs on its W side.

Cape Burd, located 2 miles S of Seven Buttresses, is a low, rocky cliff forming the SW extremity of Tabarin Peninsula.

From Cape Burd, the coast leads E for 4.5 miles to a bay which indents the coast and extends inland for 2 miles. Depths of 23.8 and 12.1m are reported (1980) to lie about 1.5 miles S and 1 mile S, respectively, of the entrance to this bay.

Cape Green, the SE extremity of Tabarin Peninsula, is located 2.5 miles ESE of the bay. A depth of 40m was reported (1980) to lie about 3.3 miles S of this cape.

**1.29** **Herbert Sound** (63˚53'S., 57˚40'W.), 16 miles long, leads S from Prince Gustav Channel, between James Ross Island and Vega Island, to Cape Lamb. The sound then leads E to its SE entrance, where it joins Erebus and Terror Gulf. In 1982, this sound was navigated for the first time. Passage was made in both directions with little ice being encountered. Depths of 150 to 400m were reported to lie in the center of the channel.

The N entrance lies between Cape Lachman and Keltie Head, which is rounded and has vertical cliffs rising to a small ice dome, 190m high.

Lachman Crags (Lachmans Crags), an escarpment, extends in a N/S direction and rises to an elevation of 620m. It stands on the W side of the sound, 3 miles SSW of Cape Lachman.

Croft Bay indents the coast, 8 miles S of Lachman Crags, on the SW side of the sound. Dreadnought Point forms the W entrance point of this bay and Stark Point forms the E entrance point. Dobson Dome, standing W of the bay, is a prominent mountain. It is snow-covered, dome-shaped, and 948m high.

From Croft Bay, the sound leads NE to the area lying N of The Naze. The sound narrows to a width of 2 miles in this area and is obstructed by numerous rocks and islets.

Between Cape Lachman and Cape Obelisk, 28 miles SSW, the coast is indented by a number of bays. These bays are separated by headlands which are fringed by rocky cliffs with extensive scree slopes. Brandy Bay lies 6 miles SW of Cape Lachman and provides safe anchorage with a good holding ground of thick, gray mud. It offers easy access to the hinterland and good protection, especially from N gales. Although ice collects in this bay, it rarely becomes packed during the summer months. It is reported that an orange hut stands on the SW side of the entrance to the bay and is clearly visible, except when covered with snow. Landing can be carried out by shallow inflatable craft.

The Naze, a peninsula, extends N from Terrapin Hill and forms the SE end of Herbert Sound. Terrapin Hill, 546m high, is rounded and reddish in color. Comb Ridge, forming the NE end of The Naze, rises to an elevation of 105m.

The E side of Herbert Sound is bordered by Vega Island. The strait leads S and then E for about 15 miles to where False Island Point forms the S extremity of a peninsula extending into the sound.

**1.30** False Island Point is connected to the main part of Vega Island by a narrow, low, and gravel spit. From a distance, this point appears to be separated from the main island.

A line between Comb Ridge and False Island Point indicates the SE end of the sound and the entrance to Erebus and Terror Gulf. Humps Island (Humps Islet) lies 4 miles SSE of Combs Ridge. It is 0.5 mile long and has two summits rising near its W end, the tallest being 186m high.

Vega Island, the N of the Ross Island group, is about 16 miles long and 5 miles wide. It is high, precipitous, and has tower-like rocks. The lower falls of eruptive rock are plateau-like in form and brown in color.

Sandwich Bluff, located close W of the center of Vega Island, is a flat-topped mountain, 644m high, which is broken sharply at its W side by a steep, dark bluff. From the N, this bluff appears as a sandwich because of a horizontal snow-holding band of rocks on the cliffs.

Cape Well-Met, a dark and conspicuous headland, projects from the N coast, near the middle of the island. Devil Island, 207m high, lies close to the N shore in the vicinity of this cape. It has steep, stone sides and is ice-free.

Cape Gordon is located 6.5 miles SE of Devil Island. A rock, 1m high, lies about 6.5 miles E of this cape and is surrounded by a shoal area which may best be seen on the chart.

A rock lies about 0.5 mile offshore, 5 miles SW of Cape Gordon. Another rock lies 1.5 miles E of the cape, 4 miles NE of False Island Point.

The SE side of James Ross Island fronts Erebus and Terror Gulf and is marked by numerous glaciers. Trending S and SE from The Naze, the coast is fronted by steep cliffs which rise to a mostly ice-covered plateau.

**Skep Point** (64˚03'S., 57˚18'W.), high and ice-free, resembles a beehive from offshore. A shallow rock lies 2 miles ESE of this point.

Ula Point, ice-covered and low, lies 4.5 miles SE of Skep Point. Lonely Rock, lying 2.8 mile ESE of Ula Point, is 46m long, isolated, and prominent.

The area leading between the SE end of Herbert Sound and Erebus and Terror Gulf is not fully surveyed.

A depth of 15.8m was reported (1980) to lie about 1.3 miles E of Humps Island. Depths of 7.6m and 14m were reported to lie within 2.3 miles of each other, about 12 miles SE of Humps Island. It was reported (1982) that anchorage could be taken, in a depth of 15.8m, to the S of Comb Ridge. However, shallow depths were reported to lie about 2 miles SW of this anchorage area.

An unexamined depth of 32.9m is believed to exist about 23.5 miles ESE of Humps Island.

Between Ula Point and Cape Gage, 5 miles SSE, Coley Glacier flows inland and extends 5 miles E to the gulf.

Cape Gage, located S of the glacier, is a rocky promontory which forms the E extremity of James Ross Island. This cape also forms the W side of the N entrance to Admiralty Sound.

**1.31 Admiralty Sound** (64˚20'S., 57˚10'W.) extends in a NE/SW direction and separates Seymour Island and Snow Hill Island from James Ross Island. It has a width of about 1 mile at the narrows. The W entrance to the sound is divided by Lockyer Island into two forks, each with a width of about 2 miles. The sound has not been surveyed, although a depth of 129m was reported to lie in its center, off Hamilton Point. No vessel has navigated the sound, which is sometimes ice-locked during the entire year. It is reported that strong tidal currents set through the sound.

The description of the sound is from N to S. It covers the W side as far as Cape Foster, located beyond the limits of the sound, and then proceeds to the islands.

The coast to the SW of Cape Gage trends for 5 miles to Ekelof Point, which is high, rocky, and forms the N entrance point of Markham Bay.

Between Ekelof Point and Hamilton Point, the S entrance point, three glaciers flow into the bay. The N glacier is about 1 mile wide and enters the bay between steep, rocky headlands. The central glacier, known as Gourdon Glacier, is similar in size and form to the N glacier. It enters the bay between Saint Rita Point, a steep and rocky outcrop, on the N side and Rabot Point, high and rocky, on the S side. Hobbs Glacier, the S glacier, is about 2 miles wide and has a lateral moraine on its higher slopes.

Hamilton Point consists of a headland, 5 miles long, the S end of which forms the N limit of the narrows of Admiralty Sound. A narrow, perpendicular ridge of rock, which is shaped like a tower, stands prominently on the high cliffs of Hamilton Point.

The coast between Hamilton Point and Cape Foster, 13 miles WSW, is occupied by Swift Glacier, which terminates at the sea edge in steep ice cliffs. The Watchtower, a prominent and rocky feature, stands 4 miles W of the S end of Hamilton Point. It consists of a rocky mass which is steep-sided, flat-topped, isolated, and 396m high.

The coast then trends SW to Cape Foster and is fronted by three headlands. Jefford Point, the most prominent headland, consists of a rock cliff surmounted by ice.

Lockyer Island, lying at the SW end of Admiralty Sound, is 2.5 miles long and rises to an elevation of 460m. From the N, this island appears as a precipitous wall of dark tuffs capped by an ice dome, from which several small glaciers descend to the sea in sheer, vertical cliffs.

**1.32** Snow Hill Island is located E of Lockyer Island and lies SE of James Ross Island, from which it is separated by Admiralty Sound. It is about 20 miles long and about 6 miles wide. The island is entirely snow-capped, except at the NE extremity which, for a distance of 3.5 miles, consists of a rugged projection with steep, lofty cliffs of olivine-basalt. A low shore fronts the NW side of this snow-free projection. Anchorage may be taken about 90m off this low shore, in a depth of 11m, with a rocky bottom and good holding ground. The E side of the projection is perpendicular and offers no landing place.

The ice cap is extensive, hilly with deep depressions, and attains a maximum elevation of 300m. The inland ice terminates toward the sea in a vertical wall, which, on the E side, is from 1 to 6m high. On the E side, where the ice cap meets the bare and rocky walls of the N projection, a deep ravine exists and a running stream is found here in the summer months. The ice cliff, for a distance of 0.5 mile to the S of the ravine, is only 0.9m high and rests on the beach at LW. The ice cliff increases in height to 6m several miles to the S, but appears to be floating. Depths reported along the ice edge vary from 7 to 54m. The range of tide observed here was reported (1935) to be 1.5m. Vessels may moor to the low ice face, but calving may be a problem.

Anchorage may be taken about 0.5 mile from the E part of the ice cliff, at a point lying about 5 miles from the NE extremity of the island where the ice cap is about 3m above sea level. This anchorage is reported to have a depth of 13.7m, with a mud bottom. Anchorage can also be taken, in depth of 29m, gravel and rock, about 1 mile from the ice cliff.

The bottom is reported to be irregular to the S and E of Snow Hill Island, which indicates volcanic structure.

The interior ice dome lying opposite the NE extremity of the island rises to a large, wide shoulder which is about 150m above the sea level.

A beacon stands on the NE extremity of Snow Hill Island. It consists of a triangular framework tower, 5.2m high, with three horizontal panels painted yellow and orange.

The mean temperature at Snow Hill Island, during a period of 20 months, was reported to be -11.7˚C. The prevailing winds were SW and these were also the strongest and coldest. Winds from the SW prevail 38 per cent of the year and, during some months, 50 per cent of the time, with an average velocity of 32 mph. Winds from this quarter blowing during the winter months had an average velocity of 20 mph. The stronger the winds from this direction, the lower the temperature. The mean temperature when SW winds were blowing was reported to be more than 2˚ below normal.

Winds from the N and NNW are strong and, once started, are usually of long duration. These are foehn winds which bring warm weather, but they are not common. Winds from the NE are comparatively strong and cold. Calm periods usually raise the temperature above the normal, but bring a wide daily variation in temperature.

During the summer months, the temperature does not drop below -17.8˚C. The absolute minimum temperature of -41.7˚C was recorded in the month of August and the absolute maximum temperature of 9.4˚C was also recorded during August. Such irregularities are characteristic of this region due to the existence of the semipermanent low-pressure area in the Weddell Sea and to the unstable equilibrium of the high-pressure area over the plateau of the Antarctic Peninsula.

**1.33** Picnic Passage, a strait, is about 0.5 mile wide and 1.5 miles long. It separates Snow Hill Island from Seymour Island to the NE. Strong currents and tide rips exist in this channel which shoals to depths of less than 2m in the center LW. The bottom deepens steeply on the NW side of the channel. Seymour Island is 8 miles long and 4 miles wide. It is entirely snow-free and has a remarkable appearance. The N portion of the island consists of a level, extensive plateau which reaches an elevation of 180m. Below this smooth plateau, terraces occur which contain valleys and small irregular knolls of hard rock. Cross Valley, which cuts through the island from E to W, has a bottom which is not much above sea level. This valley

Table of Contents

opens at Penguin Point, on the E shore, and into Bertodano Bay lying close E of Bodman Point, on the W shore. A strip of deeply dissected land extends between Penguin Point and the NE extremity of the island. The SW portion of the island presents an appearance that is in marked contrast to the smooth surfaces of the N portion. The S half of the island has a peculiar ribbed appearance, being low and deeply dissected, with many low hills. Low, perpendicular, and rocky cliffs border the shore, but there are many landing places where the gorges slope gradually to the sea.

Penguin Point, located on the E side of Seymour Island, is the site of the Vice Comodoro Marambio base, an Argentinean station. Anchorage may be taken, in a depth of 22m, about 1 mile ENE of this point.

Several beacons are reported to stand 3 miles NNE of Penguin Point and at the NE end of the island.

Cape Wiman, low and rocky, forms the N extremity of the island. Bodman Point, a projection, is located on the W side of the island, 5 miles SW of this cape.

**1.34** Cockburn Island, lying at the NE end of Admiralty Sound, is circular, 1 mile in diameter, and consists of a high plateau. This plateau has steep slopes and is surmounted on its NW side by a peak which is 451m high and pyramidal-shaped. The island is almost entirely ice-free. A bold ridge of rock, which resembles a tower, stands on the NE edge of the plateau. It is conspicuous and appears prominently in the profile of the island. A beach fronts the N extremity of the island. Colonies of penguins and cormorants are reported to inhabit the slopes of the island.

It was reported (1963) that anchorage in this area is not recommended because sustained offshore winds can blow the drift ice into the area and force the ship upon the lee shore. However, anchorage was taken (1963) on the W side of Seymour Island. A vessel obtained anchorage, in a depth of 54m, thick mud and gravel, about 4 miles SW of Bodman Point. It was reported (1963) that anchorage can also be taken, in a depth of 16m, thick mud and gravel, about 4 miles SSW of Bodman Point. These anchorages lying off the W side of the island were reported to appear well-protected from all directions except the N.

It was also reported (1963) that anchorage had been taken, in a depth of 10m, about 4 miles S of Cape Wiman. However, a tidal current, with an estimated rate of 2 knots, was reported to set NE/SW along the SE coast of the island.

According to a preliminary survey, shoals were reported to lie off Cape Wiman. It was also reported that the area between Cockburn Island and Bodman Point appeared to be extensively shoaled.

It is reported that access to the N coast of Seymour Island is doubtful without the use of an icebreaker. Ice conditions around the island are changeable and dependent on wind direction. There is considerable ice movement along the S coast of the island.

Currents generally set ESE and WSW in the vicinity of the island with velocities of up to 1 knot. However, currents of 3 to 4 knots have been observed near the SW extremity of Seymour Island where Picnic Passage separates the island from Snow Hill Island.

**Directions.—**It was reported that passage to Bertodano Bay, on the NW side of Seymour Island, was attempted by rounding Cape Wiman. The cape was passed 3 miles to the N and then an attempt was made to steer SW. Depths shoaled to less than 20m on this course that lead between Cockburn Island and Seymour Island. At this point, the vessel turned back on a NE course until the 180m curve was reached. A W course was then steered, passing Cockburn Island 4 miles to the N. With the left tangent of this island bearing 126˚ and the right tangent of Cape Gordon, on Vega Island, bearing 349˚, the vessels changed course to 177˚. A passage, with considerable depths, was then found by steering S, midway between James Ross Island and Cockburn Island. The bottom shoaled gradually from depths of over 365m lying between Cape Gage, on James Ross Island, and Cockburn Island to 15.8m at the anchorage area located 4 miles SSW of Bodman Point.

**1.35 Erebus and Terror Gulf** (63˚55'S., 56˚40'W.) lies on the SE side of the extremity of the Antarctic Peninsula. It is bordered on the NE side by Joinville Island and on the SW side by the James Ross Island Group. This gulf is noted for heavy ice conditions and variable currents. Many icebergs have been observed streaming into the gulf. A SW current, setting at 4 knots, has been observed at times in the gulf. In the vicinity of the Danger Islands, strong currents and whirlpools have been reported, which render steering difficult and dangerous. The gulf has not been thoroughly surveyed, but depths of 183 to 366m were reported to lie between the NW extremity of Joinville Island and the latitude of 65˚S.

An unexamined patch, with a depth of 32.9m, was reported to lie about 11.5 miles N of Ula Point in position 64˚01'S, 56˚30'W. In the N section of the gulf, a depth of 40.2m was reported (1982) to lie in position 63˚42'S, 55˚48'W.

**1.36** The **Antarctic Sound** (63˚20'S., 56˚45'W.), about 30 miles long and 7 to 12 miles wide, separates the NE end of the Antarctic Peninsula from the Joinville Island group. At the SE end of this sound, the passage narrows and is obstructed by Rosamel Island, Andersson Island, and Jonassen Island. There is a depth of 45.7m in the NW entrance to the sound and depths of over 549m in its central part. A depth of 36.6m lies in the SE entrance to the sound.

The sound is usually blocked by ice. On the few occasions when the sound has been reported to be ice-free, it was observed that heavy drift ice streamed through the narrow passage with the impetus of winds and current.

A vessel reported (1985) that the entire Antarctic Sound, to the N of Rosamel Island, was essentially ice-free and navigable during operations between 27 February and 12 March. However, there were some icebergs and drift ice during that period.

An Argentinean pilot reported that the Antarctic Sound is free of ice when there is a N wind and the N part of the passage is navigable. The S part of the sound is usually not navigable in winter because of ice accumulation.

In the winter of 1969-1970, an Argentinean Army Officer, stationed at a base in Hope Bay, reported that the sound was navigable on a year-round basis, with the N part of the passage being ice-free almost continuously and the S entrance being ice-free in N winds.

According to charted information, adequate mid-channel depths, avoiding the rocks and shoal areas, can be found by steering through the sound on a course of 326° and passing 1 mile off Cape Scrymgeour. The N approach to the sound should be made from the NE, passing 9 miles off D'Urville Island in order to avoid the rocky shoal areas lying NW and W of it.

**Zelee Rocks** (62°57'S., 57°15'W.), lying about 17 miles NW of D'Urville Island, should be approached from the N with care. This group of rocks, both visible and submerged, should be given a berth of at least 1.5 miles.

**1.37** Fridtjof Sound, lying at the SW side of the entrance to the Antarctic Sound, separates Tabarin Peninsula from Andersson Island and Jonassen Island. It leads N for 6 miles, is 2 miles wide, and has a least charted depth of 51.2m lying near the N end. A small islet or nunatak lies on the W side of the sound, 5.5 miles NNE of Cape Green, and caution is advised when navigating in this area.

It was reported (1935) that when the S part of the Antarctic Sound is blocked by heavy ice, safe passage can be found within Fridtjof Sound for vessels with drafts up to 4.2m.

Gamma Hill, standing 5 miles N of Cape Green, rises to an elevation of 300m. Andersson Island lies on the E side of the sound and has a summit, 1,829m high.

Jonasson Island, separated from Andersson Island by Yalour Sound, is 2.5 miles in diameter and circular. Chaucheprat Point, the NW extremity of the island, is populated by a penguin colony at the foot of a scree slope. A cirque is located on the N side of the island which has the appearance of a large quarry.

Andersson Island and Jonasson Island are plateau-shaped, with ice caps falling in gentle slopes to the sea and ending as ice cliffs. Overfalls lie close off the NW extremity of Andersson Island.

Cape Scrymgeour, the E extremity of Andersson Island, is formed by a prominent promontory. It consists of an irregular mass of volcanic tuff rising perpendicularly out of the sea. This mass forms a lofty precipice and extends inland to the high plateau of the island.

Shoals were reported (1963) to lie N of the base of Cape Scrymgeour and close above the parallel of 63°30'S.

Yalour Sound, leading between Andersson Island and Jonassen Island, is 1 mile wide and 4 miles long. Two small rocks lie within this strait and a depth of 7m is reported to lie in the NE entrance.

Rosamel Island, 416m high, lies 3.5 miles E of Cape Scrymgeour. This island rises in precipitous cliffs of volcanic rock to a summit that is flat and mainly ice-free.

From Fridtjof Sound, the coast of the NE end of the Antarctic Peninsula along the W side of the Antarctic Sound trends 3.5 miles NW to a bay. This bay recedes 0.8 mile and has a least depth of 29.3m in its entrance. Brown Bluff, 745m high, stands 1 mile SW of the head of the bay. This mountain is ice-capped, flat-topped, and has a prominent cliff, formed of reddish-brown volcanic rock, on its N face.

**Trepassey Bay** (63°28'S., 56°58'W.), less than 1 mile wide, lies 4 miles N of Brown Bluff; several mountains stand between them. Stone Point is located 3.5 miles N of this bay and marks the SE entrance to Hope Bay.

**1.38** Hope Bay is entered between Stone Point and Sheppard Point, 1.7 miles NW, and extends 2.5 miles SW. A shelf extends 0.2 mile S from the NE part of the bay; its bottom slopes abruptly to depths of over 180m. Depths in the entrance gradually decrease to 24m, about 0.3 mile offshore. Numerous rocky and shoal areas lie close inshore.

Within the bay, depths of 110 to over 180m lie in the middle and depths of 18.2 to 40m lie in the SW part. The W part of the bay has only been partially surveyed and caution is advised in this area. A depth of 4.5m is reported to lie about 180m S of Sheppard Point.

The bay was reported (1963) to be open to shipping on an annual basis. It is estimated that a period of accessibility, from early December to late April, exists under ordinary conditions for ships which are not ice-strengthened.

Along the S side of Hope Bay, foul ground and shoals extend up to 0.3 mile offshore and ice cliffs, 150 to 300m high, back the coast.

Grunden Rock lies 160m offshore, 0.8 mile W of Stone Point. It is 12.5m high and about 90m long. Several other rocks, uncovered and awash, extend up to 0.2 mile N of Grunden Rock.

**Grunden Rock Light** (63°24'S., 56°58'W.) is shown from a metal framework tower and marks the NW part of the island. This light is reported to be unreliable.

An anchorage area, with a depth of 40m, lies 0.3 mile NW of Grunden Rock, off the entrance to Hut Cove. A lighted range, bearing 214°, indicates the approach from seaward to the roadstead. Anchorage areas, with depths of 24 and 110m, are also reported to lie 0.2 mile NW and 0.2 mile W, respectively, of the above anchorage roadstead. Although vessels are protected from SW and WSW winds by anchoring close inshore, it is recommended that large vessels anchor outside the 90m curve.

**Caution.—**In early spring or late summer, care should be taken because the approaches to the anchorage areas may be blocked by bergy bits. This condition is also likely in areas where depths are less than 90m.

A rock, awash, is reported to lie close E of the W anchorage area in position 63°24'50"S, 56°58'46"W.

**1.39** **Hut Cove** (63°24'S., 56°59'W.), lying 1 mile W of Stone Point, is entered between Grunden Rock and Seal Point. Seal Point is located at the seaward end of a peninsula, which forms the W side of the cove, and is fronted by rocks. A landing place is located close SE of this point.

The depths within the cove decrease to 1.8m close to the shore. The cove has not been completely surveyed and appears to be generally foul. Jagged Rocks, a group of rocks, extends for about 200m in a NE/SW direction and lies centered about 180m off the W shore of the cove, 0.3 mile SE of Seal Point. Several rocks, awash, front the NE end of this group.

Esperanza, an Argentinean base, is situated on the peninsula, close S of Seal Point. It consists of a barracks and several huts, and is fronted by a small pier. A tower, situated near an observation spot, stands in the vicinity of the S end of the peninsula.

**Eagle Cove** (63°24'S., 57°00'W.), entered on the W side of Seal Point, has a least depth of 6.4m lying in its E side. Rocky

Table of Contents

cliffs line the coast in this vicinity and a former British base was situated at the top of the rocky area near the piedmont.

At the head of Hope Bay, Depot Glacier, a large valley-glacier with a lateral moraine, terminates at the water's edge in a high, vertical cliff. This glacier is fed by the highland ice sheet which extends for a considerable distance to the S.

**1.40** Mount Flora, standing 0.7 mile SW of the head of Hope Bay, is 520m high and has a well-defined cirque facing NE.

Whitten Peak, standing 0.5 mile W of the head of Hope Bay, is 445m high and pyramidal shaped.

Mount Taylor, 998m high, and Twin Peaks, 752m high, stand W of Hope Bay and are both prominent.

On the W side, Arena Glacier flows NE from Mount Taylor and enters the bay 2 miles SW of Sheppard Point.

Sheppard Point, the NW entrance point of the bay, is surmounted by Sheppard Nunatak, which is conical and 59m high. Anderson Nunatak, 183m high, stands 1 mile W of this point and rises above the coastal ice cliffs of the N shore.

The piedmont area in this vicinity is subject to sudden high winds. It was reported that down-slope winds from the SW have been recorded with velocities of up to 150 knots.

At Hope Bay, the MHWS is 2.7m and the MLW is -0.5m. It was reported (1963) that the tidal range is 3.7m. During a 23-hour period, the currents were observed to be weak and variable.

Cape Dubouzet, located 7 miles N of Hope Bay, forms the NE extremity of the Antarctic Peninsula. It also forms the NW entrance point of Antarctic Sound.

Mount Bransfield is a prominent, ice-covered cone from which two rocky spurs lead NE and ENE to the coast. A group of moraines lies between the two spurs and at the foot of a glacier which descends directly from the cone.

Koerner Rock, lying 3.5 miles SSW of Cape Dubouzet, is a small but conspicuous outcrop.

**1.41** The Joinville Island group lies at the E extremity of Antarctic Sound. The largest islands are Dundee Island, Joinville Island, Bransfield Island, and D'Urville Island.

**Dundee Island** (63˚30'S., 55˚55'W.) is ice-covered and lies at the S end of the group. It is roughly circular, 14 miles long, and has a maximum width of 11 miles. The NE part of this island is low and smooth while a mountain of volcanic rock, covered by an ice cap, rises to an elevation of 590m in the S part. Cape Purvis forms the S extremity of the island and consists of a high bluff. Welchness, located at the W extremity of the island, consists of a low, gravel spit which projects 1 mile W from a line of morainic, ice-free hillocks. A light is reported to be shown from a structure, 9m high, standing in the vicinity of this spit.

A shoal patch, with a depth of 1.8m, was reported (1975) to lie about 3 miles SW of Welchness.

At the NW end of the island, a low and flat rocky beach fronts the ice face. The face is 12m high and forms the terminus of the ice cap which descends in a gentle slope from the higher interior. Several patches of exposed rock, brownish-green in color, can be observed where the snow mantle is thin.

Ski Beacon, 5.5m high, stands 1.3 miles NE of Welchness. This beacon was reported (1982) to be destroyed.

A radiobeacon is reported to be situated 1.5 miles E of Welchness, in the vicinity of Petrel, an Argentinean base, which consists of several huts. Petrel Cove lies close NE of the base. Anchorage can be taken, in a depth of 62m, about 0.7 mile NNW of the base. In the approach to this anchorage, the depths shoal rapidly from about 550 to 90m and then gradually level off. The maximum tidal range is 2.4m. It was reported (1963) that during a 27-hour period, a current in the anchorage area set SSW with an average velocity of 0.3 knot and a maximum velocity of 0.5 knot. Care should be taken as this anchorage affords little protection against NE gales due to the low elevations of Dundee Island and Joinville Island. The estimated access to this area is from the middle of December until the end of March.

The N side of the island, fronting Active Sound, consists mainly of ice cliffs but in some places there are beaches and exposed rock. From the W extremity of the island, a continuous ice cliff fronts the coast. Two rocks, known as Eden Rocks, lie off the E extremity of the island. Puget Rock, fronted by submerged rocks, lies close E of Eden Rocks, 2 miles E of the island.

**1.42** **Paulet Island** (63˚35'S., 55˚47'W.), lying 3 miles SE of Dundee Island, is circular and 1 mile in diameter. This island is ice-free, with steep rocky and scree slopes rising to its summit, which is 353m high. It is composed of volcanic rock and has the appearance of a crater. A cone, fronted by a gravel beach, stands on the NE side of the island. It is backed by a lake which is nearly at sea-level and fills a cirque cutting into the island. A large penguin colony and a small cormorant colony are situated near this lake. A beacon, 2m high, stands on the island at an elevation of 100m.

Currents, with rates of 2 to 3 knots, have been recorded to the W of Paulet Island and S of Dundee Island.

Active Sound leads ENE from the Antarctic Sound and joins the Firth of Tay, which separates Joinville Island and Dundee Island. This sound has an average width of 2 miles and its shores are fronted by ice cliffs. A reef extends about halfway across the sound from the NW extremity of Dundee Island. A rock lies in the center of the sound at the E end where it joins Gibson Bay and the Firth of Tay. This sound was reported to be ice-locked.

The Firth of Tay, 12 miles long and 6 miles wide, leads in a NW/SE direction from the NE end of Active Sound. Active Reef extends for about 1 mile into the firth from the NE side of Dundee Island. A depth of 36m lies close N of Active Reef in position 63˚22'S, 55˚49'W.

**1.43** **Joinville Island** (63˚15'S., 55˚45'W.) is the largest of the group, being 40 miles long and 12 miles wide. This island is completely ice-capped and rises to Mount Tholus, the summit, which is 1112m high. Smooth glacial slopes extend from Mount Tholus and are broken by a series of undulating hills. Mount Percy, 765m high, stands 6.5 miles E of Mount Tholus. The S coast of the island leads along Active Sound and the Firth of Tay.

**D'Urville Monument** (63˚25'S., 56˚18'W.), standing at the SW end of the island, rises abruptly and is 573m high. Suspiros Bay indents the coast of the island, 9.5 miles NW of the monument, and a rock, awash, lies within it. Nodule Nunatak

stands inland from the bay and is prominent, isolated, and 440m high.

Gibson Bay, lying at the junction of Active Sound and Firth of Tay, indents the S side of Joinville Island and recedes for 1.5 miles. The interior slopes above this bay are irregular and crevassed. The shore of the bay is formed by ice cliffs, up to 18m high. Near the head of the bay, an island is reported to lie about 1 mile offshore.

The peninsula located to the E of Gibson Bay is surmounted by Mount Alexander, which consists of several summits and rises to an elevation of 595m. Haddon Bay, lying E of this peninsula, extends 2.5 miles N but has not been surveyed.

**Tay Head** (63˚21'S., 55˚34'W.) is located 6 miles E of Mount Alexander, at the end of a narrow peninsula, and is fronted by several small islets and rocks. Moody Point is located 13 miles E of Tay Head. The coast between is fringed by numerous rocks and small islands. Two rocks, known as Williwaw Rocks, lie about 1 mile SE of Moody Point. Scud Rock and Brash Island, both isolated, lie 4 miles S and 6 miles SE, respectively, of Moody Point. Brash ice is reported to be frequently found in the vicinity of Brash Island.

The **Danger Islands** (63˚26'S., 54˚41'W.) is a chain, consisting of seven islands, which trends in a NE/SW direction within 15 miles ESE of Moody Point.

**Darwin Island** (63˚26'S., 54˚46'W.), the largest in the chain, is 1 mile long and 172m high. Dixey Rock, the smallest island of the chain, is an isolated stack, 35m high. Other islands in the chain include Brash Island, Earle Island, and Beagle Island. A beacon, 2m high, is reported to stand on Heroina Island, the NE island of the chain. The area in the vicinity of these islands is difficult to access due to the large number of tabular icebergs found aground in the shallow waters.

The coast extending for 5 miles SW of Moody Point is formed by a single glacier which descends from the interior heights to a cliffed face, 30m high, at the water's edge.

Fitzroy Point is located 10 miles N of Moody Point. Depths of 29 to 102m lie within 1.8 miles of this stretch of the coast. Foul ground, with several rocks and islets, fronts Fitzroy Point and extends up to 2.5 miles SE and 1 mile offshore.

Fitzroy Point, which forms the NE extremity of Joinville Island, is low. Fliess Bay, lying close W of the point, and Ambush Bay, lying 5 miles further W, have not been surveyed. A dangerous rock is reported to lie 0.3 mile offshore between these two bays.

**1.44** Etna Island, lying 5 miles NNW of Fitzroy Point, is 0.3 mile long and 0.3 mile wide. This island is 49m high and can be identified by its summit, which is cone-shaped and resembles a volcano. The N end of the island descends to the sea in a long slope while the S end abruptly drops from the summit to a low plateau. A horizontal band of stones, which is ice-free and appears black from a distance, aids in distinguishing this island. Several reefs, above-water, have been reported to extend up to 0.5 mile N and W from the island and it should be given a berth of at least 1 mile.

King Point forms the NW entrance point of Ambush Bay. Patella Island lies 2 miles NW of this point and is small, about 75m high, and prominent. A submerged rock is reported to lie about 0.5 mile SSE of the island.

Several islets and rocks lie off the coast between King Point and Rockpepper Bay and extend up to 1.5 miles offshore. Rockpepper Bay is entered close E of Boreal Point and recedes to the S. The E side of the bay is fronted by numerous small islets and rocks.

Papua Island, circular and about 0.3 mile in diameter, lies 3 miles WNW of Boreal Point. A large number of penguins have been sighted on this island.

The NW shore of Joinville Island fronts Larsen Channel.

**Saxum Nunatak** (63˚10'S., 56˚02'W.) is 457m high and isolated. When viewed from the S, this nunatak appears dome-shaped while from the N, it appears as a conspicuous, rocky wall.

A small islet lies at the NE end of Larsen Channel, N of Saxum Nunatak and 0.5 mile off the N shore of Joinville Island.

**Madder Cliffs** (63˚18'S., 56˚29'W.), formed of reddish rock, rise steeply from the sea and attain a height of 305m.

Suspiros Bay, lying close SW of Madder Cliffs, indents the coast of Joinville Island and recedes E for 1.5 miles. An island is reported to lie 0.2 mile off the S side of this bay. Another island, 0.4 mile long, is reported to lie 0.5 mile SW of the N entrance point. Anchorage may be obtained in the S part of the bay. It is reported that anchorage may also be taken between the two islands over a bottom of sand, mud, and stones.

It was reported (1963) that shoals were observed to lie to the W of Suspiros Bay, N of Cape Kinnes.

Balaena Valley, located E of Suspiros Bay, is ice-filled and gently slopes toward the bay.

Cape Kinnes, the W extremity of Joinville Island, is located 3.5 miles S of Suspiros Bay and fronts the Antarctic Sound.

**1.45** Larsen Channel, 10 miles long and 1 to 2.5 miles wide, lies in a NE/SW direction and separates Joinville Island from D'Urville Island. This channel has never been reported to be ice-free and has a least reported depth of 88m. Rocks and islets extend up to 1.3 miles offshore along both sides of the E entrance. Two islets lie close off the N shore of Joinville Island, at the NE end of the channel. Overfalls were reported (1963) to exist about 0.5 mile NW of the W islet. A shoal, with a depth of 9.1m, lies about 2 miles off Joinville Island, 2 miles NW of Boreal Point.

**D'Urville Island** (63˚05'S., 56˚20'W.), the N of the Joinville Island group, is 17 miles long and 305m high. It has a smooth and unbroken ice cap which terminates at the coast in high cliffs. Several islets and rocks extend up to 7 miles seaward of this island.

Turnbull Point, the W extremity of the island, is exposed, rocky, and fronted by numerous rocks and islets. Hope Island, the largest of a group of islands, lies centered about 6 miles W of this point. This island is 31m high and a rock lies about 3 miles SSW of it. Care should be taken when navigating in this area.

The coast trends 12 miles SE from Turnbull Point to the S extremity of D'Urville Island. Burden Passage separates the SW side of the island from Bransfield Island. This channel is 2.5 miles wide and extends from the Antarctic Sound, at the NW end, to Larsen Channel, at the SE end. It is unsurveyed, but icebergs indicate the presence of considerable depths within this passage.

The coast of D'Urville Island forms the side of Larsen Channel and several rocks and islets extend up to 0.5 mile offshore. Medley Rocks, a group of reefs, front the NE end of the island and extend up to 2.5 miles offshore. Another group of islets, rocks, and reefs lies 2 miles S of Medley Rocks and extends up to 1.5 miles E from the shore.

**1.46** The **Wideopen Islands** (63˚00'S., 55˚49'W.), located 4.5 miles E of Medley Rocks, consists of two isolated rocks lying on the N side of the E approach to Larsen Channel.

Two other rocks and a shoal patch, with a depth of 18.5m, lie 2.5 miles E and 9 miles E, respectively, of the Wideopen Islands.

An islet, 11m high, lies 11.5 miles NE of the Wideopen Islands. A spit, with a depth of 20.1m, and a reef, covered to an unknown extent, lie 9.5 miles NNE and about 7 miles NNW, respectively, of the Wideopen Islands.

An islet, 0.3 mile long, lies 0.8 mile N of the coast of D'Urville Island, 5.5 miles W of Medley Rocks.

From the NE end of D'Urville Island, the coast trends W for 12 miles to Cape Juncal, the NW extremity of the island. Foul ground extends up to 1 mile W and 2 miles N of this cape. Southtrap Rock, located about 4 miles W of the cape, and Northtrap Rocks, located about 5.5 miles NW of the cape, lie near the approach to the Antarctic Sound and caution is advised when transiting in this area.

Montrol Rock lies 1 mile off the coast, 3 miles E of Cape Juncal. It is the largest of a group of above and below-water rocks which lie off the N coast of D'Urville Island. Harris Rock and a below-water rock lie 1.5 miles N and about 4 miles NNE, respectively, of Montrol Rock.

**1.47** **Bransfield Island** (63˚11'S., 56˚36'W.), low and ice-covered, lies with its NE extremity located 3 miles SW of D'Urville Island. This island is 4.5 miles long, 3 miles wide, and is separated from D'Urville Island by Burden Passage. Between this island and Cape Dubouzet, on the mainland, the Antarctic Sound is about 9 miles wide.

The W and N coasts of the island are generally foul, with below-water rocks extending up to about 1 mile offshore in places. Knobble Head, a conspicuous rock exposure, forms the E extremity of the island. Several islets lie within 1.5 miles N of this point. Shoal patches, each with a depth of 20m, lie about 2 miles SE and 2 miles SSE, respectively, of this point. The northernmost of these patches is position approximate.

Archibald Point, exposed and rocky, is located at the SW side of the island. Shoals, with depths of 0.9 and 14.6m, lie 1.5 miles W and 3.5 miles SW, respectively, of this point.

A beach, on which a penguin colony is situated, fronts the NE side of the island.

Table of Contents