

COAST D, SECTOR VIII

Preliminary Report

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Geographical Bureau

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Coast D Sector VIII

Sector VIII comprises the south west coast of Foxe Peninsula from Lloyd Point, $78^{\circ} 16' W$, $64^{\circ} 23' N.$, up to and including Bioral River $78^{\circ} 21' W$, $64^{\circ} 31' N.$ The sector includes the Trinity Islands.

Maps

- (1) National Topographic Series 8 miles to 1 inch 36 SW & SE. 1947.
- (2) Canadian Hydrographic Chart of Hudson Bay and Strait (1948)
No. 5000.
- (3) World Aeronautical Chart, U.S. Aeronautical Chart Service;
Foxe Peninsula 1: 1,000,000 No. 83, 1948.
- (4) J.D. Soper's map of Foxe Peninsula, 5 miles to 1 inch 1928-9.
- (5) L. T. Burwash's Map of S. W. Corner of Baffin Is. July 1924.

Photographs

Air Survey Trimetrigon: 20,000 feet.

T 208 R - 35 to 39 - July 2, 1948, 1330 to 1332 hours E.S.T.

T 208 C - 35 to 39 - July 2, 1948, 1330 to 1332 hours E.S.T.

Shore

To the north west of Lloyd Point a deep indentation between parallel ridges forms inlet 'a'. The sides of the ridges form the cliff coasts. The sea floor shelves rapidly at the head of the inlet to a wide boulder strewn foreshore. Here a stream enters the inlet from a low flat-floored valley extending inland between the ridges. The ridge which lies to the north of inlet 'a' reaches the sea as a promontory. The steep sides of this ridge make a cliff coast from the west point of the promontory to the head of inlet 'b', a distance of two miles. A small low islet connected to the mainland by a sand bar, which may not be covered even at high tide, forms the south western side of inlet 'b'. There is a wide foreshore on both sides of the sand bar. It extends to the north east across the head of inlet 'b', narrows in front of a rounded headland and widens again in inlet 'c'. The cliff coast, seen west of inlet 'b', continues inland as a steep scarp slope

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marking the edge of the series of ridges leading to Lloyd Point. To the north of this scarp slope the land is lower and more open. This change in elevation is reflected in the coastal type, which, though it is rocky in places, has not the preponderance of steep cliffs found to the south west. A low rocky peninsula intervenes between inlets 'c' and 'd'. In front of this rocky coast are small beaches littered with boulders. Inlet 'd' is broad and not very long, it is devoid of water at low tide exposing a gravel foreshore with scattered boulders. A small stream enters the inlet from the low ground inland. From inlet 'd' the coast extends for four miles in a northwesterly direction. It is low and rocky with a very narrow beach, except at three small coves 'a', 'b' and 'c'. Cove 'a' is very shallow and dries out at low tide, the foreshore appears to be a mixture of sand and gravel. Cove 'b' is enclosed by two small islets on shoals. Cove 'c' is entered by a small stream and is protected on the west by a very small stream and is protected on the west by a very small hook-shaped promontory. (Air Photo T 208R - 37). From cove 'c' to the mouth of Bioral River the coastline turns north for two miles. The low rocky coast with a narrow beach continues as far as inlet 'e'. At this point is the coastal outcrop of presumably white crystalline limestone which can be traced inland for at least ten miles in a southeasterly direction and also west into White Belt Island. The rock appears to be rather less resistant to weathering than the gneiss and granites and so marks a lower area. A stream emanating from a lake in the limestone enters inlet 'c', which is long, narrow and shallow. A quarter of a mile to the north of inlet 'e' is inlet 'f'. This inlet is of the same type as inlet 'e' but is slightly wider, it dries out at low tide and blocks of ice are left stranded on the foreshore. An irregular headland, ending in two small islets joined by a sand bar, lies between inlet 'f' and the mouth of Bioral River. There are several small coves on the promontory. The estuary of Bioral River is about a quarter of a mile across and is very shallow. The two mouths of the river join

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a short distance inland where they flow from a ribbon lake. This lake is the last one of a series which stretch inland for over twenty miles. The north side of the estuary has a low rocky coast behind a very narrow beach.

(Air Photos T 208 R - 37, 39; T 208 C - 38).

Islands

In Lonebutte bay is the single low rocky island A. It appears to be smooth with a narrow rocky beach round it (Air Photo T 208-37).

The Trinity Islands are a group of six islands which lie from one to three miles west of Lloyd Point. All the islands are of the same type. They are low and rocky with a few scattered terns on them. Islands B, C and D are larger and slightly higher than E, F and G but it is doubtful if they exceed 50 feet in height. No beach can be seen on any of the islands though there are shoals off the west point of island D, between island D and E, and around island F. (Air Photo T 208 R - 37).

Half a mile west of the mouth of Bioral River lies White Band Island. It is a mile and a half long and nearly a mile wide. The northern half of the island is made of the same rock, presumed to be white crystalline limestone, found on the mainland round inlets 'e' and 'f'. The southern half of the island is of the granites and gneiss which make up most of Foxe Peninsula. Steep cliffs form the north coast of the island, they have an average height of about 100 feet but rise to 150 feet east of inlet 'h'. Apart from the small beach in inlet 'h' there is none along the whole north coast. The cliff line is broken where an outlet for an inland lake exists but the small stream falls rapidly to the sea without any coastal indentation. On the east coast of the island the low rocky coast is broken by inlet 'i' which is very shallow and entered by two small streams. A small headland surrounded by a shoal stands at the south east tip of the island. The south coast of the island is deeply indented by two large bays 'a' and 'b'. Bay 'b' is very shallow and is filled with a jumble of shoals and small islands. A rock bench appears round the head of the bay. Islands

These appear to have a columnar or rectilinear structure.

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L, M, N are bare rocks rising from shoals which are connected to White Band Island at low tide. Island K is another rock on an elongated shoal at the mouth of the bay. Between bays 'b' and 'a' is a low rocky headland. Island J lies on a shoal off this headland. Bay 'a' appears to be quite deep though there are some shoals near the coast. A stream enters its north east corner from a low valley, which breaks the low cliff walls. The west side of the bay is formed by island H which is a large bare rock mass with a rocky cliff coast. Island H is joined to White Band island by a sand bar at low tide. On the west coast of White Band Island is another outcrop of the presumed white crystalline limestone. Inlet 'g' makes a long indentation in it. It is very shallow and leads to a lake in the interior of the island. Island I is a rock on a shoal lying off the southwest point of White Band Island. (Air Photo T 208 C - 39).

Hinterland.

The most notable feature of the hinterland of this coast is the change in topography north of the series of ridges which terminate in Lloyd Point. The area north of the ridge is lower and flatter, the lakes are more rounded and indeterminate in shape instead of ribbon-like. "The coastal hills are relatively low, with elevations of about 25 to 90 feet" (Sailing Direction for Northern Canada U.S.H.O. pub. No. 77 p. 420). An outcrop of what is presumed to be white crystalline limestone about half a mile wide can be seen extending inland for at least ten miles from inlets 'e' and 'f'. The outcrop trends in a southeast-north west direction in contrast to the north east southwest trend of the Lloyd point. The lower area fills the v-shaped space between these two structural trends. (Air Photos T 208R - 37, 39; C - 39).

There is no definite information about vegetation but in the lower area there is probably the same sort of peaty accumulation that Soper reports in Schooner Harbour four miles to the south west. "Vegetation on either the mainland or on the adjoining islands is not abundant, but grasses, mosses and a number of hardy wild flowers are in evidence" (Burwash in Millward p. 61).

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"on the mainland the animal and bird life (is) not especially prolific, the mammals being represented almost entirely by white foxes and lemmings, while the bird life is confined to a few varieties of wild duck, a few Canada geese, ptarmigan, and several varieties of smaller birds. On the outlying coastal islands eider ducks, several varieties of gull, and sea pigeons are plentiful. Some of the rivers and lakes produce a variety of salmon while the salt water is well stocked with square flipper and jar seal with a lesser number of harp seals in evidence. Walrus are plentiful in certain areas and both narwhal and white whale are occasionally seen." (Burwash in Millward 1929 p. 60).

Rivers

There are no large rivers in this sector but there are two small ones, Bioral River and the one that enters inlet 'c'. Bioral river connects a series of lakes to the sea. At the coast it has two main channels and many smaller diffusions and would not appear to be navigable even by small boats. ~~The numerous channels~~ *the river flows through a wash moraine boulder filled valley of quite steep slope* lying in a flat area suggest that there may be extensive flooding in this river at the time of break-up. The river which enters inlet 'c' is little more than a large stream. It does not cut a definite channel through the foreshore of the inlet but has a flood plain over a quarter of a mile broad extending inland for over two miles to a lake. This again suggests extensive flooding at time of break-up. The river would appear to be navigable for canoes or small boats for about a mile upstream. Small streams enter inlets 'a', 'b', 'd', 'e' and 'f' and also coves 'a' and 'c'. The drainage on White Band Island is restricted to small streams entering the inlets and bays. (Air Photos T 208 R - 37, 39; T 208 C - 39).

Shelter

No good harbour is reported for this sector but small vessels could probably find shelter in inlet 'a' and in bay 'a', on White Band Island. Both these harbours are shallow near the shore and shoals are to be expected, so that sounding ahead would be assential when entering. Small boats could be beached in the inlets and coves of the sector and in the estuary of Bioral River. The beaches appear to be littered with boulders and stranded ice floes so that careful selection of the exact

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landing place would be required. (Air Photos T 208 R-37, 39; T 208 C -39).

Aircraft Landing Possibilities.

The only lake in the sector which is large enough for aircraft landings lies six miles inland due east of the mouth of Bioral River, and ten miles north of Schooner Harbour. This lake however was still full of ice on July 2, 1948. Sea landings could be made in Lonebutte Bay and in the straits between White Band Island and the mainland. The aircraft could probably be beached safely in inlet 'd' or in the mouth of Bioral River. Winter landings on skis may be possible on the sea ice. A possible site suitable for airstrip construction may be found on the flatter ground about a mile north of the head of inlet 'd'.

Approaches

There is no observed information about the approaches to this sector but the sea floor is believed to shelf regularly to the coast from depths exceeding 60 fathoms in the centre of Foxe Channel (unpublished Chart of Hudson Bay and Strait, - K. Morley, Geographical Bureau). Air Photos show many small islands shoals and reefs round the Trinity Islands and White Band islands, so that sounding ahead would be required when approaching this coast.

Tides

There is no observed information about the tides of this sector but they should not vary much from those of Schooner Harbour, which lies ten miles to the southwest. "The mean high water interval at Schooner Harbour is 10 hours 33 minutes. The mean tidal range is 14.2 feet, and the spring range is 18.9 feet (Sailing Directions for Northern Canada U.S.H.O. Pub. No. 77 p. 419). Strong tidal currents are to be expected especially round the Trinity Islands and White Band Island (Putnam 1928 p. 12).

Landmarks

In good visibility there is no shortage of natural landmarks in this sector but on August 2, 1927 "occasional glimpses of the mainland (north of the Trinity Islands) through fog and over ice, gave no clue of exact locality" (Putnam 1928 p. 12).

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The high ridges of Lloyd Point, surrounding inlet 'a' should make it easy to identify. The north coast of White Band island rises to over 150 feet which is well above to the general level of the coast. The outcrop of presumed white crystalline limestone in the vicinity of inlets 'e' and 'f' ^{is} ~~should~~ be noticeable. The remainder of the coast, ~~including the mouth of Bioral river is not easily distinguished~~ and would require good visibility and careful examination of the natural features. The Trinity Islands are reported to have been seen from Foxe Channel by Parry, Burwash and Putnam. There are no artificial cairns or beacons in this sector.

obs.

Could never see from 4 miles out.

Ice and Snow Conditions

Break up. Along the shores of Hudson Strait the ice forms a broad coastal belt which breaks up from west to east in June (Arctic Pilot Vol. III p. 53). "In May and the first part of June the pack was closed the whole time (at Schooner Harbour). The 22nd of June the pack being slack and there was some open water" (Spicer in Wakeham 1898 p. 59). "Foxe Channel ice probably consists not only of ice formed in the channel and in Foxe Basin but also of old floes from the Gulf of Boothia, which have entered the northwestern part of the basin through Fury and Hecla Strait. This ice can generally be distinguished by its soiled appearance, and it is usually hummocky". (U.S.H.O. Pub. No. 77 p. 419). In contrast to this opinion "Foxe channel ice is chiefly formed locally, but some floes are from the Gulf of Boothia via Fury and Hecla Strait. The local ice can be distinguished by its discoloured appearance. Ice from the Gulf of Boothia is more formidable and is not discoloured." (Arctic Pilot Vol. III p. 53). In support of this view:- "The ice of Foxe Basin is heavy and generally much like that found in Kane Basin. But it seems older and is amazingly dirty, covered with mud pebbles and kelp" (Capt. Bartlett in Putnam 1928 p. 22). Further "The Foxe Channel ice is heavier, rafted more, and has more sand on it than the (Hudson) bay ice, some of it is from 10 to 15 feet out of water; is in moderate pans though earlier in the season is larger... I do not think much ice comes in to Fox Channel from Fury and Hecla Straits. "(Spicer in Wakeham 1898 pp. 59, 60). The majority of opinion suggests that it is the Foxe Basin ice which is discoloured since most of it remains in the anticlockwise circulation of the basin for several seasons, only occasionally

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escaping through Foxe Channel. The new ice formed locally in the Channel would be clean, as would that coming directly with the southward current from Fury and Hecla Strait.

Some ice remained in some of small lakes of the sector on July 2, 1948 and one large lake was completely frozen, but all the rivers and streams were ice free. A certain amount of ice is left stranded on the beaches of the coves by the falling tides. (Air Photos T 208 R-37, - 39, T 208 C - 39).

Freeze-up

Towards the end of October ice begins to form in the small bays, from west to east, gradually forming a broad coastal belt (Arctic Pilot Vol. III p. 53). Captain Spicer wintered at Schooner Harbour, ten miles to the south west, in 1877 and 1878. "We froze in about 20th October.... The 10th of November the Foxe Channel pack was down across the front as far out as you could see, and continued all winter setting to the south and east, at times northeast; had open water along the shore... The strait (Hudson) never freezes over solid in winter, the ice is always moving — the same among the islands.... Ice will freeze on an average about four feet in a winter, I have seen it five feet in a still place. When inside ice is found thicker than this, it is from rafting." (Spicer in Wakeham 1898 pp. 59-61).

Winter Travel

Good sledging conditions are reported on the sea ice during the winter and early spring (Burwash and Soper 1930). On the other hand "An attempt was made to explore the unknown coast line of Foxe Channel (in the winter of 1914-15); but an inadequate outfit and impassible rough ice made the project impossible and at the Trinity islands, 35 miles west of Cape Dorset we turned back (R.J. Flaherty, Geog. Rev. 1918 p. 442). Inland winter travel by dog team and sledge should be easier in this sector as the terrain is flatter and less rugged than farther southwest. "As the country is practically gameless in winter, elaborate precautions are required in estimating the necessary provisions, fuel and dog feed" (Soper 1930 p. 412).

New Names

The following new names are suggested and have been used for Sector VIII.

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White Band Island - The island has a band of white rock across it.

Bioral River - The river has two mouths.

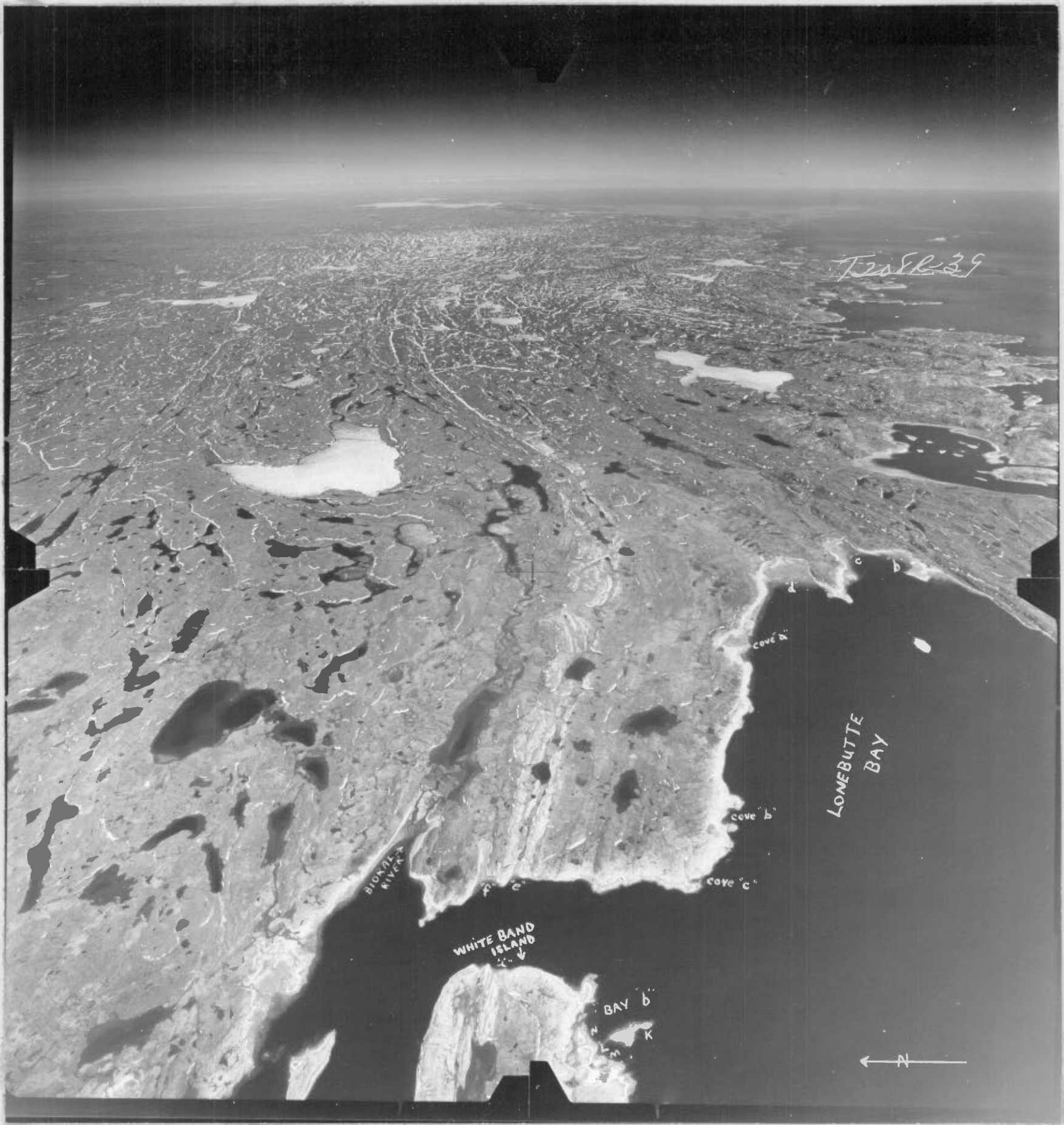
Remarks

Baffin in 1613 and Foxe in 1630 first sailed past this coast but did not map it. Parry believed he identified the Trinity Islands on Aug 2, 1821 and he made a land fall just north of them on Sept. 18, 1823.

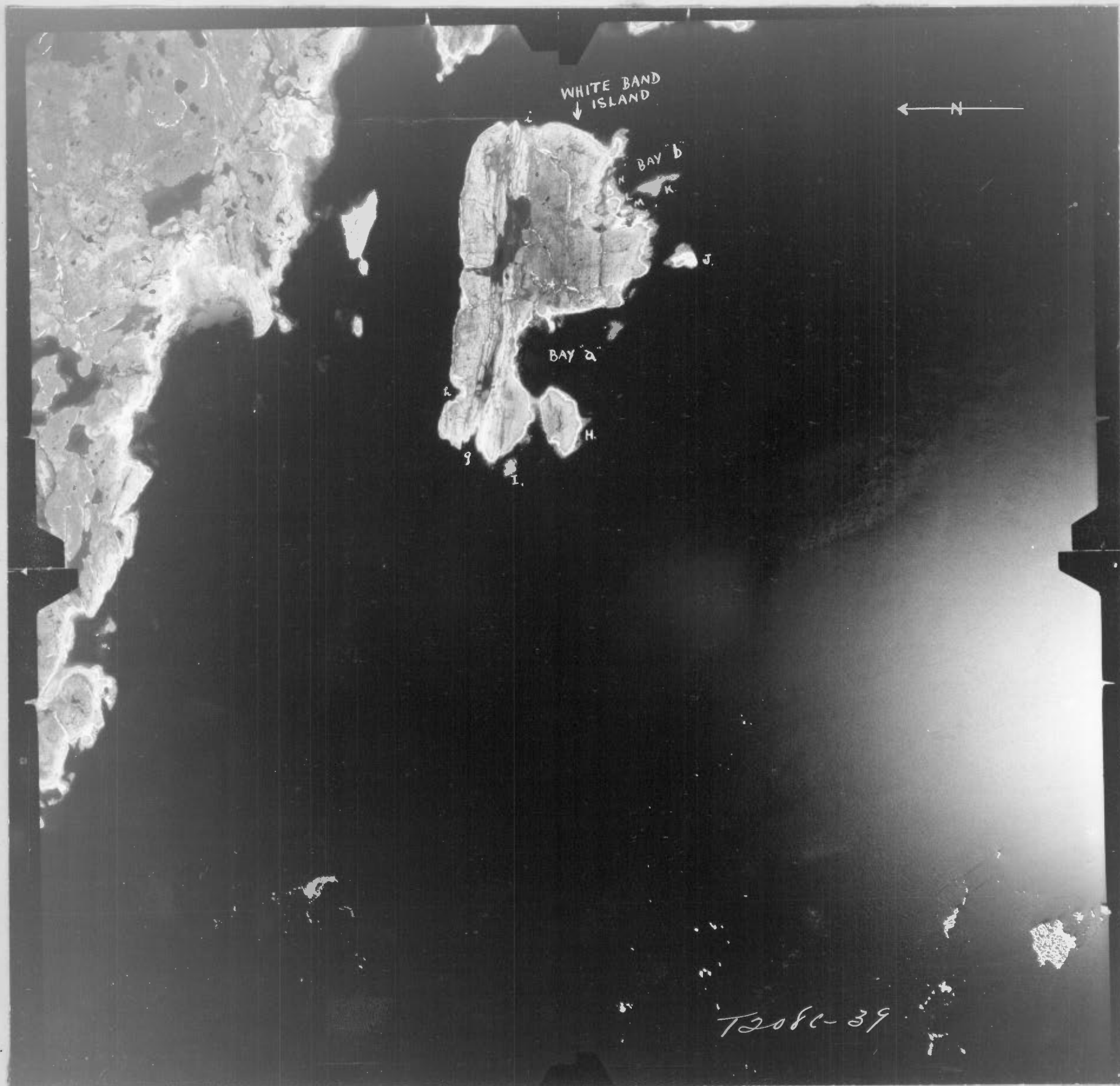
D.B. MacMillan is reported to have sailed along the west Foxe land coast in the "Bowdoin", and to have wintered at Bowdoin Harbour near the Trinity Islands in 1921 (Putnam 1928 p. 13).

L.T. Burwash made a rapid reconnaissance survey from a whale boat of the whole coast from Cape Dorset to Cape Queen between June 28 and Aug. 1, 1923. His compass traverse established the position of Lloyd Point and the promontory on the south side of the mouth of Bioral river. These are marked as stations 9 A and 10 on his map. G. P. Putnam passed this coast on August 2, 1927. "Much of the run was made in fog, some of it in and around ice, and all of it without adequate sight of the sun... Tide and currents were strong, and beyond the Trinity Islands the occasional glimpses of the mainland, through fog and over ice, gave no clue of exact locality." (Putnam 1928 p. 12).

The coast was first mapped by J.D. Soper in Aug. 1928 on a scale of 5 miles to the inch. The coastal survey was made by means of a large freighter canoe with an outboard motor. Measurements were made with a Negus taffrail log. Bearings were taken with a four inch prismatic compass or a four inch surveying compass with Jacob staff. (Soper 1930 p. 424). Several inaccuracies of his map are revealed in comparison with aerial photos.



T 208 R - 39 White Band Island; islands K, L, M, N; Lonebutte Bay; Bay 'b'; Bioral River; inlets 'b', 'c', 'd', 'e'; 'f' and 'i'; coves 'a', 'b' and 'c'.
Looking east from 20,000 on July 2, 1948 at about 1332 E.S.T.



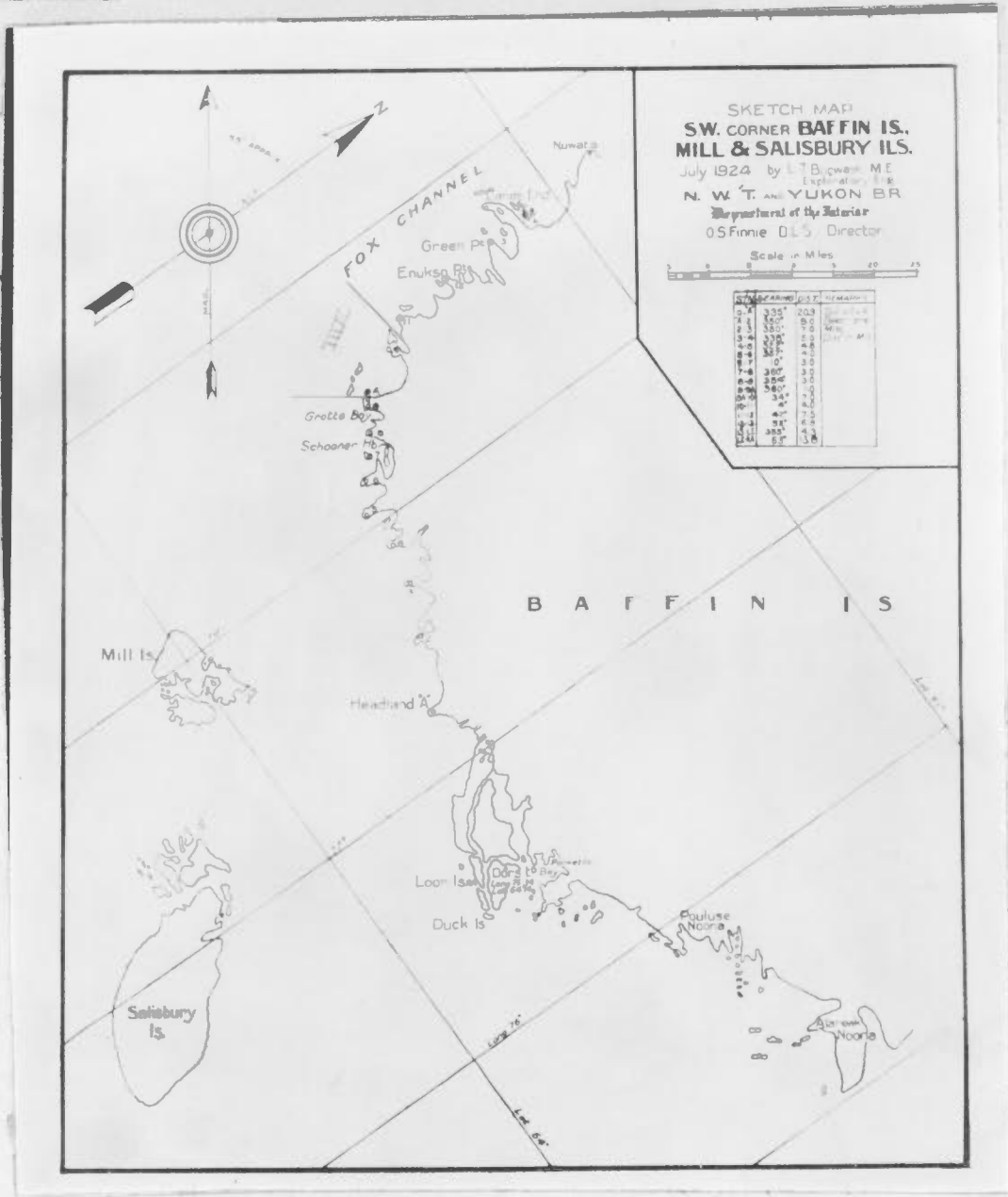
T 208 C - 39

White Band Island; islands H, I, J, K, L, M, N; bays 'a' and 'b'; inlets 'g', 'h' and 'i'; Looking east from 20,000' on July 2, 1948 at about 1332 hours E.S.T.



T 208 R - 37

Schooner Harbour, Lloyd Point, Lonebutte Bay; inlets 'a', 'b', 'c', 'd'; cove 'a'; Trinity Isles named B, C, D, E, F, G. Looking east from 20,000' July 2, 1948 at about 1332 hours E.S.T.



L. T. Burwash's Map of South West corner of Baffin Island and Salisbury Island.



Sheets 36 S. W. and 36 S. E. 1947, 8 miles to 1 inch.
 Air Survey Trimetregon Flight Lines and Photo Numbers.

Limits of Sector.

