

4238

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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
_____, Director	
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State: SE. Alaska	
DESCRIPTIVE REPORT	
Topographic <del>Hydrographic</del>	Sheet No. 4238
LOCALITY	
North from Cross Sound	
Cape Spencer to <del>Dixon Harbor</del> inclusive	
Astrolabe Pt.	
1926	
CHIEF OF PARTY	
A.M. Sobieralski	

GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET NO.

REGISTER NO.

Work completed under orders dated Feb. 12, 1926 to A. M.  
Sobieralski, Commanding Str. SURVEYOR.

This sheet includes the rocks and islands around Cape Spencer, and extends to Astrolabe Point, including Graves Harbor, Torch Bay (proposed name), and Dixon Harbor.

GENERAL DESCRIPTION

The shore line is steep and rocky and very irregular, except in Dick's Arm and the heads of the principal Bays. Here, the beach is narrow, and consists of decayed rock, with the exception of Dixon Harbor, which has considerable sand-beach near its head. The area is wooded with spruce, fir, and small deciduous trees to the 1000 foot contour; this growth thinning out between the 1000 foot and the 1500 foot contours. Above the 1500-foot contour, the growth consists of stunted bushes and coarse grass.

DETAILED DESCRIPTION

Cape Spencer, the northwest point at the entrance to Cross Sound, is conspicuous. Its extremity is formed by a number of islets, some having scattering trees, which appear as a low point, from which the Cape rises by an upward sweep to the summit of the mountains back of the cape. There are many rocks awash at various stages of the tide, while others rise to a height of from 10 to 60 feet. A few of the larger islands are wooded, and a few others are grass-topped, but the majority are bare, and of a brownish-black color. Just east of the entrance to Dick's Arm, there is a clear area, in which some protection can be found for small boats. The lighthouse service maintained a mooring buoy in this area, during the summer of 1926.

Dick's Arm is a narrow bay, 2-1/4 miles (statute) long, 120 meters wide at its narrowest point, widening to 500 meters at its head. Zip is a sharp knob, on a bare rock about 20 feet high, and serves as a landmark for entering the Arm. A large reef, which bares at L. L. W. (164° true, 600 meters from Zip) and a rock which bares at L. W. (40° true 854 meters from Zip) are dangers, located by the topography party, which are hidden at high water. Other rocks are visible, except at extreme high water in very calm weather.

Lone Rock is a brownish black rock about 80 meters across in any direction and 20 feet high. The name applies to the triangulation station, but is also suggested as a name for the rock.

Graves Rocks lie one mile west (true) of Δ Kelp, and Δ Graves<sup>Rock</sup> is located on the southern end of the group. The rocks appear as if divided into two groups, for the rocks between the northern and southern groups are very low. All rocks

in southern group are bare, and of a brownish-black color. The northern group appears as one large rock, when viewed from seaward. The largest island at the northern edge of the group is the highest (125 feet), and is wooded, which makes it the most conspicuous part of the group. A grass-topped island lies 750 meters south (true) of the wooded island. The other rocks of the group are bare and of a dark-gray color. Libby Island lies one mile,  $335^{\circ}$  true from Graves Rocks. The island is 760 meters long and 175 feet high. (Coast Pilot gives 300 feet.) The island is heavily wooded, and has a steep rocky shore, which is white in color. The white, rocky cliffs are very conspicuous from the seaward, and the island makes a good land mark for entering Graves Harbor.

Graves Harbor has its entrance between Graves Rocks and Libby Island. There is one danger, located by plane table; a rock baring at  $1/2$  tide,  $92^{\circ}$  true, 2500 meters from A Peep. This rock is marked by kelp.

*Approximate  
transmission by  
O. H. H. H.*

Torch Bay, named by party. From Oval to a point just south of O Fil the coast is steep, bare, and of a distinct white color. The dangers located by plane table consist of three rocks in the entrance to this bay. One which bares at L.L.W. is  $169^{\circ}$  true, 1850 meters from Sugarloaf. The other two bare at  $3/4$  tide and appear to be connected by a reef. They are located  $129^{\circ}$  true, 3010 meters from Sugarloaf.

Dixon Harbor has a steep rocky shore, with the exception at the head, where the shore consists of sandy beach. The large river at the head of Dixon Harbor is of Glacial origin, and carries much sediment to the sea. The result is that the waters of Dixon Harbor are always murky. The slope is on the western side of Dixon Harbor has several rock slides, which are fairly conspicuous. The slope back of the shore line, from Azo to a point 3300 meters north, is practically devoid of vegetation. This slope is rocky with rock slides and appears brown in color from the sea. A rock baring at  $1/4$  tide,  $114^{\circ}$  true, 760 meters from Astrolabe, and one baring at L.W.,  $287^{\circ}$  true, 190 meters from Astrolabe, were located by plane table, and do not show on the old topo bromide.

*J  
J*

#### SURVEYING METHODS

The usual plane table methods were followed throughout the sheet; and, due to the nature of the topography, plane-table triangulation was used extensively. Stadia traverse was used between these points, and the position of the table could always be checked by resection.

Although the work around Cape Spencer had been done, it was thought advisable to rerun it, and particular pains were taken with this portion of the work, and as many checks as possible were made, as the work progressed.

A reef, which bares at L.L.W., 283° true, 1220 meters from Cape, is shown as anchored kelp only on the old chart. This reef was seen by both the hydrographic party and the topography party, and there is no doubt as to its existence. Two rocks located 25° true, 470 meters from Cape Spencer light, bare at low water, and were not indicated on the old chart. There are other discrepancies in this group of rocks, particularly as to the shape of some of the larger islands. A most careful comparison should be made between the two surveys; and, in case of discrepancy, it is thought advisable to accept the new work, as extreme care was taken in its execution.

Dixon Harbor was resurveyed, with the exception of the shore line between signal y and signal Tog. The rocky shore line, which was resurveyed, checked reasonably well, but the sandy beach seems to have filled in some. The mouth of the river changes from year to year, as can be seen from a photograph taken in 1925. Signals Hig, Sid, Low and Dix were placed in the vicinity of Stations High, Side, Lower and Dixon, which were placed in 1905. Although a search was made and some indications found, no definite recoveries were made. The new signals were all located by plane table cuts.

PLANE TABLE POSITIONS				
	0	1	meters	
Lit	Lat. 58	11	1524	Cape Spencer Light
	Long 136	38	330	
Dap	Lat. 58	16	1517	Hydrographic mark (see description)
	Long 136	42	134	
Gog	Lat. 58	17	464	Hydrographic mark (see description)
	Long. 136	41	44	
Bud	Lat. 58	12	72	Lone tree
	Long 136	10	240	

#### STATISTICS

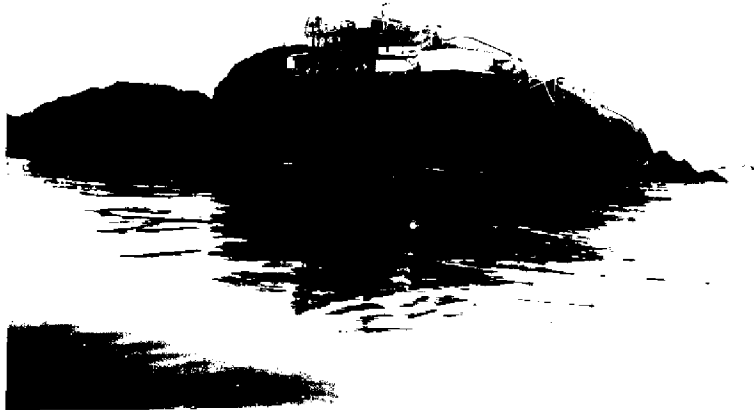
157 miles of shore line (statute).  
60.0 square miles topography (statute).

Respectfully submitted

*E. H. Kirsch*  
E. H. Kirsch  
Aid, C & G Survey

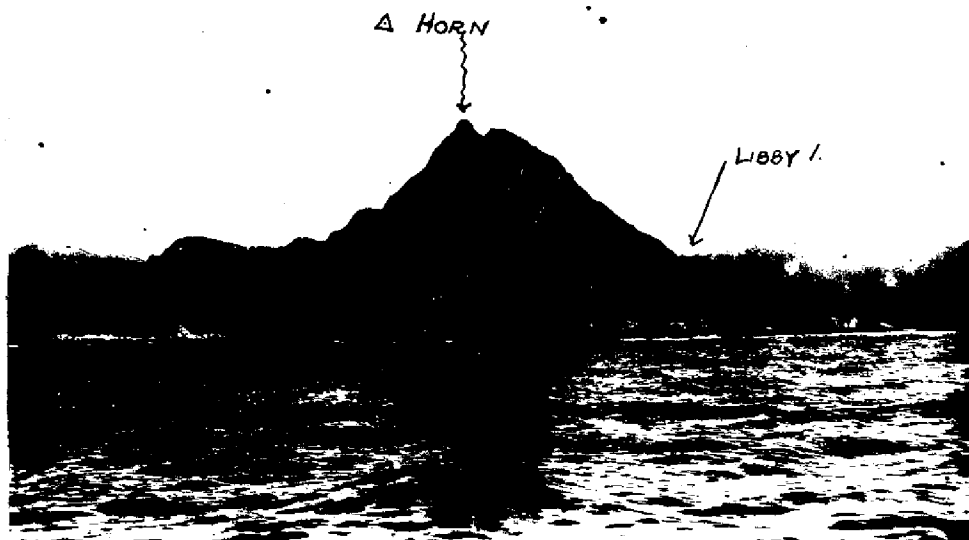


Cape Spencer Light under  
construction

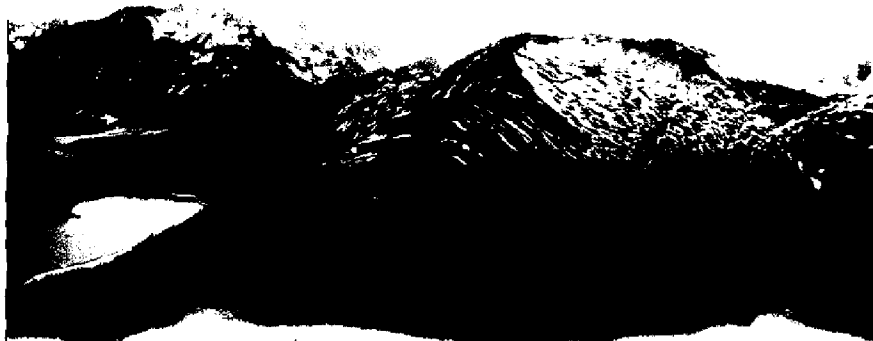


3.

Taken from  $\Delta$  Lone Rk.



4.



*Taken from A Brady Looking North*



*Taken from A Brady looking into Dixon Harbor (1925)*



*Taken from A Brady looking into Torch Bay*

2.

Δ Horn

1875'





DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4238

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. \_\_\_\_\_

REGISTER NO. <sup>4238</sup> 4238

State S. E. Alaska

General locality North of Cross Sound

Locality Astrolabe Pt.  
Cape Spencer to Dixon Harbor, inclusive

Scale 1:20,000 Date of survey April - June, 1926

Vessel Str. SURVEYOR

Chief of Party A. M. Sobieralski

Surveyed by E. H. Kirsch

Inked by E. H. Kirsch

Heights in feet above M.S.L. to ground ~~to tops of trees~~

~~Contours by approximate method~~ Form line interval 100 feet

Instructions dated Feb. 12, 1926

Remarks: \_\_\_\_\_