

4218

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
State: <u>ALASKA</u>
11-5613
DESCRIPTIVE REPORT.
Topographic Sheet No. <u>2</u> <u>4218</u>
LOCALITY:
<u>Shelikof Straits, Afognak I.</u>
<u>Black Cape to Lighthouse Pt.</u>
<del><u>Chuyak Straits to Black Cape</u></del>
<u>126</u>
CHIEF OF PARTY:
<u>Charles Shaw</u>

4218

## DESCRIPTIVE REPORT

to accompany

### TOPOGRAPHIC SHEET 2

#### LOCALITY AND LIMITS

This topographic sheet which was made under authority of the Director's instructions of March 27, 1926 embraces the area south of and adjacent to Shuyak Straits. It joins topographic sheet field no. 1 at Lighthouse Point and extends southwest including Bluefox Bay and ends at triangulation station POINT on Black Cape.

The topography includes the location of the low water line in all cases where it could be obtained without special work and all geographic features that could be located from the shoreline. Especial care was taken to locate as many rocks as possible in the area south of Bluefox Bay which the hydrography did not cover. Several topographic signals in this area were permanently marked for subsequent hydrographic use.

#### CONTROL

The topography is based on a system of triangulation established before the topography. Intersection stations were established at frequent intervals along the shoreline and topographic signals were further located by cuts from these stations.

#### METHODS

The topography was done by planetable in accordance with paragraphs 145 - 197 of the General Instructions. With the exception of Bluefox Bay it was always possible to work a three point problem for the location of the planetable. A combination of traverse and checking by pointings on three well determined signals made straight traverse unnecessary and hence no errors could accumulate. Part of the area in Bluefox Bay was traversed and the rest established by planetable triangulation. The closing errors of these traverses were particularly satisfactory and no adjustment was necessary.

The group of rocks lying about a mile northwest of Devils Inlet and also those in the vicinity of Grassy Island were each rodded in by planetable from setups on "Twin Rocks" and "GRASSY". The time of low water on three successive days was used to locate rocks covered by high water with the endeavor to make this area of some use to small boats although the hydrography did not proceed this far.

### SHORELINE CHARACTERISTICS

The shoreline in this locality is bold and permanent and for the most part rocky. Beaches at the head of bays and bights are composed of coarse gravel and small boulders. From Lighthouse Point south to Bluefox Bay the shoreline is abrupt and rocky being well washed out by heavy seas to a height of 30 to 40 feet. The outside of the islands in the entrance to Bluefox Bay and the shoreline to the southwest as far as Black Cape is of the same character although not as high and more gravel beaches occur toward Black Cape. At the head of Bluefox Bay the trees grow down to the high water line as is usually the case in protected waters. The shores of this part of Afognak Island are heavily wooded with coniferous trees and a dense underbrush of "devils club" and berry bushes. The woods thin out at an elevation of a thousand feet on the mountains and on the outside coast about a hundred feet from the high water line.

Devils Inlet was not surveyed beyond its entrance. The entrance from abeam of the second island (about 200 meters east of signal DEVIL) is shoal and unfit for anchoring having less than a fathom of water at low tide. This entrance narrows up to about 20 meters (at a distance of 850 meters from signal DEVIL). At this point the entrance is shoal being only a few feet deep at High water and endangered by rocks. Only very small boats with local knowledge can enter this inlet and it is dangerous in any event. At low water the tide forms a cascade at this point and runs out except about an hour before and after high water at which time it runs in with greater volume forming a rapids of swirling water as it runs in. The periods of slack vary with the height of high water. The beaches and shore inside of the inlet show evidence of a range of tide of about three feet. From the entrance the Inlet widens and deepens into a sizeable bay which has more the appearance and nature of a lake. The inlet runs back for a distance of two miles and opens out into a large body of water at the head. The water appears to be deep and bottom cannot be seen except along the shore. A salmon stream at the eastern end of the inlet is frequented by bears in the summer.

BLACK CAPE is a low dark point grass covered at its outer end. From this point the land rises gradually to a round bare hill of an elevation of 1155 feet. About 200 meters from the point the grass gives way to scrub spruce and the hill is densely wooded nearly to the top.

A group of unnamed islands and rocks lies 2 miles northwest of Black Cape. The highest two of these which appear as one except from southeast northwest directions are 48 feet high. The sides of these islands are sheer and rocky. These two islands of this group are grassy and flat on top and the others are rocky.

GRASSY ISLAND is a low flat grass covered island lying approximately in latitude  $58^{\circ} 27'$  north, longitude  $152^{\circ} 47'$  west. It is 30 feet high with low inconspicuous shores. A number of rocks on its east and northeast sides bare at various stages of the tide. The water between Grassy Island and shore is shoal and kelp grows here in the summer.

ALLIGATOR ISLAND which lies in latitude  $58^{\circ} 28'$  north, longitude  $152^{\circ} 48'$  west bears the resemblance of an alligator if viewed from the southeast or northwest with its head pointing toward the southwest. It is a grass covered island 64 feet high with bold and high rocky shores.

Rocky Island appears as a small low black rock. It is about 80 meters long and 25 meters wide and is 12 feet high above high water. Several rocks extend off its northeast end (see hydrographic sheet.).

TECK ISLAND, the outermost island in Bluefox Bay appears from the west and north as a rounding grassy hill with a fringe of scrub spruce trees on the top. It is about 130 feet high.

HOGG ISLAND is heavily wooded and has rocky beaches. It is 292<sup>3</sup> feet high to the tops of the trees.

BEAR ISLAND is heavily wooded to the high water line and is 354 feet high above high water to the tops of the trees.

#### DANGERS TO NAVIGATION

Several rocks and shoals southwest of Bluefox Bay as determined by the topographer and not in the area treated by the hydrographic report are worthy of special mention.

Two rocks which bare 4 feet at mean lower low water lie in approximate latitude  $58^{\circ} 27' 20''$  north, longitude  $152^{\circ} 46' 20''$  west. The easternmost of these is 0.7 miles (statute) or 1090 meters N  $49^{\circ}$  E of the northern end of Grassy Island. The other lies 0.15 miles or 230 meters west of the first.

A large group of rocks lies 3 miles N  $70^{\circ}$  E (true) of Black Cape. The highest of these, "Twin Rocks" (see New Geographic Names) and also one near the western end of the group are awash at high water. The most easterly of this group bares at half tide, is sharp and pointed and is the highest in its immediate vicinity. All the others shown bare at various stages of the tide mostly at low water.

A reef makes out from shore about one half mile east of Black Cape. Three rocks mark the end of this reef the highest of which is awash at high water and has another rock on either side baring at half tide. This rock lies 0.7 mile (statute) N  $74^{\circ}$  E (true) from Black Cape.

A rock at the western end of the passage behind the island two miles east of Black Cape lies nearly in the middle of the passage and bares at quarter tide.

Two rocks 60 meters apart bare at quarter tide 0.7 mile (statute) due west from the outer island at the entrance to Devils Inlet.

Two other rocks about a hundred meters apart bare at half tide 1.1 miles (statute) S  $87^{\circ}$  W from the outer island at the entrance to Devils Inlet.

A patch of kelp was observed but not located about one half mile WNW (true) from the northern end of Grassy Island.

#### NEW GEOGRAPHIC NAMES

Since the area covered by this sheet has not been previously surveyed there are few names on the present chart.

The names already appearing on the chart are in common use and should stand. These include Black Cape and Bluefox Bay. This latter name appears "Bluefox Bay" on the chart rather than "Blue Fox Bay" as it appears on the topographic sheet.

Among the other names which appear on the topographic sheet are the following which are well established and are in common local use.

LIGHTHOUSE POINT is the point on the south side of the entrance to Shuyak Straits. This name is in common use and was established by the reason that navigators after turning on Rocky Island set their course off this point.

ROCKY ISLAND gains its name from its rocky appearance. It is composed wholly of rock and has no grass or turf.

ALLIGATOR ISLAND also gained its name from its appearance. From the southeast and northwest it appears like an alligator lying with its head to the southwest.

HOGG ISLAND is a name which has come into local use from the name of Mr. Hogg who maintains a fox farm on this island. He lives on the island in the winter as well as summer. No other name for this island is known.

ESTHER LAGOON lies on the east side of Bluefox Bay near the head of the bay. It is so named on account of the schooner "Esther" which was anchored in this lagoon throughout one or more winters.

DEVILS INLET or Devil's Bay as it is sometimes called is so named because of its hidden location and dangerous entrance. This name is well established.

RED PEAK is so called because of its reddish appearance due to mineral formation.

DEVILS PAW MOUNTAIN is a local name applied to the peak west of Bluefox Bay.

Other names which have been applied for convenience by field officers and which are not in common use are:

TECK ISLAND applied to the outermost island in the mouth of Bluefox Bay.

GRASSY ISLAND so named because it is grass covered and is easily discernable as a low grassy island.

TWIN ROCKS a name assigned to the highest and most prominent of a group of rocks at latitude  $58^{\circ} 25' 30''$  north, longitude  $152^{\circ} 48' 30''$  west. These two rocks are about 15 meters apart and are easily discernable by this name. The tops of the rocks are equal in height and appearance and are bare at high water. (Checked at A.W., see Sep. 4218 and also preceding page)

BEAR ISLAND is the third island in the mouth of Bluefox Bay at approximate latitude  $58^{\circ} 26' 30''$  north, longitude  $152^{\circ} 42'$  west. This name although not in common use is used by the fox farmer on Hogg Island.

#### MAGNETICS

The magnetic meridian was determined with the declinoire at triangulation station HOGG and planetable signal BRASS. The date in each case was written along the arrow representing the magnetic direction. A separate magnetic study was made of the area covered by this seasons work and is described under REPORT ON MAGNETICS OF VICINITY OF SHUYAK STRAITS.

## PLANETABLE POSITIONS

Object	Lat.	D.M.	Long.	D.P.	Description of Object
Brass	58 24	479	152 52	836	See description of H. & T. Station
Bolt	58 24	152	152 51	223	" " " " " "
Rod	58 24	332	152 49	475	" " " " " "
Sphinx	58 26	713	152 45	204	Highest point of grass topped rock (Resembles a sphinx) about 15 ft. high & 5 ft. in dia.
Frog	58 27	568	152 43	425	Top of pointed rock about 20 feet high. Rock resembles a frog.
Out	58 27	87	152 43	512	Top of rock which is about 4 feet high above high water.
Fall	58 25	1372	152 42	372	Waterfall, at beach at edge of veg.
Cat	58 25	594	152 41	346	North end of small island. Rock was whitewashed about 4 ft. above H.W.

✓K.G.C.

## LANDING FIELDS FOR AIRPLANES

There are no suitable landing fields for airplanes in this locality.

Respectfully submitted:



H.W. Tyler  
Jr. H. & G. E., C. & G. S.  
Topographer.

Approved:



Charles Shaw  
H. & G. E., C. & G. S.  
Chief Of Party.

IN REPLY ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 11-DFM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

February 18, 1927.

SECTION OF FIELD RECORDS

Report on Topographic Sheet No. 4218

Black Cape to Lighthouse Point, Shelikof Strait

Surveyed in 1926

Instructions dated March 27, 1927 (Shaw)

Chief of Party, C. Shaw.

Surveyed and inked by H. W. Tyler.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of the survey conform to the requirements of the General Instructions and satisfy the specific instructions.
3. The junctions with the adjoining surveys are satisfactory.
4. No further surveying is required.
5. The character and scope of the surveying and field drafting are excellent.
6. Reviewed by E. P. Ellis, February, 1927.

Approved:

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Chief, Section of Field Records (Charts)

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Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

4218

U. S. Coast and Geodetic Survey.

Register No. 4218<sup>2</sup>

State ALASKA  
General locality . Shelikof Straits Afognak Island  
Locality . ~~Shuyak Straits to~~ Black Cape to Lighthouse Pt.  
Chief of party . . Charles Shaw  
Surveyed by . . H.W. Tyler  
Date of survey . July - September 1926  
Scale . . . 1 : 20 000  
Heights in feet above High water  
Contour interval . 100 . feet.  
Inked by . . H.W.T. . . . Lettered by . . H.W.T.  
Records accompanying sheet (check those forwarded): Photographs,  
Descriptive report, Horizontal angle books, Field computations,  
Data from other sources affecting sheet

Remarks: Joins topographic sheet of Shuyak Straits of the same season.



## NAUTICAL CHARTS BRANCH

SURVEY NO. T-4218

### Record of Application to Charts

[illegible]

M.2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.