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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
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State: S.W. Alaska.

DESCRIPTIVE REPORT

Topographic } Sheet No. "B" 4578
~~Hydrographic~~

LOCALITY

Kodiak Island.

~~Ayakulik Island Low Cape.~~

Low Cape to Ayakulik I.

1930

CHIEF OF PARTY

F. H. HARDY, H. & G. E.

U. S. GOVERNMENT PRINTING OFFICE: 1925

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DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET "B".

Str. SURVEYOR.

F.H.HARDY, Comd'g.

Instructions dated April 1-st, 1930
Referenced 10-RS.

4578

GENERAL DESCRIPTION.

The area included in this sheet is for the most part a slightly rolling grassy plateau which terminates in steep eroded ~~cliffs~~ bluffs at the shore. These bluffs are deeply fissured and present an almost unbroken line extending from a point about two miles north of Ayakulik Island to Low Cape. The bluffs vary in height from ten feet to 267 feet, the highest point being located three miles north of Low Cape. The plateau is covered with a thick growth of long grass and is spotted with pot holes and numerous lakes and ponds.

The mountains of this area are grass covered and either rounded or conical in form. They occur in scattered groups.

AYAKULIK ISLAND. is a small island 220 feet high. It presents a bold rocky face to the westward and a gentle grass covered slope to the east. There is a reef at the westward base of the island which terminates in a rock 55 feet high. A number of small rocks and rocks awash are scattered about the west and north sides of the island at a distance less than 1/4 mile. On the eastern side of the island the area between the high and low water lines is composed of medium sized boulders. The low water line extends within 1/4 mile of the low water line of the mainland. The island is uninhabited although it is used as a fox farm. There are three deserted barabas or native huts on the eastern side of the island.

AYAKULIK RIVER is a shoal semi-tidal stream about thirty meters wide at the narrowest part of the entrance. It is not navigable although small fishing craft can enter there for a short distance during high tide under favorable conditions. There is a fish weir on this stream, maintained by The U.S. Bureau of Fisheries. A number of shacks and barabaras are inhabited here during the salmon and trapping seasons. From the mouth of the river northward to the limit of the sheet, the beach is sandy. Southward to Low Cape the beach for the most part is composed of gravel with varying amounts of sand and large stones. Between triangulation station Bluff and triangulation station Tundra the beach is very stony. This is also true of the area northward $1\frac{1}{2}$ miles from Low Cape.

LOW CAPE presents an eroded bluff to seaward. It is 90 feet high and falls away gently to the north, east, and southeast. The top of the cape is grass covered. There are a number of rocks awash at various stages of the tide off this point at a distance of $1/4$ mile. The low water line extends about $1/5$ mile off shore.

OVAL MOUNTAIN named on account of its shape, is 900 feet high, and is entirely covered with grass. It forms the seaward end of the long ridge of mountains which run in a northeast and southwest direction immediately north of the Ayakulik River. It is located by triangulation.

MYRTLE MOUNTAIN is a pyramidical mountain with grassy slopes. It is 1401 feet high. It forms the landward end of the ridge immediately north of Ayakulik River. It is located by triangulation.

NOB MOUNTAIN is the most prominent tip on the south end of the group of mountains immediately east of triangulation station MUD. It is 965 feet high and is grass covered. It is located by triangulation.

ROCKS.

Scattered rocks and rocks awash lie close to Ayakulik Island and Low Cape. Between signal Kid and triangulation station Sandy there are a number of small stony reefs extending a short distance from shore. **All important rocks awash were located by three or more planetable cuts, and are shown enclosed by ink dots. Those not enclosed in dots were,**

SURVEY METHODS.

The shoreline between triangulation stations Flat and Low Cape was surveyed by traverse along the beach. It was considered impractical to traverse along the bluff on account of the danger involved in setting up the planetable near the edge of the unstable bluff. Also the distance (angular) from the bluff top to the high water line was in most places too great for the alidade to measure. To supplement the traverse, triangulation station Yak, was occupied, and cuts to hydrographic signals were taken from it. These cuts served as a

(sketched.)

check on the work. With the exception of the run from Bluff to Low Cape₂, all traverses closed within the allowable limit and were adjusted by the usual method, taking into account the distortion of the sheet. The traverse from triangulation station Bluff to Low Cape failed to close by forty meters, and as it was suspected that the error occurred between signal Hump and triangulation station Low Cape 2, this portion of the traverse was rerun and the error detected.

CONTOURS.

Owing to the fact that the traverses on this sheet were run along the beach, only a few cuts to peaks were obtainable by planetable where peaks occurred in the bluff line. Most of the cuts and elevations were obtained by sextant from a launch laying-to at points offshore at distances from two to four miles. The magnetic meridian was observed at triangulation station Tundra.

DISTORTION.

The distortion along the major axis of the sheet where practically all the work was done, remained practically uniform during the progress of the survey and until the sheet was completed. The distortion in this area amounted to two meters per minute of longitude and 9 meters per minute of latitude. However, upon completion of the sheet, the distortion along the edges of the sheet^{was} noted as follows :-

South	1.4	meters	per	1000	meters
East	4.9	"	"	"	"
North	1.8	"	"	"	"
West	10.8	"	"	"	"

COMPARISON WITH OLD SURVEY.

This area was unsurveyed prior to 1930, except for reconnaissance.

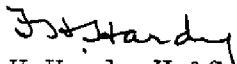
PHOTOGRAPHS.

Three photographs are attached to this report.

Respectfully submitted,


G.M. MARCHAND, Jr. H.&G.E.

Approved and forwarded,

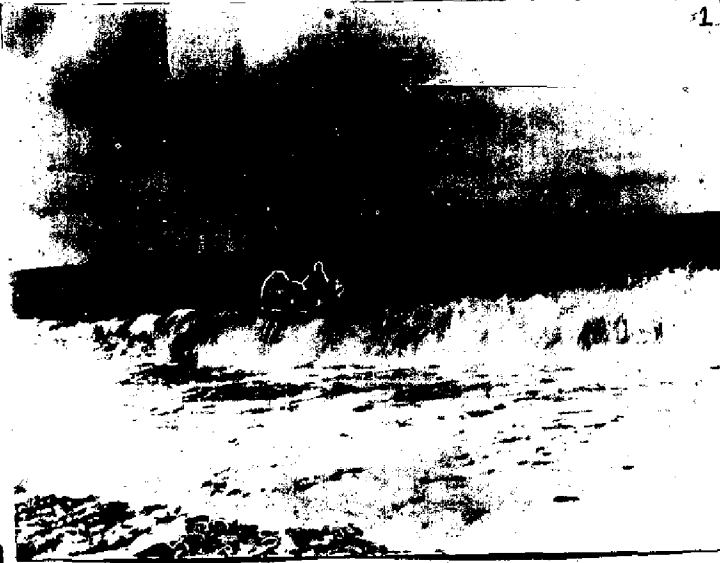

F.H. Hardy, H.&G.E.
Commanding, Str. SURVEYOR.

NEW PLACE NAMES.

<u>Name suggested by</u> <u>Field Party.</u>	<u>Reason for Name.</u>
Oval Mountain	So named because of its shape.
Myrtle Mountain	So designated by triangulation observer.
Nob Mountain	So named because it shows a prominent tip to seaward.

Plane-Table Positions.

<u>Name & Description.</u>	<u>Lat.</u>	<u>D.M.</u> meters.	<u>Long.</u>	<u>D.P.</u> meters	<u>Ht.</u>
Chim. Chimney of bunkhouse of U.S. Bureau of Fisheries at mouth of Ayakulik River.	57°11'	1146	154°32'	441	15'
Shack- South gable of shack on top of bluff 1/8 mile north of tri- angulation station TUNDRA.	57°06'	1121	154°31'	601	95'



1] These photographs show the operation of landing a dory thru a heavy surf aided by an anchor and line. The pictures were taken on the southwest coast of Kodiak Island, Alaska.

#1. shows dory riding crest of wave with bow to seaward. One man is at the oars, another is paying out the anchor line, while two others stand by to leap ashore. (Note the outboard motor on the stern.)

#2 shows dory making landing and
#3 shows dory being hauled to safety, members of a topographic party assisting.

2.



DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4578

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. "B"

REGISTER NO. 4578

State Alaska.

General locality Kodiak Island

Locality ~~Ayakulik Island~~ - Low Cape to Ayakulik I.

Scale 1:20,000 Date of survey June & August, 1930

Vessel SURVEYOR

Chief of Party F. H. HARDY.

Surveyed by G. M. Marchand.

Inked by G. M. Marchand.

Heights in feet above M. H. W. to ground to tops of trees

Contour, Approximate contour, Form line interval 100 feet

Instructions dated April 1-st., 1930

Remarks: