

4391

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

....., Director

State: SE Alaska

DESCRIPTIVE REPORT

Topographic
~~Hydrographic~~

Sheet No. 4391

LOCALITY

West Coast of Kruzof Island

Point Mary to Cape Georgiana

1928

CHIEF OF PARTY

H.A. Cotton

GOVERNMENT PRINTING OFFICE

chart
8248

date
2/19/74

Re-applied nets, ledge
rock and fair - D.J. Kinnear
2/19/74

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET NO. _____

(Field Letter C)

WEST COAST OF KRUZOF ISLAND

Pt. Kruzof

to

Pt. Mary

SOUTH EASTERN ALASKA

June and July, 1928

Scale 1:20,000

AUTHORITY:

The topography was executed in accordance with instructions of February 13, 1928, to the Commanding Officer of the Str. EXPLORER.

LIMITS:

This sheet is a topographic re-survey of the West Coast of Kruzof Island, from Point Kruzof (Lat. $57^{\circ} 20'$, Long. $135^{\circ} 50'$) to Point Mary (Lat. $57^{\circ} 10'$, Long. $135^{\circ} 49'$). It connects with topographic sheet (Field Letter D) of Salisbury Sound at Triangulation Station "Kruzof", and with topographic sheet (Field Letter AB) of Shelikof Bay at Signal "Wet" at Point Mary.

CONTROLL:

Control for this Survey was furnished by recovered Triangulation stations "Kruzof", "George", "Lion", and "Amelia"; and by Triangulation Station "Storm" established during the season. Triangulation Station "Sea" on Sea Rock was not recovered and the mark has apparently been lost. However, by plotting the position of the Station and taking cuts with the planetable its position on the rock was found with sufficient accuracy for use as a Hydrographic and Topographic Signal. It is shown on this sheet as a planetable position.

CONNECTION WITH PREVIOUS SURVEYS AND DIFFERENCES NOTED:

The difference in location of shoreline between this survey and the previous survey was so great that it was considered best to make a complete re-survey of the coast-line. The difference between the two surveys is considerable over nearly all of the shore-line covered by this sheet.

Sea Rock is shown on this sheet in pencil, and was copied from the Photostat copy of the previous Topographic sheet. The rock is correct in shape and position, and its location on the previous survey was controlled by a Triangulation-station.

On the old Topographic sheet, there was shown among the Sea Lion Rocks, a low-water rock at the intersection of Meridian 135° 52' and Parallel 57° 15' ^{*} and 130 meters East of signal "Cen". Such a rock was not found to exist and is not shown on this sheet. There is a shoal area between the two eastern-most islands and about on line between stations "An" and "top". This area is marked by kelp and the least depth found by the topographer was $1\frac{1}{2}$ fathoms. See Hydrographic sheet (Field Letter 3), Survey of 1928.

17. June

The small High-water rock just south of station "Ox" in the group of Sea Lion Rocks was not shown on the old Topographic sheet.

METHODS:

The Survey was made by Stadia Traverse and by Plane-table Triangulation.

Station "Twin" at Twin Point was located by a three point fix on Triangulation stations "George", "Lion", and "Amelia". This position was located when the sheet was first taken into the field and before there was any distortion. In surveying the section from Cape Georgiana to Twin Point, signals were first built and the survey controlled by a system of Plane-table Triangulations based on Triangulation stations "George" and "Lion" and on the three point fix position of station "Twin".

A Traverse was run from station "Twin" to Triangulation station "Amelia".

Traverse was next run from Triangulation station "Amelia" to station "Pal" and from this traverse line stations "Ker" "Fom", "Pal" and all stations along the east side of Gilmer Bay up to station "Point" were located by intersections from successive Plane-table positions. The remainder of the work in Gilmer Bay was controlled by intersections from these stations.

Traverse was next run from station "Pal" to Triangulation station "Storm".

Traverse closures were as follows:

Location	Distance (St.Mi.)	Closure
1. Station "Twin" to Triangulation station "Amelia".	3.8	4 meters(not adjusted)
2. Triangulation station Amelia to Triangulation station Storm.	5.4	20 meters (adjusted)

The greater part of the closure at Triangulation station "Storm" was an error in distance. At this time the sheet had changed and was about 8 meters short in one minute of Latitude. No allowances were made for this shrinkage when running the traverse line. The difference in Latitude between stations Amelia and Storm being about 3 minutes ~~in Latitude~~, the closure on the traverse line would be about 24 meters. The closure was about 20 meters too great in distance in a North and South direction. Adjustment was made by distributing the error over the north and south positions of the traverse line.

MAGNETIC VARIATION:

The Magnetic variation was measured with the Declinoire at

Triangulation station "Storm". The Declinatoire was checked at the Sitka observatory and found to be correct.

ELEVATIONS AND FORM LINES:

Elevations were determined with the sextant from a launch and by angles with the Theodolite from Triangulation stations. Elevations are plotted in red and are in feet above high water. Elevations taken to the tops of trees on wooded crests have not been reduced to the ground. However, in such cases, the estimated height of the trees is shown on the sheet in small red numbers in parenthesis just above the observed elevation.

Inspection in the field did not seem to warrant a complete re-sketch of the form lines and the form line interval of 200 feet used on the previous survey has been retained. A number of elevations were determined as shown on the sheet. Form lines were traced from the Photostat copy of Topographic sheet 2305 and placed onto this sheet by fitting them onto corresponding peaks. They are shown in pencil. Part of the form lines have been re-sketched to conform to changes in the shore line made on this survey and to conform to changes in location and elevation of peaks made on this survey. Those positions of the form lines which have been re-sketched are shown in red ink. The tree line extends to an elevation of about 1800 feet. The limits of trees, and the vegetation symbols for the interior of Kruzof Island are shown on Topographic sheet No. 2305 and have not been re-sketched on this sheet.

CHARACTER OF THE SHORE LINE:

The shore line in general is very rugged and broken and is composed largely of rock ledge.

From Pt. Georgiana to Sea Lion Cove, the beach has a steep

slope and the interior is wooded except for the crests of the mountains above about 1800 feet.

The sand beaches at Sea Lion Cove and S. E. of Twin Point are composed of a very fine light sand.

From Sea Lion Cove to Twin Point, the beaches are of rock ledge and have a steep slope with cliffs as indicated. The mountains to the Eastward have bare crests and steep wooded slopes from the beach.

From Twin Point to Point Amelia and to the entrance to Gilmer Bay the beaches, except for the one stretch of sand beach, are very steep and rugged.

In Gilmer Bay the beaches are comparatively flat. The Bay is marked by a range of eight bare, rugged peaks, which start from, just North of the head of the bay and run North eastward across Kruzof Island.

From Gilmer Bay to Point Mary the beaches are again steep and broken. The trees make down nearly to High water and the mountains rising from the beach have wooded crests in contrast to the bare peaks farther to the North East and to the Eastward in the interior of the Island.

ANCHORAGES:

There are no anchorages in the area surveyed on this sheet which afford protection from westerly or southerly winds. Gilmer Bay is well protected from Northerly and easterly winds but is other wise a poor anchorage as it is open to storms from the south or west.

In Gilmer Bay small boats find the best protection either in the small cove just east of station "Ker", or in the upper part

of the Bay under the west shore just north of station "Eit".

RECOVERABLE PLANE-TABLE POSITIONS:

Ten plane-table positions on this sheet are recoverable and are described on Form 524, submitted with this report. Stations listed below:


TOP	KER	EAG
AB	AL	NOR
CEN	PIN	TWIN
WEST		

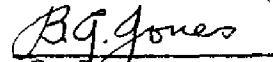
STATISTICS

Statute miles of shore line	- High Water	30.4.
Area, Square statute miles		14.3
Number of elevations		30
Number of recoverable stations	- Triangulation	5
	Plane-table	10
Positions occupied		49

Examined, approved and forwarded

Respectfully submitted.


Harold A. Cotton,
Hyd. & Geo. Engineer,
C. & G. Survey,
Commanding S.S. EXPLORER


B. G. Jones,
Jr. H. and G. E.
C. & G. Survey.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

C. & G. SURVEY
L. & A.
FEB 85 1929
Acc. No.

REG. NO. 4391

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. "C"

REGISTER NO.

4391

State S. E. Alaska.

General locality West Coast of Kruzof Island.

Locality ~~Point Georgiana~~ to Point Mary to Cape Georgiana

Scale 1/20,000 Date of survey June and July, 1928.

Vessel Steamer EXPLORER

Chief of Party Harold A. Cotton.

Surveyed by B. G. Jones.

Inked by B. G. Jones

Heights in feet above High Water to ground & to tops of trees

~~Contour, Approximate contour~~, Form line interval 200 feet

Instructions dated February 13, 1928.

Remarks: