6636

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic / ~~*Hydrographic*~~ *Sheet No.* 6636

State S. E. Alaska

LOCALITY
Sitka Sound
~~South Side of Eastern Channel~~
Eastern Channel to Aleutkina Ba
~~Approach to Sitka Harbor, Alaska~~

1938.

CHIEF OF PARTY

G. C. Jones

U. S. GOVERNMENT PRINTING OFFICE

6636

Applied to Reconstruction of Chart 8244 - 11/8/39 - J.T.W.

Applied to Chart 8255 11/9/39 Chas R Bush Jr.

Form 537a
Ed. Nov. 1929

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. F

REGISTER NO. 6636 T6636

State S. E. Alaska

General locality ~~South Side of Eastern Channel~~ Sitka Sound

Locality ~~Approach to Sitka Harbor, Alaska~~ Eastern Channel to Aleutkina Bay

Scale 1:10,000 Date of survey May - August, 1938

Vessel U. S. C. & G. S. S. EXPLORER

Chief of party G. C. Jones

Surveyed by Joseph E. Waugh, Jr.

Inked by Joseph E. Waugh, Jr.

Heights in feet above MHW to ground ~~to tops of trees~~

~~Contour, Approximate contour,~~ Form line interval 100 feet

Instructions dated March 7 and May 5, 1938

Remarks:

GPO

DESCRIPTIVE REPORT

TO ACCOMPANY TOPOGRAPHIC SHEET NO. 6636,

SOUTH SIDE OF EASTERN CHANNEL

APPROACH TO SITKA HARBOR, ALASKA

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DESCRIPTIVE REPORT

TOPOGRAPHIC SHEET NO. 6636

SOUTH SIDE OF EASTERN CHANNEL

APPROACH TO SITKA HARBOR, ALASKA.

INSTRUCTIONS:

The topography on sheet No. 6636, is a part of Project No. HT-220, the instructions for which were dated Mach 7, 1938, and May 5, 1938.

LIMITS AND SCALE:

This sheet was surveyed on a scale of 1:10,000. It covers the small islands on the south side of Eastern Channel that lie east of Longitude 135°22', and north of Latitude 56°59.5'; also that part of Baranof Island which lies west of Longitude 135° 15.94', and borders on the south side of this channel. It also includes the topography of Baranof Island that borders on Aleutkina and Leesoffskaia Bays. The southeastern most one of the Kayak Islands on the north side of the Eastern Channel is shown on this sheet. This was surveyed on this sheet primarily to define the low water line on the south side of this island. This island is also shown on Sheet No. 6632. This is the only place where a junction was obtained with the modern surveys.

CONTROL AND SURVEY METHODS:

The control consisted of twenty-three second order triangulations stations both main scheme and intersection. The triangulation was executed this season and based on the North American 1927 datum. It was not considered necessary to establish any recoverable plane table stations, the triangulation stations being numerous enough.

The usual plane table survey methods were used. The plane table positions were obtained by three point fix and resection methods. There are two traverses on the sheet. The first is along the south and west sides of Long Island. It starts at a set-up near hydrographic signal "BOW", and closed on triangulation station "MERTZ". The second begins at a set-up on the reef to the west southwest of hydrographic signal "TO", then southeast and south in the small narrow slough and closing on triangulation station "FIN". Both traverses closed within the accuracy required and the proper adjustments have been made.

Leesoffskaia Bay was surveyed by establishing a scheme of

plane table triangulation. Satisfactory checks were obtained by orienting on distant signals and carrying a check distance from previous located points.

All of the off-lying features were rodded in except the rocks in Latitude 57°00.1', Longitude 135°22.0', and Latitude 57°00.1', Longitude 135°19.1'. They were located by three cuts and the elevation measured by depression angles to the top of the rock and to the water. From this the heights were computed taking into account the tide. The low water line shown on the sheet was rodded in at low tide.

FORM LINES:

The elevations shown on this sheet are ground elevations. Where the elevations of the tops of trees were determined the estimated heights of the trees are shown in parenthesis near the elevation concerned. The amounts deducted for the heights are based on several actual measurements of the heights of trees in this area. These measurements gave varying heights from twenty feet on the small islets to one hundred and ten feet on the larger islands.

All elevations were determined by an elevation angle or depression angle on the feature concerned. Proper corrections were applied including the height of instrument which was determined in all cases by computing it from the actual stage of the tide. Those elevations whose positions were determined by cuts with the alidade are a result of three or more closely agreeing elevations determined independently when each cut was taken. All elevations are referred to mean high water unless otherwise indicated directly on the sheet.

GENERAL DESCRIPTION OF TOPOGRAPHIC FEATURES:

This area for the most part is covered by numerous small islands and islets that rise sharply from the water. It is rugged in appearance. No evidence was found of any recent changes in the shore line. Most of the islands are heavily wooded and they are difficult to distinguish at a distance as they blend with the background of land. There are numerous indentations in the islands and for the most part the points have rocky bluffs tapering off to a rock beach in the head of these bays and inlets. Attention is invited to the fifty foot rock bluffs on the west end of Long Island. They raise vertically from the water. The hachures on the islands indicate rock outcrops that form bare rocky bluffs back of the high water line. Attention is also called to the 420 foot elevation in Latitude 57°00.6', Longitude 135°16.55'-and the 709 foot elevation in Lat-

itude 56° 59.75', Longitude 135° 15.65'. These are outcroppings of rock on the side of the respective hills. It will be noticed that kelp is shown in a very few places. The absence of kelp in this area was very noticeable.

When the outer limits of the rock ledges at mean lower low water are too close to the mean high water line for a clear indication of the same by symbol the mean lower low water line is indicated by a dashed line and an appropriate notation made on the sheet.

MARSHES:

There are two marshes shown on the sheet. These are peat bogs. The one in Latitude 57° 00.5', Longitude 135° 17.0', is small. It consists mostly of marsh grass and pot holes. It is at the foot of the small bluff. The one on the south side of Leesoffskaia Bay is larger. It is essentially a peat bog and is covered by marsh grass and is soft and spongy. The sand and gravel bar on the water side has been built by deposits from the numerous streams draining from the hills in back and through the marsh. The bar is firm and well packed. Neither marsh is covered except on the extreme high tides.

MAGNETIC MERIDIANS:

The magnetic meridians shown on this sheet are not accurate as they were observed on a board with iron screws. The standardization of the declinatoires used was also done on the same board. Therefore; since a small displacement of the declinatoire affects the value materially, the values were not scaled.

Disregard meridians.

COMPARISON WITH PREVIOUS WORK:

There are many differences between the topography shown on Chart No. 8244 and this survey. The general shape is the same, but the rocks, reefs, inlets, bays, and indentations in the shore line come in different places, have different shapes, in all, outside of looking the same they don't agree. A detailed general list of these differences is given below.

The southeastern Kayak Island is the only one shown on this sheet. It is larger than that shown on the chart and is not connected to the others at low water.

Buoy N-2, is farther north than charted. Buoy C-3, is northwest

of the charted position. Buoy C-1, is southeast of the charted position. Par. 3b, review.

Liar Rock is ~~farther eastward and smaller~~ a different shape than shown on the chart. The other islands of the Eckholm group have a different shape. ✓

The Belknap Islands are larger, have a different shape and are farther west. The rock that bares seven feet at M.L.L.W., is the only rock awash seen in this area. It probably corresponds to the charted reef just south of its position. The reef on the eastern end is smaller than charted. The rocks as shown on the topographic sheet were the only ones seen in this area. ✓

Due to the inclement weather when working off the western end of Long Island the position of the charted rock awash in Latitude 57°00.05', Longitude 135°22.1', was not verified. There is a rock in this area as indicated by the breakers. It is covered more fully on hydrographic sheet No. 6351~~1~~5. The other two rocks shown were all that were seen in this area. Sunken rocks on H-6355.

Long Island has the same general shape but extends farther to the eastward. The bay on the outside western end is larger than charted. There are several rocks off the end of the island as shown. The bay south of Mertz Island has an entirely different shape and is smaller than charted. ✓

Mertz Island is larger than charted and the rocks and reefs shown around this island and between it and Long Island are more numerous than charted. ✓

The islands and islets off the southeast end of Long Island are larger than shown and the smaller one is farther north. ✓

Emgeten Island is approximately the same shape but the indentations are different shape. The rock awash (3 feet M.L.L.W.) off the eastern end of this island is about 25 m. southwest of the charted one. ✓

Luce Island is larger and extends farther eastward. Attention is called to the rocks awash between Luce and Error Islands. They are not charted at present. This is one of the few places where growing kelp was seen. There are two high water rocks off the northwest end of Error Island. They are farther northwest than the charted one. ✓

Error Island has the same general shape. The southwest end

as charted is too far to the southwest. The rocks on the eastern side of this island are farther to the eastward.

The low water rocks between this island and hydrographic signal "SEV", are all that were seen in this area. They are farther to the eastward than charted.

The rock where hydrographic signal "SEV", is located and the rocks awash to the southeast are farther north than charted.

The two ends of Berry Island are not connected at high water as shown on the chart. Neither do they extend as far north, being smaller than charted.The rocks and reefs around hydrographic signal Jun are generally farther to the north and east. The indentations on the north and the connecting bay are much smaller than charted.

The Martin Islands are larger than shown and extend farther to the eastward. The rock awash off the eastern end is farther east. This is the only rock seen in this area.

The island shown to the southeast of Martin Island has the same general shape. The indentations in the shore are more numerous and larger than charted. There is a long rock (not charted) off hydrographic signal "MI". The rock southeast of hydrographic signal "RAL", is farther to the eastward. The rocks awash that are shown are on the charted reef line. No evidence could be found by the topographer of the charted rock awash and the sunken rock south of the island.

Within 20m. of rocks awash on present survey. Disregard.

Boidarkin Island and Fassett Island are approximately the same shape as charted. The reefs between the islands are generally farther to the northwest. No evidence was found by the topographer of the northwesternmost rock that is charted to the northwest of Fassett Island. The other rock is farther to the eastward than the charted position.

Disregard old rocks. Area too generalized on old surveys.

Silver Point is wider than charted and is not connected to Baranof Island at high water. The rocks and reefs along the southwestern side are generally farther east than the charted positions.

The charted reef in Latitude 57° 00.55', Longitude 135° 17.7', ~~agrees with the charted~~ agrees approximately with survey one on the ~~western end. There are two uncharted rocks extending to the southeast.~~

The charted shore line of Baranof Island agrees in general detail with the topography on this sheet. However; the indentations generally have a different shape. The off-lying rocks are more numerous, and those off hydrographic signals "CARD", "ROD", and south (?)

and east of "ELL", are all farther east than the chart shows them. The fifteen foot rock southeast of hydrographic signal "OX", is farther east. Attention is also invited to the two off-lying rocks northeast of hydrographic signal "COW". The islet at hydrographic signal "MIS", is larger and farther east than charted.

Cobb Island is larger than shown. The two rocks southeast of hydrographic signal "HOW", are farther east than charted.

The form lines shown are in fair agreement. No comparison between the actual elevations was made as none are shown on the chart.

A satisfactory comparison with chart No. 8255 could not be obtained due to the difference in scale. Since the authority for the area on this chart that is covered by this survey is probably the same as that shown on chart No. 8244, the same general descrepancies will probably be found.

A satisfactory comparison with topographic sheet No. 2149 could not be obtained due to the different scales.

TOPOGRAPHIC SIGNALS:

The following is a list of topographic signals outside the high water line:

HYDROGRAPHIC NAME	DESCRIPTION
NUT	Banner on off-shore end of pier, Berry Island.
PED	Highest point of rock that bares 4 feet at M.L.L.W.
PIER	Banner on off-shore end of small pier, Long Island.

JUNCTIONS:

This survey joins sheet No. 6632 on the southeastern end of Kayak Islands. No other junction with modern surveys was made.

LANDMARKS:

Landmarks for Sitka Harbor which includes this survey has been submitted in a separate report.

AIDS TO NAVIGATION:

The Eckholm Light is the only permanent aid to navigation that falls in the area covered by this sheet. The report covering the floating aids to navigation and their location is the subject of a separate report. There are three floating aids, Buoys Nos. "C-1", "C-3", and "N-2". Report referred to is special chart submitted for use of Lighthouse Service.

GEOGRAPHIC NAMES:

All geographic names shown, except one (Leesoffskaia Bay), on this sheet are from Charts Nos. 8244 and 8255. They are all known locally and should be retained.

Leesoffskaia Bay was originally the name applied to Aleutkina Bay. This is from a statement in the "Geographic Dictionary" of Alaska by Marcus Baker, published in 1906. From local usuage however, Aleutkina Bay is used to mean the outer Bay. Leesoffskaia Bay is used to indicate the inner Bay. It is recommended that it be so charted. An alphabetic list of names shown is given below:

NAME	SOURCE	RECOMMENDATION
Aleutkina Bay	Charts Nos. 8244 & 8255	Be retained.
Baranof Island	Chart No. 8255	Be retained.
Belknap Islands	Charts Nos. 8244 & 8255	Be retained.
Berry Island	Charts Nos. 8244 & 8255	Be retained.
Boidarkin Island	Charts Nos. 8244 & 8255	Be retained.
Cobb Island	Charts Nos. 8244 & 8255	Be retained.
The Eckholms	Charts Nos. 8244 & 8255	Be retained.
Eastern Channel	Charts Nos. 8244 & 8255	Be retained.
Emgeten Island	Charts Nos. 8244 & 8255	Be retained.
Error Island	Charts Nos. 8244 & 8255	Be retained.
Fassett Island	Chart No. 8244	Be retained.
Kayak Islands	Charts Nos. 8244 & 8255	Be retained.
Kutchuma Islands	Chart No. 8255	Be retained.

NAME	SOURCE	RECOMMENDATION
Leesoffskaia Bay	Local usage	Be charted.
Liar Rock	Charts Nos. 8244 & 8255	Be retained.
Long Island	Charts Nos. 8244 & 8255	Be retained.
Luce Island	Charts Nos. 8244 & 8255	Be retained.
Martin Island	Charts Nos. 8244 & 8255	Be retained.
Mertz Island	Charts Nos. 8244 & 8255	Be retained.
Silver Point	Charts Nos. 8244 & 8255	Be retained.

STATISTICS:

32.9 Statute miles of shoreline.

5.4 Square statute miles of area.

Respectfully submitted,

Joseph E. Waugh Jr.

Joseph E. Waugh, Jr.,
Aid, C. & G. S.

APPROVED & FORWARDED:

G. C. Jones

G. C. Jones,
Chief of Party, C. & G. S.

	Remarks	Decisions
1		570353
2		"
3		"
4		"
5		"
6		"
7		" USGB
8		"
9		569353
10		570353 USGB
11		
12		"
13		"
14		"
15		570352
16		"
17	To be referred to DGN: do not ink	"
18		570350 USGB
19		570353
20		"
21		"
22	For title only.	570355
23		
24		
25		
26		
27		

M 234

GEOGRAPHIC NAMES

Survey No. T-6636

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Eastern Channel										1
Liak Rock										2
The Eckholms										3
Belknap Islands										4
Luce Island										5
Error Island										6
Kutchuma Islands										7
Mertz Islands										8
Long Islands										9
Emgeten Island										10
[illegible]										11
Aleutkina Bay										12
Berry Island										13
Martin Island										14
Silver Point										15
Cobb Island										16
Leesoffskaia Bay										17
Baranof Island										18
Kayak Islands										19
Boidarkin Island										20
Fassett Island										21
Sitka Sound										22
										23
										24
										25
										26
										27

Names underlined in red approved by L. Heck on 6/27/39

M 234

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
[redacted]
No. T-6636

received April 29, 1939
registered June 22, 1939
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
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30			
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62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed

✓ TBR

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6636 (1938) FIELD NO. F

Eastern Channel to Aleutkina Bay, Sitka Sound, S.E. Alaska.
Surveyed in May-Aug., 1938, Scale 1:10,000.
Instructions dated March 7 and May 5, 1938 (EXPLORER)

Plane Table Survey — Aluminum Mounted

Chief of Party - G. C. Jones
Surveyed by - J. E. Waugh
Inked by - J. E. Waugh

1. Junctions with Contemporary Surveys.

The present survey makes a satisfactory overlap with T-6632 (1938) on the most southerly island of the Kayak group. Overlaps with other new surveys on the north are confined to control.

2. Comparison with Prior Surveys.

a. H-1439 (1879), 1:15,000 (contains topography)

The above survey covers a large part of the same area covered by the present survey. It is much inferior to the latter as regards survey methods and detail. The present survey supersedes it in the common area.

b. T-2149 (1893), 1:20,000; T-2150 (1893), 1:10,000; T-2290 (1893-97), 1:40,000.

The first two of the above are shoreline surveys; the third is a form line survey. The descriptive report, pages 3 to 6, discusses individual differences between old and new surveys. In general, the old shoreline is quite similar to the new but differs in detail much as if it might have been drawn mostly by means of cuts and sketching rather than from rod readings. Form lines on T-2290 are at 200 foot intervals as compared with 100 foot intervals on the present survey. Agreement of form line detail is fair. The present survey is adequate and supersedes the old surveys in the common area.

3. Comparison with Chart 8244 (New Print of June 11, 1937)
Chart 8255 (New Print of May 24, 1939)

a. Topography.

Topography charted in the area covered by the present survey originates with surveys discussed in the foregoing paragraphs.

b. Aids to Navigation.

Survey positions of floating aids are in substantial

agreement with charted positions. Positions on contemporary hydrographic surveys are probably more accurate, however, and should take precedence over those on the present survey.

4. Condition of Survey.

Satisfactory.

5. Compliance with Instructions for the Project.

Satisfactory.

6. Additional Field Work Recommended.

None.

7. Reviewed by - J. A. McCormick, September 14, 1939.

8. Inspected by - H. R. Edmonston.

Examined & Approved:

T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

Fred. L. Peacock
Chief, Section of Field Work.

Chief, Division of H. & T.

11/25/49

T-6636

Rock and rock elevation data shown in green ink was applied in 1949 from photographs field inspected in 1947.

L. C. Lande

L. C. Lande, Chief
Graphic Compilation Section
Division of Photogrammetry