

4603

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Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
....., Director

State: SE Alaska

DESCRIPTIVE REPORT
Topographic } Sheet No. 4603
Hydrographic }

LOCALITY
Cross Sound - Yakobi I.
Surge Bay to Soapstone Pt.

1926

CHIEF OF PARTY
A. M. Sobieralski

GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET NO.

Outer Coast of Yakobi Island from
Surge Bay to Soapstone Point

Hydrography executed under orders dated Feb. 12, 1926, issued
to the Commanding Officer of the Str. SURVEYOR

GENERAL DESCRIPTION OF THE COAST

The coast is rocky and rugged, with many reefs and outlying rocks and numerous small inlets and bays. From Surge Bay, the southern limit of the sheet, the shore line trends north-westward to Cape Bingham, and from Cape Bingham, northeastward to Soapstone Point and Lisianski Strait.

Cross Sound is to the northward of Yakobi Island.

There are many outlying reefs and islands, and vessels making along the shore should pass outside all islands and rocks awash, as any passage inside should be attempted only by small craft with excellent local knowledge.

There is a strong tidal current setting northerly with the flood and southerly with the ebb tide, and changes approximately with high and low waters at Cape Bingham, which is ten minutes after high and low waters at Sitka.

The current has a velocity of approximately two knots in the vicinity of Yakobi Rock, and tapers off as one passes to the southward.

There are large tide rips in the shoal water near Yakobi Rock, and a very choppy sea in and near Cross Sound with an ebb tide and a westerly or southwesterly breeze.

While the instructions called for a junction with hydrographic sheet no. 2558, it was considered advisable to drop some additional soundings, especially in the cove westward of Soapstone Point, and in Indian Cove, eastward of Soapstone point. Off Soapstone Point an effort was made to locate the rock shown on chart 8304, but while very irregular bottom was found, the rocks themselves were not seen. Detached rocks occur close to shore in this vicinity and it is not advisable for vessels to seek anchorage along the coast, as pinnacle rocks may occur.

LANDMARKS

The only landmark of value to navigators is Yakobi Rock, a bare rock island, 20 feet high, covered liberally with bird lime, and 1/2 miles to the northwestward of Cape Bingham. There are no dangers within 1/2 mile of shore for vessels making into Cross Sound.

*ASG in
C.D. - J.W.M.

BARS AND CHANNELS

Channel into Indian Cove

Indian Cove is a small cove located to the southeastward of Soapstone Point, and provides a good anchorage for small craft. The channel has a least depth of ~~six~~ ^{seven} feet at mean L.L.W. Enter the channel on a course of 213° true (S mag.) and steer mid channel until abeam of the point to the northeastward of the small bight to the left. There is a sign on this point maintained by the Bureau of Fisheries. When abeam of this point turn sharply to the left ^{to avoid short off-shore} and pass into the cove by ~~holding about 30 meters off the left shore.~~ ^{forming eastern shore slightly.} The Cove has from 8 to 9 feet of water at M.L.L.W., with a soft mud bottom and is sheltered in all directions.

A.M.S.
A.M.S.

There is an anchorage for larger vessels, 250° true (SW 1/2 S) from the most northerly point of Soapstone Point exposed to the East, North and West, in 16 to 19 fathoms, sand bottom, with swinging room 700 meters wide.

There are no anchorages along the coast north of Surge Bay.

The depths and shore lines are not subject to change.

Indian Cove, the cove to the southeastward of Soapstone Point, is a well established, local name.

Yakobi Rock - the name appears on an old chart.

Inset of Indian Cove is to a 1:10,000 scale, projection is made with 30" meridians and parallels.

There is a Naval Radio Compass at Soapstone and a Naval Radio Station at Indian Cove.

STATISTICS FOR HYDROGRAPHIC SHEET NO. A

<u>Date</u>	<u>Boat Used</u>	<u>Miles</u>	<u>Soundings</u>	<u>Positions</u>	<u>Day</u>
Sept. 22	Cosmos	12.9	207	118	A
23	"	12.8	184	110	B
24	"	12.5	103	65	C
25	"	3.3	86	48	D
27	"	4.0	56	42	E
28	"	1.4	20	12	F
16	Delta	4.5	71	30	a
17	"	15.0	230	95	b
18	"	10.3	174	72	c
20	"	18.5	346	132	d
23	"	5.8	289	79	e
24	"	8.0	143	62	f
25	"	12.0	240	88	g
27	"	2.0	60	27	h
TOTALS		122.9	2209	980	

March 19, 1927.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4004

Locality: S. E. ALASKA.

Chief of Party: A. M. Sobieralski.

Plane of reference is: M. L. L. W.
7.0 ft. on tide staff at Sarge Bay.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G. Wade

Chief, Division of Tides and Currents.

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

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

November 17, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4603

Cross Sound, Yakobi Island, Southeast Alaska

Surveyed in 1926

Instructions dated February 12, 1926.

Chief of Party, A. M. Sobieralski.

Surveyed by A. P. Ratti and E. B. Latham.

Protracted and soundings plotted by E. B. Latham.

Verified and inked by J. T. Jarman.

1. The records conform to the requirements of the General Instructions with exception of the infraction below:

In direct disobedience to paragraph 304 of the General Instructions, erasures of signals occur in the records.

2. The plan and character of the development fulfill the requirements of the General Instructions.
3. The usual depth curves can be satisfactorily drawn.
4. The field plotting was completed to the extent prescribed by the General Instructions with the following exceptions noted:
 - a. Very few bottom characteristics were plotted (Paragraph 319, section g, General Instructions.
 - b. Many errors occurred on the sheet in converting fractions (feet to fathoms). Evidently paragraph 338 of the General Instructions was not referred to.
 - c. The spacing of soundings as set forth by paragraph 351 of the General Instructions was not observed.
5. The office draftsman plotted 298 soundings left out by the field draftsman.

Signals Bol, Buz and Dad had to be relocated. The above change necessitated the replotting of 49 positions and something over 150 soundings.

The triangulation stations and projection were checked in the office.

Statistics on Verification of Sheet

No. soundings	2209
No. positions	980
No. positions checked	654
No. positions changed	72

Time interval - irregular

Character of sheet - generally open, with several shoal developments.

6. The junction with H. 4602 on the south is satisfactory.

Remarks: A close check on the speed of the COSMOS during the offshore survey showed that on several occasions it was making 13 knots per hour or better (20 knots in one instance). Since the speed of the COSMOS is 7 knots per hour and the current in the vicinity of the survey rarely exceeds 2 knots per hour, the office is at a loss as to how the excessive speed may best be explained. It has been suggested that there may be an error in the recording of the running time.

A complete summary of statistics on the verification of H. 4603, giving the numerical number of errors and an explanation is attached to this report.

Report by J. T. Jarman.

Statistics on H. 4603

1. Soundings not plotted by field draftsman but put in by office draftsman - 296.
2. Errors in converting feet to fathoms - 63

Examples:

Calling 8 fathoms and 5 feet -	9	fathoms
" 7 " " 2 " -	8	"
" 8 " " 2 " -	8 3/6	"
" 9 " " 3 " -	9 1/2	"

3. Poor spacing - over entire sheet.

No attention was paid to changes in time interval. As a general rule, soundings between positions had to be respaced.

4. Errors in plotting of soundings - 4 (gross errors).

Example:

As it was plotted by field draftsman

21 9 4 3 3 3
64e 62e

As it should have been plotted

21 9 4 4 3
64e 63e

Sounding on position 10 h was plotted 6 1/6 fathoms by field draftsman instead of 1 fathom as recorded.

5. Erasures of signals in record book occurred on the following positions:

3 d	80 d	33 e	45 e	54 e
11 d	94 d	35 e	46 e	56 e
26 d	97 d	42 e	47 e	67 e
65 d	111 d	43 e	52 e	6 f
77 d	1 e	44 e	53 e	55 g
79 d	10 e			

6. Instances in which the average of similar soundings was plotted without regard to the time interval - 21

As it was plotted by field draftsman

8 8 8
4 4 4

As it should have been plotted

8 8 8 8
4 4 4 4

Statistics on H. 4603 - 2

7. It was necessary to change three signals (Bol, Buz and Dad).
The above changes necessitated the replotting of 49 positions.
8. Neither the projection or triangulation stations had been checked when the sheet was received by office draftsman.
9. Errors in protracting, not including those due to change of signals - 72.
10. Weak fixes:

10 e	5 e
11 e	35 f
7 e	36 f
4 e	
11. Very few bottom characteristics were plotted by the field draftsman.
12. Instances in which it was discovered that the COSMOS was making 13 knots per hour or more - 5. (The COSMOS is rated at 7 knots per hour and the current in the vicinity of the survey rarely exceeded 2 knots per hour.)

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

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DRM

WASHINGTON

February 4, 1929.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4603

Surveyed in 1926

Chief of Party, A. M. Sobieralski.

Surveyed by A. P. Ratti and E. B. Latham.

Protracted and Soundings plotted by E. B. Latham.

Verified and inked by J. T. Jarman.

1. The records conform to the requirements of the General Instructions, except as noted in report of verifier.
2. The plan and character of development satisfy the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. There were very few sounding line crossings, but those that were made are satisfactory. In an area as broken as is this area, sounding line crossings are of limited value as checks.
5. The usual depth curves can be drawn except in foul areas where it would be unsafe to sound with a launch.
6. The field plotting was completed to the extent prescribed in the General Instructions except as noted in the report of verifier.
7. It was necessary for the office draftsman to do over part of the drafting done by the field party. Statistics of work done over by the office draftsman are given in report of verifier.
8. Junctions with adjacent sheets are satisfactory.
9. The areas on this sheet in which there is probability that dangers may have been missed by the field party are very close to the shore or to the foul water near the shore. The only important

areas close inshore are Indian Cove and approaches and the north and south channel and adjacent small boat anchorages, lying inside of the string of rocks and islets extending from Yakobi Rocks to triangulation station Channel. It is believed that these areas have been sufficiently developed except as reported under 10-d. It is believed that the remaining areas have been sufficiently developed for a locality of this character in view of the present and probable future lack of importance of the area. In the event of future commercial importance, further development should be considered. Otherwise, it is believed that further work is unwarranted, except as recommended under 10-d.

A hasty examination of the sheet gives the impression of insufficient development. However, a closer examination and consideration of all of the factors involves limits the work open to question to localities so near the foul areas that its importance is considerably minimized.

10. In view of the extremely irregular nature of the bottom, and the prevalence of rocks and shoals rising with little or no indication, it is recommended that this sheet be used to supplement, and not to supersede, sheet No. 2558.

Points to be considered are as follows:

- a. A $4 \frac{5}{6}$ fathom spot is shown on this sheet approximately 700 meters S 30° W of Station Cad. A $4 \frac{1}{4}$ fathom spot is shown on sheet No. 2558 approximately 600 meters S 40° W of Station Cad. A check in the plotting of these spots failed to show any changes in position. The two spots shown probably refer to the same position. However, there is nothing to prove that there are not two spots, and it is recommended that both be retained.
- b. Two rocks awash and one sunken rock are shown on topographic sheet No. 2572 north of Soapstone Point. An unsuccessful search was made for these rocks by the field party. In view of the extremely broken character of the bottom it is recommended that these rocks be retained.
- c. A rock awash is shown on topographic sheet No. 2572 approximately 1140 meters S 15° W of Station Cad. This rock and a rock awash approximately 300 meters west of it are shown on hydrographic sheet No. 2558. These rocks are not shown on sheet 4603 or on the accompanying topographic sheet, the inshore one transferred to sheet 4603 lying between a 13 and a 17 fathom sounding, and the outer one lying between a $5 \frac{5}{6}$ and an $8 \frac{1}{2}$ fathom sounding. A wire drag set at 25 feet passed just outside of the position of the outer rock. In the record for sheet 2552

the notation "5 M. from K patch" was found opposite position 2 i. This corresponds with the location of the outer rock. It is recommended that the inshore rock be retained as a rock awash and that the outer rock be changed to a sunken rock, inasmuch as there is evidence to support the existence of the inshore rock, but no evidence to support the existence of the outside rock as a rock awash.

d. A 19 fathom spot is shown in the inset for Indian Cove approximately 900 meters N 40° E from Soapstone Radio Station. A 26 fathom sounding is shown on sheet 2552 in approximately this position. This sounding occurs where deeper water would be expected. It is recommended that further development of this spot be considered if a convenient opportunity arises.

In the verifier's report the statement is made that a sounding speed of 20 miles per hour for the COSMOS would have been required to make good some of the positions. It is suggested that a part of the excessive speed might be accounted for by the drift of the COSMOS while stopped to sound and while getting on course after going ahead.

11. See paragraph 9.
12. Reviewed by W. M. Scaife, February 1, 1929.

Approved:

Chief, Section of Field Records (Charts)

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4603

HYDROGRAPHIC TITLE SHEET

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

Field No. 3

REGISTER NO. 4603

State SE Alaska

General locality ~~Outside Coast~~ Cross Sound, Yakobi Island

Locality Surge Bay - Soapstone Point

Scale 1:10,000
1:20,000 Date of survey Sept.-Oct., 1926

Vessel Delta and Cosmos

Chief of Party A. M. Sobieralski

Surveyed by A. P. Ratti and E. B. Latham

Protracted by E. B. Latham

Soundings penciled by E. B. Latham

Soundings in fathoms feet

Plane of reference Surge Bay T. G. 7.8 M.L.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated February 12, 1926

Remarks: