5180

Form 504
Ed. June, 1928

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

State: ALASKA

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } *Sheet No.* 22 5180

LOCALITY

KODIAK ISLAND
SITKINAK AND
TUGIDAK ISLANDS

1931

CHIEF OF PARTY

F.B.T.SIEMS, Comdr. U.S.C. & G.S.

U. S. GOVERNMENT PRINTING OFFICE: 1931

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Form 537
Ed. Dec., 1930

REG. NO. 5180

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 22

REGISTER NO. 5180

State Alaska

General locality Kodiak Island

Locality ~~Sitkinak Island~~ Vicinity of Trinity Is.

Scale 1;20,000 Date of survey May 27 to Sept.24, 1931

Vessel Helianthus,Launch#3, Launch#4, Motorsailer.

Chief of Party F.B.T.Siems.

Surveyed by F.B.T.Siems,A.C.Thorson,W.J.Chovan E.C.Baum,G.M.Marchand.

Protracted by E.C.Baum

Soundings penciled by E.C.Baum

Soundings in fathoms ~~Feet~~**

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by G.H.Streeter

Verified by G.H.S.

Instructions dated April 17,1931 Project 58, 19

Remarks:

U. S. GOVERNMENT PRINTING OFFICE: 1931

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC FIELD SHEET NO.22
SITKINAK ISLAND
KODIAK ISLAND

Str. SURVEYOR F.B.T.SIEMS, Comd'g.

Scale 1:20,000

INSTRUCTIONS: This work was accomplished under instructions dated April 17,1931, project #58.

SURVEY BY: F.B.T.Siems, A.C.Thorson, W.J.Chovan, E.C.Baum, G.M.Marchand.

GENERAL LOCATION: The areas surveyed on this sheet are, the north entrance to passage between Sitkinak and Tugidak Islands, and the northeast corner of Sitkinak Island. The former joins hydrographic sheet (field) # 41, 5181 to the north, and registered sheet # 5081 to the east. The latter joins hydrographic sheets # 42, 5182 to the east, and registered sheet # 5080 to the north and west.

SURVEY METHODS: Standard hydrographic survey methods were used thruout. Depths were obtained by handlead, machine soundings, and a small section by fathometer.

DISCREPANCIES: A discrepancy of $1\frac{3}{4}$ fathoms was found on several soundings governed by positions #163f, 164f and 165f (green lower case - launch #3 - vol. # 3), at latitude 56 degrees 35 minutes, longitude 154 degrees 21.8 minutes. Discrepancies in depth show this line to be 70 meters (maximum) too far to westward. An overlay # 1 (attached to the smooth sheet) was constructed and the locii of positions in doubt were plotted by left angles only, as the right angles appear in error. Another overlay #2 was constructed, giving the theoretical path of launch, governed by time for distance, and courses for direction, between positions 162 to 166f, which appear to be free from error. Overlay #2 was then placed on overlay #1, which in turn was placed over the smooth sheet, and positions #162f and 166f were made to coincide respectively. The most probable positions were then established on the locii of the left angles respectively. Overlay #2 shows in green the final analysis. The corrected locations of soundings are shown on the smooth sheet in red crayon.

A shoal with less than 3 fathoms, and a minimum depth of 1-2/6 fathoms, extends in a N.W. by W. direction from ⊙ Out, for a distance of $1\frac{1}{2}$ miles. Hfms on Sheet. JWM.

A shoal baring 2 ft. at M.L.L.W. is located at latitude 56 degrees 36.45 minutes, longitude 154 degrees 30.8 minutes. A danger area, with less than 3 fathoms of water, extends $\frac{1}{2}$ mile offshore from this shoal, and should be avoided.

Several rocks baring at M.L.L.W. were found along the northwest shore of Sitkinak Island. None were found more than 0.4 mile offshore. Inspection of the smooth sheet will show their locations.

Two groups of off-lying rocks, 1 mile N.E. by N. from northeasternmost part of Sitkinak Island, are a source of danger; the higher of the outer group being 17 ft., and the higher of the inner group 9 ft. elevation. There are no well-defined depth curves at a navigable distance off the outer rock. The 20-fathom curve is quite well defined but it passes close to the outer rock.

CHANNELS: Whether passage between Tugidak and Sitkinak Islands exists, cannot be determined until the hydrographic survey is extended southward.

ANCHORAGES: No anchorages were found.

COMPARISONS WITH PREVIOUS SURVEYS: No previous hydrographic surveys existed in this area.

WIREDRAG GROUNDINGS: No wire drag was executed.

GEOGRAPHIC NAMES: No new geographic names were used.

PLOTTING: In plotting this sheet the following day-letter designations were used:

Record of sheet # 22

Surveyor	Red	Upper case letters
Helianthus	Green	" " "
Launch # # 3	"	Lower " "
" # 4	Blue	" " "
Motorsailer	Red	" " "

STATISTICS: A table of statistics attached to this report.

REMARKS: Rocks obtained from hydrographic surveys are shown on topographic sheet in pencil. A strip of kelp extending up to a mile off shore was found between ⊙'s Nia and Foot.

Verification of smooth sheet plotting was accompliwhed by superimposing boat sheet tracing of positions on smooth sheet. Appreciable discrepancies were inspected and errors corrected.

BOTTOM CHARACTERISTICS: Tugidak Island which is comparatively low, is an alluvion deposit of sand and gravel, as opposed to a shale and gravel composition on mountainous Sitkinak Island, which has indications of bed-rock close to the surface, in its numerous ledge-rock patches just off the beach. No rock-ledge formation is in evidence near Tugidak Island, however a level boulder-patch about awash at ML.L.W. lies off the Tugidak shore with extensive shoaling of rock indication by the lead, in this locality, which is probably also of boulder formation. An indication of the nature of the bottom is futher had by the action of a very strong tidal current between Tugidak and Sitkinak Islands, in that a deep

narrow channel is gouged through this material. Bed-rock would probably be found only at a great depth, except near Sitkinak Island. Except for boulder-patch shoalings of appreciable area, the bottom of sand and gravel has a gentle sloping surface under 5 or 6 fathoms, which is evidently due to the leveling effect of sea-action at this depth. A single large boulder or boulder-patch of small afea would in the course of time be undermined by the sea action and currents, and subside to the general level. It is therefore reasonably safe to assume that there are no outcropping dangers in this area.

Respectfully submitted:

Edwin C Baum

Edwin C.Baum, Jr.H.& G.E.
U.S.C.& G.S.Str.Surveyor.

Approved and Forwarded:

F.B.T.Siems

F.B.T.Siems, H.& G.E.
Commanding Surveyor.

APPROVAL PF CHIEF OF PARTY

The field and office work of Hydrographic Sheet (field) #22 was accomplished under my immediate supervision and the sheets and records have been inspected by me and herewith approved.

Additional work is recommended on inshore lines, in heavy kelp, on southeast coast of Sitkinak Island. It is believed, that this work can be more efficiently accomplished at the beginning of a field season, as this grouth is not so heavy at that time. It was prevented during the latter part of last season.

F.B.T.Siems, H.& G.Engineer,
Chief of Party.

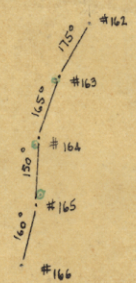
STATISTICS FOR SHEET NO. 22

DATE	VOL.	DAY	STATUTE MI.	POSITIONS	SOUNDINGS	VESSEL
June 17	1	a	15.0	78	309	Launch No.3
" 18	1	b	22.5	147	556	"
" 22	1	c	20.0	116	461	"
" 23	2	d	27.0	162	678	"
" 24	2	e	32.5	163	765	"
" 25	3	f	36.0	179	574	"
Sept. 4	3	g	13.0	73	205	"
" 11	3&4	h	12.3	89	166	Launch No.4
" 24	4	j	7.4	25	112	SURVEYOR
" 29	4	k	2.3	12	31	"
Aug. 17	5	a	30.9	237	738	Launch No.4
" 18	5&6	b	33.6	246	683	"
" 22	6	c	13.2	82	213	"
" 24	6&7	d	28.0	225	481	"
" 25	7	e	14.4	122	306	"
Sept. 3	7	f	7.3	46	114	"
May 27	8	a	20.2	116	532	Motorsailer
July 15	8	b	14.0	80	280	"
Aug. 17	8	c	17.6	131	413	"
" 18	9	d	22.1	166	456	"
" 24	9	e	21.2	142	492	"
Sept. 4	9&10	f	13.7	71	184	"
" 11	10	g	13.7	78	216	"
Aug. 21	11	A	5.0	20	79	Helianthus
" 22	11	B	18.0	60	215	"
" 24	11	C	17.0	76	240	"
" 25	11	D	5.8	31	95	"
				2473	9599	

To accompany H-5180

See descriptive report.

Overlay #2 to accompany hydrographic sheet #22 (field) with reference to positions #162, 163 & 164 f (green lower case launch #3).



Lee

May 27, 1932.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 5180

Locality **Vicinity of Trinidad Islands, South Coast Kodiak Island, Alaska.**

Chief of Party: **F.B.T. Siems in 1931**
Plane of reference is **mean lower low water, reading**
3.3 ft. on tide staff at **Lazy Bay**
17.7 ft. below B. M. **3**
2.2 ft. on tide staff at Jap Bay
8.4 ft. below B. M. 1

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 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. **In four days work wrong reducers were entered and checked by field party making considerable extra work for the office.**

H. R. Harmon
Actg Chief, Division of Tides and Currents.

2.9 ft. on tide staff at Three Saints Bay
11.9 ft. below B. M. 1
4.5 ft. on tide staff at Port Hobron
11.7 ft. below B. M. 1

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5180

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	2973
Number of positions checked	935
Number of positions revised	86
Number of soundings recorded	9594
Number of soundings revised	1181
Number of signals erroneously plotted or transferred	✓

Date: Aug. 30, 1932

Cartographer: Gaylord H. Streeter

Section of Field ~~Work~~ Records

Report on H-5180
Chief of Party F. B. J. Siems
Protracted by E. C. Baum
Verified and inked by G. H. Streeter

Surveyed by J. B. J. d., A. C. Thorson, W. J. Chovan, C. C. B., G. M. Marchand
Soundings plotted by C. C. B.
Topography inked by Field Party

1. The records conform to the requirements of the General Instructions.
2. The usual depth curves can be drawn.
3. The field plotting was completed to the extent prescribed in the general instructions.
4. It was necessary for the office draftsman to ink in the shore line east of station "Gud" and check the topographic stations.
   Three lines had to be replotted: (a) Line 209 to 218 and 218 blue d. Center object "New" was recorded instead of "East." (b) Line 53 to 78 blue e. Center object "Log" was used instead of the recorded "End". These discrepancies were obviously incorrect and it is apparent that the boat sheet was not consulted.
   (c) Line 5 to 10 red c. Position "6" was numbered "5," "7" was numbered "6" and so on up to "10". A cross line with 64 red c was used as number "10" position. This error was undoubtedly caused by the omission of position "5" which has a ~~[illegible]~~ rejected angle.
5. The junction with adjacent sheets is satisfactory. (H-5080 and H-5081 being the only completed sheets joining this survey.)

6. The penciled soundings were a little too large and the position numbers, for the most part, were put entirely too close to the position forpes interfering of course with the soundings.

Many tide reductions were incorrectly recorded (they were corrected in the Tides + Current Division.) This discrepancy necessitated correcting 1160 penciled soundings on the smooth sheet.

In volume #9, page 12 an improbable interval of 5 seconds is recorded.

For volume #11 a boat sheet of H-5181 was used. This [redacted] is not mentioned in the descriptive Report.

7. The quality of the field drafting is good.

Respectfully submitted,

G. H. Streeter

Aug. 30, 1932

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. H. 5180.
Sitkinak Strait, Alaska.
Surveyed in 1931.
Instructions dated April 17, 1931 (Surveyor).
Hand lead, Machine, Fathometer Soundings - Three Point Control.

Chief of Party - F. B. T. Siems.
Surveyed by - F. B. T. Siems and various officers.
Protracted and soundings plotted by - E. C. Baum.
Verified and inked by - G. H. Streeter.

1. Records.

The records conform to the requirements of the Hydrographic Manual.

2. Specific Instructions.

The plan and extent of development satisfy the specific instructions.

3. Depth Curves.

The usual depth curves can be completely drawn with the exception of the area to the southeast of Sitkinak Island (see insert) where the heavy kelp prevented carrying the hydrography closer inshore than 10 fathom curve.

4. Field Drafting.

The usual field drafting was accomplished by the field party, but is subject to the following criticism: A failure to closely consult the boat sheet resulted in the incorrect plotting of two lines of soundings (Line 209 to 218 blue "d" and Line 53 to 78 blue "1".) In the first case the wrong center object was recorded and in the second case the wrong center object was used. In both cases the smooth plotting differed from the boat sheet plotting, the latter placing the soundings in a more probable position.

5. Junction with surveys.

The junctions with the contemporary surveys H. 5080 and H. 5081 are satisfactory. The junctions with H. 5181 and H. 5182 will be considered in the review for those sheets.

There are no old surveys covering the limits of the present survey.

6. Additional Work.

The recommendation of the Chief of Party that additional work be done on the inshore area southeast of Sitkinak Island (now marked by heavy kelp on the smooth sheet) is concurred in.

7. Reviewed by - A. L. Shalowitz. September 1932.

Approved: A. M. Sobieralski. (signed)