

5179

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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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APR 19 1932

State: S. W. ALASKA

Acc. No. _____

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 121 5179

LOCALITY

~~OFF~~ S.W. COAST OF KODIAK ISLAND

Off Cape Alitak

19 31

CHIEF OF PARTY

F. B. T. SIEMS H. & G. E.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5179

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. 121

REGISTER NO. 5179

State ~~S. W.~~ ALASKA

General locality S.W. of KODIAK ISLAND

Locality ~~OFF SOUTHWEST COAST, KODIAK ISLAND~~ Off Cape Alitak

Scale 1-120,000 Date of survey MAY 12 to JUNE 10, 1931

Vessel Str. SURVEYOR

Chief of Party F. B. T. SIEMS

Surveyed by F. B. T. SIEMS

Protracted by R. A. EARLE

Soundings penciled by R. A. EARLE

Soundings in fathoms ~~feet~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by NONE

Inked by

Verified by

Instructions dated APRIL 17, 1931

Remarks:

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 121

U.S.C. & G.S.S. SURVEYOR

F.B.T.SIEMS, COM'D'G.

Surveyed by - F.B.T.SIEMS

May 12 - June 10, 1931

Instructions dated April 17, 1931

LIMITS:

This sheet covers an area off the southwest coast of Kodiak Island. It connects with Sheets 5077 and 5089 (1930 surveys) on the north; and with Sheet No. 41 of the 1931 surveys on the southeast. The remainder of the area adjacent to this sheet has been un-surveyed.

SURVEY METHODS:

All soundings on this sheet were taken by the SURVEYOR, the position of the ship being obtained by three point fixes observed on triangulation points - mainly peaks.

Depths were obtained by the use of the fathometer; however frequent vertical casts, and on "E" and "F" days, leadline sounding with machine (See Hydrographic Manual page 46) were taken simultaneously with fathometer soundings.

DISCREPANCIES:

The irregularity of the 20 fathom curve and the failure of soundings to check exactly by the two methods on "E" and "F" days is probably due to the fact that the fathometer work was done in the early part of the season before it was discovered that low frequencies gave the most constant fathometer readings. (See Report on Reduction of Fathometer Soundings and Notes on Fathometer Operation, Assoc. Field Engineer Bulletin for December 1931); and also due to the fact that the deeper leadline soundings with machine are in question.

This doubt as to the reliability of the hand lead soundings with machine in the deeper depths (approximately over 15 fathoms) is explained as follows: If the wire from the sounding machine is retarded by friction there is a likelihood of a bow forming in the measuring line and inability on the part of the leadman to effect sufficient lifting power to bring measuring line vertically taut. This appeared to be the trouble in this survey, it was impossible to cause the sounding machine to operate freely enough to avoid retardation. The measuring line was constructed in the usual manner, it contained 10 fathoms of stranded wire adjacent to the lead.

Where fathometer and hand-lead with machine soundings were taken simultaneously preference was given to the hand-lead with machine soundings since the fathometer soundings before using low frequencies in depths under 20 fathoms are considered of a lesser degree of accuracy than the hand-lead soundings with machine.

Positions 28 to 34 "A" day rejected because of questionable fathometer soundings. ✓

Positions 85, 87 and 88 "A" ^{day} rejected because of questionable fixes. ✓

Positions 10 - 12 "J" day rejected because of questionable fixes. ✓

The area within the 20 fathom curve covered by this sheet is part of the bank extending seaward from Tugidak Island. This bank is evidently an extensive glacial deposit with boulder patches. There are probably no outcropping dangers in the form of ledge rock. The intensive surveys on the inshore sheets 21 and 41 (See descriptive reports for these sheets) indicate small shoalings of 2 to 3 fathoms above the general depths, as does this sheet. ✓

The work is offshore and requires clear weather for its execution. The beginning of the season was devoted to this accomplishment, in conjunction with work closer inshore. Due to insufficient clear weather, however, while operating in this locality it was impossible to complete the extensive development necessary inside the 20 fathom curve, and as the work was also far removed from the main field of operation it was impracticable to return to the locality during the season.

COMPARISON WITH PREVIOUS SURVEYS:

Previous surveys of this area were of a reconnaissance nature; consequently no comparisons could be made. ✓

DANGERS - CHANNELS - ANCHORAGES:

There are no dangers, channels or anchorages within the limits of the hydrography. There are, however, several small shoals of 11 to 12 fathoms surrounded by general depths of about 14 to 16 fathoms. Some of these have been obtained by the fathometer and are questionable. ✓

GEOGRAPHIC NAMES AND LANDMARKS FOR CHARTS:

Geographic names and landmarks for charts would be exactly similar to those submitted with sheet 101 (H-5077) of the 1930 surveys; therefore no additional lists are submitted.

STATISTICS:

A table of statistics accompanies this sheet.

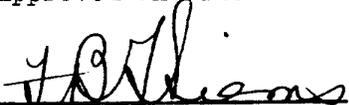
TIDES:

The tidal data is furnished on a separate page and accompanies this report.

A tracing from the smooth sheet superimposed on boat sheet checks positions of triangulation stations plotted independently on both sheets

Approved and Forwarded:

Respectfully submitted:


F.B.T. SIEMS, H.&G.E.
Chief of Party, C.&G.S.

(Signed) R.A. Earle.
R.A. Earle, Jr. H.&G.E.
U.S.C. & G. Survey.

APPROVAL NOTE OF CHIEF OF PARTY

Sheet 121 and accompanying records have been inspected by me and are approved.

The soundings taken on this sheet within the 20 fathom curve probably furnish sufficient information for charting on a ^{small} large scale. The irregularities in the 20 fathom depth curve, accentuated by reason of the gradual sloping bottom are probably due to soundings obtained by the fathometer at the beginning of the season which may be in error by 1 or 2 fathoms.

It is recommended that the area within 20 fathom curve, since it requires further development of its shoals, be supplemented throughout by additional lines when the work to the westward is undertaken. Well defined mountain peaks located by triangulation control this area.



F. B. T. SIEMS, H. & G. E.
CHIEF OF PARTY, C. & G. S.

STATISTICS FOR SHEET NO. 121

DATE	DAY	VOL.	STATUTE MI.	POSITIONS	SOUNDINGS	VESSEL
May 12	A	1	145.4	166	1402	SURVEYOR
"	13	B	1	9.5	12	95
"	15	C	2	134	170	1443
"	18	D	2 & 3	70	77	688
"	20	E	3	42.6	87	544
"	25	F	4	66.8	115	685
June 8	G	4	24	29	230	
"	9	H	4	55.5	61	600
"	10	J	4 & 5	93.8	108	909
				825	4596	

Section of Field Work

Report on H-5179

Chief of Party F. B. J. Siema

Protected by R. A. Earle

Verified and Indexed by G. H. Streeter

Surveyed by F. B. J. S.
Sounding plotted by R. A. E.

1. The geographic names were not penciled in and several bottom characteristics are incorrectly abbreviated otherwise the records conform to the requirements of the general instructions. ✓
2. The usual depth curves can be drawn. ✓
3. The field plotting was completed.
4. The office draftsmen did not have to do over any part of the drafting done by the field party.
5. Junction with sheets no. 5084 and 5089 is satisfactory. The junction with 5077 is not entirely satisfactory for there is a difference of seven fathoms in the vicinity of Long. $155^{\circ}15'$ and Lat. $56^{\circ}55'$. ✓
6. The quality of the field drafting is good. ✓

Respectfully submitted,
G. H. Streeter

June 22, 1932

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5179

Off Cape Alitak, Kodiak Island, Alaska

Surveyed in May and June, 1931

Instructions dated April 17, 1931 (SURVEYOR)

Chief of Party, F.B.T. Siems

Surveyed by F.B.T.S.

Protracted and soundings plotted by R. A. Earle

Verified and inked by G. H. Streeter

Fathometer and machine hand lead

1. The records conform to the requirements of the Hydrographic Manual, except that the standard abbreviations for the bottom characteristics were not always used in the sounding records.
2. The plan and extent of development are in accord with the specific instructions. Further development within the area less than 20 fathoms is proposed for the 1932 season. See Descriptive Report and also instructions dated April 22, 1932.
3. Soundings: The depths shown on the sheet are from fathometer soundings with the exception of seven lines running northeast and southwest (1E day to 80 F day) which are depths determined by hand lead with machine method as described in the Hydrographic Manual. In a few cases on these lines the corrected fathometer depth was plotted where the hand lead sounding was a "miss", the fathometer and hand lead being read simultaneously. For a statement of the relative accuracy of the two methods of sounding see the Descriptive Report.

The field party ~~marked~~^{marked} the 11 fathom depth in lat. $56^{\circ}42'.3$, long. $154^{\circ}41'.4$ "By fathometer questionable". It should not be rejected unless further development will prove that it is in error. There are several unquestioned 12 fathom depths on this bank.

4. Curves: The 100, 50 and 20-fathom curves are shown on the sheet. The irregular nature of the 20 fathom curve is commented on in the Descriptive Report and the probable cause explained. The conventional system of plotting to whole fathoms tends to increase the irregularity of the curve in gently sloping bottom.

5. Junctions with survey sheets H. 5084 and H. 5089 are satisfactory.

A discrepancy of 3 to 7 fathoms in the junction with H. 5077 probably is due to weak fixes and consequent uncertain location of the joining sounding line on H. 5077.

The verification and inking of H. 5181 has not yet been completed.

Previous surveys of this area were of a reconnaissance nature only and no close comparison was made.

6. Recommendation: At the junction of this sheet and H. 5077 the work on H. 5179 should be given preference; although no dangers to navigation are indicated on the present survey, the additional development of the area less than 20 fathoms as proposed by the field party, is deemed desirable.

Several additional lines should be run to fill in the open spaces in the northwest part of the surveyed area.

7. Reviewed by R. J. Christman, July 1932.

Sheet inspected and recommendations approved by A. L. Shalowitz.

Regarding the irregularities in the 20 fathom curve and the possibility of this being due to discrepancies in the fathometer soundings, it is not entirely clear why a high frequently oscillation should introduce erroneous results on this survey and yet give satisfactory results on other surveys as suggested in the Descriptive Report. Since additional work is to be done inside the 20 fathom curve it is recommended that the finger-like formations in the 20 fathom curve be further investigated. If these lines prove to be erroneous, so much of the work should be resurveyed as is necessary to eliminate all doubt as to the correctness of the soundings to be charted.

Approved:

A. M. Sobieralski
Chief, Section of Field Records.

J. B. Borden
Chief, Section of Field Work.

May 17, 1932.

✓ Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5179

Locality Sitkinak Straits, S.E. Coast of Kodiak Id., 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

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 several places wrong reducers were entered and checked by field party. A. M. tides were entered where P. M. tides should have been used.

Paul F. Whitney
Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5179

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

Number of positions on sheet	.825.
Number of positions checked	.231.
Number of positions revised	..15.
Number of soundings recorded	6596
Number of soundings revised	..51.
Number of signals erroneously plotted or transferred ⁴

Date: June 22, 1932

Cartographer: G. H. Streeter