5100

Diag. Cht. No. 8502-2 & 8552

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, *Director*

State: ~~S.W.~~ ALASKA

DESCRIPTIVE REPORT

~~Topographic~~ / *Hydrographic* } *Sheet No.* 81

5100

LOCALITY

S. of Kenai Peninsula

~~S.W. Alaska~~

Seal Rocks to Nuka ~~Island~~

Bay Approaches

19 30

CHIEF OF PARTY

F. B. T. Siems

U. S. GOVERNMENT PRINTING OFFICE: 1930

5100

Form 537
11—5812

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

REG. NO. 5100

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. 81

REGISTER NO. 5100

State ~~SOUTHWEST~~ ALASKA

General locality S. OF KENAI PENINSULA

Locality Seal Rocks to Nuka Bay Approaches ~~SOUTH COAST; SEAL ROCKS TO NUKA ID.~~

Scale 1/80,000 Date of survey MAY - AUG, 1930

Vessel U. S. S. DISCOVERER

Chief of Party F. B. T. Siems

Surveyed by F. B. T. S., L. D. C.

Protracted by J. L. askowski

Soundings penciled by G. A. Nelson

Soundings in fathoms ~~XXX~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by Warren N Bamford & H W Murray

Verified by W N B & H W Murray.

Instructions dated MARCH 21, 1930

Remarks:

GPO

DESCRIPTIVE REPORT

to

Accompany Hydrographic Sheet #81

AUTHORITY:

This survey was made under the Director's instructions dated March 21, 1930.

LOCALITY:

This sheet covers the offshore area south of Kenai Peninsula from Seal Rocks on the east to Nuka Island in the west, and extends approximately 15 miles offshore.

It joins with Registers Nos. 4856 and 4836 on the east and north east respectively. The inshore junction is with Field Sheets Nos. 42-a and 42-b; the offshore junction with Field Sheet No. 161.

METHOD OF SURVEY:

For control, three point visual fixes were used throughout. Natural objects, previously located by triangulation and topography, being used. Several supplementary objects were located by the hydrographic party. Very little, if any, jump in the lines was experienced in shifting objects.

Soundings were obtained with the fathometer, being recorded at regular intervals of one minute. Numerous vertical casts were obtained at well-balanced intervals over the entire area of the sheet. These checked the fathometer soundings very well after the proper corrections had been applied; less than a fathom in most instances.

The development in the northeast corner of the sheet was done by the M.V. Westdahl, using vertical casts exclusively. These checked the ship's fathometer soundings within a fathom in most cases.

GENERAL DESCRIPTION:

The area covered by this sheet is uniform in both depth and

and character of bottom. Nothing of an unusual character was found. Vertical casts are inclosed with a dotted circle and marked V.C.

changed to this symbol. A.C.S.

Respectfully submitted

F.B.T. Siems,
H.& G.Engr.,
Commanding.

NOTE: There is a chain of several high mountain peaks extending from △ HIGH to Peak C (1927) including peaks A and B. Two of these peaks have been definitely located by the hydrographic party as shown on the smooth sheet. Other peaks in the vicinity of △ HIGH have been located on Boat Sheet 43.(field no., 1930, DISCOVERER)

APPROVAL OF CHIEF OF PARTY

Sheet No. 81 and accompanying records have been inspected and approved by me. No additional work is considered necessary within the limits of the work already accomplished.

F.B.T.Siems
Chief of Party

TABLE OF STATISTICS

HYDROGRAPHIC SHEET #81

DATE	VESSEL	DAY LETTER	POS	SOUNDINGS V. C.	SOUNDINGS FATH.	STAT. MI. SDG. LINES.
MAY 19	SHIP	A	24	1	92	39.1
" 20	"	B	94	3	325	83.0
" 22	"	C	90	6	375	78.0
" 23	"	D	54	2	187	42.5
" 28	"	E	137	14	483	107.0
" 29	"	F	63	2	203	43.1
JUNE 5	"	G	154	6	582	132.0
" 7	"	H	145	11	619	126.0
" 8	"	J	193	13	887	191.0
" 9	"	K	174	12	827	177.0
" 25	"	L	11	1	40	8.0
JULY 14	"	M	27	3	103	18.0
" 21	"	N	65	3	265	46.0
" 22	"	P	15	0	61	11.3
" 23	"	Q	103	4	442	85.0
AUG.14	"	R	16	0	68	13.0
AUG.18	WESTDAHL	a	150	150	---	55.2
" 19	"	b	72	72	---	24.7
TOTALS - - -		18	1587	303	5559	1279.9

Section of Field Records
Report on Sheet H-5100
Seal Rocks to Nuka Bay Approaches, Alaska
Instructions dated Mar. 21, 1930 (Discoverer)

Chief of Party - F.B.T. Siems
Surveyed by - F.B.T.S., L.D. Graham
Date surveyed - May - Aug., 1930
Protracted by - J. Jaskowski
Soundings plotted by - G.A. Nilson
Verified & Inked by - H.W. Murray, W.V. Bamford.

1. The records, plan & character of development fulfill the requirements of the Hydrographic manual.
2. The plan & extent of development satisfy the specific instructions.
3. The crossing lines are adequate.
4. The usual depth curves can be satisfactorily drawn.
5. The field plotting was good except that only 40% of the lines were plotted. The remainder were plotted by the verifier.

6. The majority of the soundings on this sheet were inked and positions 14 to 1931 inclusive were verified by the writer. The remainder were verified & inked by W. H. Bamford including the obtaining of photostats and transferring & overlaps with the exception of H-4836, H-5085 and a small portion of H-5087.

7. There are 8 junctions with adjacent sheets All transfers were made by the verifiers of this sheet (H-5100). Junctions in general are satisfactory with the exception & some minor changes in the 100 fathom curve of H-4836.

8. Dangers – A shoal with a least depth of 31 fathoms has been developed in lat. 59°-28' and long. 149°-41'.

9. Respectfully submitted:- July 9, 1931

Harold W. Murray

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5100

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

Number of positions on sheet	1587
Number of positions checked	351
Number of positions revised	35
Number of soundings recorded	5862
Number of soundings revised	201
Number of signals erroneously plotted or transferred	✓

Date: June 9, 1931

Cartographer: Harold W. Murray, W. H. Bamford

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

AND REFER TO No.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5100

Seal Rocks to Nuka Bay Approaches - Offshore

Kenai Peninsula, Alaska.

Surveyed in 1930

Instructions dated March 23, 1930 (DISCOVERER)

Fathometer & Machine Soundings - Three Point Control

Chief of Party - F. B. T. Siems

Surveyed by F. B. T. S., and L. D. Graham

Protracted by J. T. Laskowski

Soundings plotted by G. A. Nelson

Verified and inked by H. W. Murray and W. H. Bamford.

1. Records:

The records conform to the requirements of the Hydrographic Manual with the exception that in the work of the WESTDAHL there is a lack of conformity with the sample page given on page 116 of the Hydrographic Manual. This has been fully discussed in my review for H-5093.

2. Specific Instructions: The work conforms to the specific Instructions.

3. Sounding line crossings: Wherever fathometer soundings crossed fathometer soundings, almost perfect crossings were obtained, but where the WESTDAHL'S work (vertical casts) on the 50 fathom bank to the south of Seal Rocks crossed the fathometer work of the DISCOVERER the fathometer soundings on several lines average 1 fathom less than the vertical casts. This might be due to the use of a mean index correction for various depths or might be due to the fathometer recording the small irregularities of the bottom. As the depths are not critical, no further study was made of the differences.

4. Depth Curves: The usual depth curves could be completely delineated.

5. Junctions with surveys:

(a) Contemporary surveys: A satisfactory junction was effected with all the adjoining surveys made within the last few years. Generally the soundings are in agreement within one fathom, which is acceptable for this class of work. No consistent differences were noted. At the junction with H-4836, however, there are differences noted as great as five fathoms. In these cases the work on H-4836 are usually deeper. The original records for the old survey were examined and it was found that at that time no index corrections were applied to fathometer soundings. A study of the comparative soundings taken on that survey shows that a one to two fathom minus correction could have been applied to the fathometer soundings. While this does not account for all the differences noted, it would bring the old work in closer harmony with the new work. No corrections have, however, been applied to the old sheet ~~or~~ as the bottom is not of such a character that a difference of one or two fathoms would displace the depth curves materially.

(b) Old surveys: The old surveys that border or overlap the present survey need not be considered in the compilation of the charts for the reason mentioned in the review of the various sheets of the present project that border on these old surveys (see in particular reviews H-5085, H-5087, and H-5091).

Other charted soundings that fall within the limits of the new work are not important and should be disregarded in charting. They come from miscellaneous sources and have not been considered in this review.

6. Field drafting: The field plotting was done in conformity with the Hydrographic Manual.

7. Additional work: No additional work is recommended for this area.

8. Reviewed by A. L. Shalowitz, July, 1931.

Approved:

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

Chief, Division of Charts

B. Bordin
Chief, Section of Field Work.

G. Rude
Chief, Div. of Hyd'y and Top'y

80
16

May 15, 1931

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5100

Locality Seal Rocks to Nuka Bay, S. W. Alaska

Chief of Party: F. B. T. Siems in 1930
Plane of reference is mean lower low water, reading
7.0 ft. on tide staff at Chance Lagoon
21.3 ft. below B. M. 1
2.6 ft. on tide staff at Seward
14.9 ft. below B.M. 1a
5.0 ft. on tide staff at Port Dick
19.2 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.

Paul R. Whitney

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.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

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Approved:

Chief, Section of Field Records.

Chief, Section of Field Work.