

6795



Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

DECLASSIFIED BY NOAA  
PURSUANT TO 50C SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.5(A) EXECUTIVE ORDER 12356.

Type of Survey Hydrographic

Field No. N-5-1942 Office No. H6795

LOCALITY

State Southeastern Alaska

General locality Baranof Island

Locality Fort Armstrong

194 2

CHIEF OF PARTY

Charles Pierce

LIBRARY & ARCHIVES

DATE March 3, 1943

6795



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

H 6795

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. N-5 - 1942

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

REGISTER NO.

State S. E. ALASKA

General locality BARANOF ISLAND

Locality PORT ARMSTRONG

Scale 1/1,000 Date of survey October, 1942

Vessel M. V. WESTDAHL

Chief of Party CHARLES PIERCE

Surveyed by C. F. Chenworth

Protracted by R. M. Sylar

Soundings penciled by R. M. Sylar

Soundings in Ortho feet East

Plane of reference MLW

Subdivision of wire dragged areas by

Inked by P.H. Andros

Verified by P.H. Andros

Instructions dated Navy Request - October 6,, 1942

Remarks: Smooth Sheet Plotting by the

SEATTLE PROCESSING OFFICE.

H8795

DESCRIPTIVE REPORT

To accompany Hydrographic Sheet

N - 5

Port Armstrong, Baranof Island, Chatham Strait

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GUIDELINES AS DESCRIBED IN SECTION  
3.2(a), EXECUTIVE ORDER 12356.

INSTRUCTIONS: Received from the Commanding Officer, Sitka Naval Air Station October 6, 1942. ✓

LIMITS: Detailed surveys of Port Armstrong, Baranof Island particularly in vicinity of the Navy Section Base (Old Saltery) and the cove directly south of the Section Base. ✓

CONTROL: The only existing triangulation at Port Armstrong were stations ELI 1925, close to the outer light, and station SI 1925 1/2 miles southward on the outer coast. Triangulation could not be carried into Port Armstrong from these stations without backing up across Chatham Strait, a plan not feasible at the season of the year we operated. Topographic control was carried into Port Armstrong starting from the line ELI - SI; the distances all were determined by stadia readings; this control plotted on a scale of 1-5,000 on aluminum mounted sheet. The control so established was scaled off as accurately as possible and re-plotted on scales of 1- 1,000 covering the areas at the Section Base and the cove across there from. All the topography was traversed and controlled by these transferred positions. Extreme care was exercised in scaling the topographic stations ( all marked with discs) from the 1-5,000 scale topographic sheet since any error was increased <sup>five</sup> ~~ten~~ fold upon transfer to the 1-1,000 scale sheets. The Processing Office verified our scalings when the topographic sheets were inked. T- 6901 (1942) ✓

SURVEY METHODS:

All of the hydrography completed on this sheet was done with a hand lead from a 16 foot dinghy equipped with a reel and tag line. A wooden reel was securely mounted on the amidship thwart and a lead line 170<sup>5</sup> meters in length marked off every five meters was wound upon this reel. A personnel of four was used in the sounding dinghy, consisting of one helmsman, one recorder, one leadsman and a reel operator. A small outboard motor was mounted on the stern to control the dinghy on the range lines. When ready to start a line the boat was backed out to the end of the line, usually 170<sup>5</sup> meters from the front range, then maneuvered on line and tension so taken up on the tag line as to have it swing clear of the water. A sounding was then taken with the sounding boat at rest. The reel man moved the boat ahead by winding in the tag line, the helmsman maneuvering for range line and tension on the tag line. Soundings were taken as every five meter mark came over the reel, abreast of the leadsman. All soundings were taken with the boat at rest on range and with tension on the tag line. A flag was raised over the reel when cuts were taken on the sounding boat. ✓

As many of the range lines along the docks at the Section Base were necessarily short it was necessary on the maximum length lines to control the outer ends of these lines by cuts from marked topographic stations taken with theodolites.

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3.3(a), EXECUTIVE ORDER 12356.

The spacing of lines for the work at the Section Base is 5 meters and soundings spaced five meters along the lines. For the lines run across the cove from the Section Base, the spacing of lines was six meters and soundings spaced 5 meters along the lines.

The ranges set along the docks at the Section Base were laid down with tape and sextant and no other record exists of these ranges other than the points shown on the boat sheet. For the work across from the Section Base a traverse line was laid down along the beach thru topographic point "ARM". A theodolite was set up at each back range point, six meters apart, as the hydrography proceeded and front ranges set out as far as possible in the water. The angle from the traverse line was 92 degrees. A sextant angle was measured from the sounding dinghy at the extreme end of each sounding line as additional information on the accuracy of the range line and tag line distance position. No other record of these range lines exists other than the positions as shown on the boat sheet.

The sounding record states that all distances were measured from the front ranges. This is an error as the zero of the tag line was set (for the cove across from the Section Base) at the back range except in such instances where offsets are shown in the record. A 50 pound boat anchor was found very convenient for securing the end of the tag line as it could quickly be set in the gravel beach so that the zero of the tag line coincided with the rear range.

The area at the head of the Section Base was not sounded as it was choked with logs which were not found practicable to move. Also during the progress of the sounding a pile driver was secured in the "T" of the Navy dock at station "8".

The records are not extremely clear as to the line run at 14 hours, 15 minutes, on "d" day, October 16th. A sounding was taken at the old dock at range 135-69, (10 feet). Then the boat was moved and a line of soundings was started near the outboard side of the pile driver and run towards range 135-69. A sounding was then taken on the outboard side of the pile driver and another on the inboard side next to the dock at station "8". This interpretation of the record agrees with the soundings shown on the boat sheet. *Plotting O.K.*

During the progress of the work Lieut. Chenworth plotted up the work each night, reducing soundings from the tide marigram, removed for this purpose. The ranges set each day were plotted nightly.

In case of doubt, the boat sheet should be followed, as in some cases the sounding lines may not have started exactly on line, or slight adjustments were made where range line, tag line distance and theodolite cuts on sounding boat failed to intersect in a point.

The actual soundings as recorded and reduced should be followed as shown on the smooth sheet.

COMPARISON WITH CHART NOA 8261

See Seattle Processing Office Notes.

STATISTICS

Area in square statute miles -----	0.02
Statute miles of sounding lines -----	7.1
Number of soundings -----	2308
<i>Number of positions - - - - -</i>	<i>2308</i>

*Charles Pierce*

Respectfully Submitted

Charles Pierce Lt. Cmdr. USC&GS  
February 19, 1943

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GUIDELINES AS DESCRIBED IN SECTION  
3 OF EXECUTIVE ORDER 12356.

*See par. 3  
page 1 of  
Processing  
Office notes*

SEATTLE PROCESSING OFFICE NOTES

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

The sounding lines are designated in the records by the numbers of the front and rear ranges followed in running the lines.

In plotting the northern piece of work all distances are measured from the front range points except on the lines 54-13 and 53-14, where the distances were measured from the back points 13 and 14. In these instances, the front range points which appear in the water were on the outer side of a barge that lay at the wharf.

On the boat sheet we note that there is a datum difference in the upper half of the work. The lower half of the work is correct. So when the outer ends of the long lines of the main system (running southeastward from the two wharfs) were controlled by angles centered at SAL with BO as initial, the datum error at SAL threw the boat sheet lines out of position.

*Boat sheet incorrect with respect to inked projection lines.*

The four lines 125-121, 126-122, 127-123, and 128-124 are controlled at the outer ends by intersections from SAL and SIS. The zero points, which are on the ranges, are set out 50 meters from the front ranges. The lines from zero to 175 meters are then controlled by cuts from SAL and SIS at the 50, 100, 150, and 175 meter points and are not on range.

Other parallel lines are controlled at the outer ends by cuts from SAL and/or SIS.

On Page 47, Vol. 1, the range is given as 134-129. The boat sheet is plotted on SAL-129, and the smooth sheet is similarly plotted.

Two lines adjacent to the western buoy running from the southwest corner of the wharf, 53-14 and 54-13, are also controlled by cuts to the outer ends.

In the northern part of the work where the line depends on range only, the outer ends of the lines were transferred from the boat sheet and the lines drawn to the front ranges.

Where the boat sheet distances did not agree with the recorded distances, the distances were plotted as noted.

For the plotting of the southern piece of work the lines were all plotted on the ranges and distances given in the notes. At the outer ends of the lines sextant angles were taken, but these were in agreement with the ranges and distances at the outer ends of the second, third, fifth, and eighth lines only, counted from the north. The field party informs us that the range poles were carefully placed by theodolite, the ranges being parallel, and could easily be seen and followed closely. However, in plotting,

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GUIDELINES AND DIRECTIVE IN SECTION  
1.3.3 OF EXECUTIVE ORDER 12958

the ranges are very short, and it is easy to swing the outer ends and still appear to be on range. For this reason, when plotting, the range was considered to be at a constant angle of 92 degrees from the line of the back ranges. The field party further informs that the sextant angle at the outer end of the line was taken by an inexperienced observer. Where this angle did not support the other notes, it was ignored. *The range poles were set, by theodolite, as the lines were run. At no time were there more than two range poles in use, so the crossway was not confused as to the range.*

In this southern piece of work, all distances along the sounding lines were measured from the back ranges except that in the two northern lines the zero point of the tag line was set out from the base line of the back range 9 meters and 6.8 meters as noted in the records. This contradicts the notes which say that the distances were measured from the front ranges, and the smooth sheet plotting is supported by the boat sheet and by statements of both Lieut. LeFever and the Chief of Party. Reference is here made to the note on Page 26 of Vol. 2.

Referring to the last paragraph of the report by the Field Party, "in case of doubt, the boat sheet should be followed"; during the plotting of the smooth sheet, Lieut. LeFever and Lieut. Commander Pierce have been consulted, and they have aided with explanations of the notes and approved any variation of the smooth plotting from the boat sheet representation.

COMPARISON WITH THE CHART 8261.

The soundings of this chart on scale of 1/10,000 were enlarged to a scale of 1/1,000 and compared with the smooth sheet. The great difference in scale and the sparsity of charted soundings makes this comparison unsatisfactory. We suggest that a better comparison can be made with the original survey sheet which is not available.

A tracing of the smooth sheet together with tracings of two Port Armstrong topographic sheets were sent to the Commander, Sitka Sub-Sector, Naval Operating Base, Sitka, Alaska, on February 23, 1943.

*Edgar E. Smith*  
Edgar E. Smith  
Assoc. Cartographic Engineer  
Seattle Processing Office.

Approved and forwarded:

*F. H. Hardy*  
F. H. Hardy  
Officer in Charge,  
Seattle Processing Office.

H6795

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

TIDAL NOTE

N-5 - 42

Southeastern Alaska

Baranof Island

Port Armstrong

Latitude 56 17'.8

Longitude 134 39'.7

Staff Reading of HLM 

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LCC  
HMC

### TIDE NOTE FOR HYDROGRAPHIC SHEET

March 5, 1943.

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: Mr. H. R. Edmonston.

Tide Reducers are approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 6795 [REDACTED]

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Pursuant to DOD SYSTEMATIC REVIEW  
CATEGORIZED AS UNCLASSIFIED IN SECTION  
EQUATED UNDER 120360

Locality Port Armstrong, Baranof Island, S.E. Alaska

Chief of Party: Chas. Pierce in 1942  
Plane of reference is mean lower low water reading  
3.4 ft. on tide staff at Port Armstrong  
13.0 ft. below B.M. 2

Height of mean high water above plane of reference is 10.1 feet.

Condition of records satisfactory except as noted below:

*E. J. Green*  
Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES  
 Survey No. **H6795**



Name on Survey

On Chart No. A  
 On previous survey No. B  
 On U. S. quadrangle Maps C  
 From local information E  
 On local Maps F  
 P. O. Guide or Map G  
 Rand McNally Atlas H  
 U. S. Light List K

Name on Survey	A	B	C	D	E	F	G	H	K
<u>Port Armstrong</u>									1
<u>Baranof</u>									2
									3
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 3.3(a), EXECUTIVE ORDER 12356.**

Names underlined in red approved  
 by L. Heck on 4/11/13

H6795

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

Decisions

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2	on of tide staff.	560345
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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY

116705  
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 GUIDELINES AS DESCRIBED IN SECTION  
 1.2(a), EXECUTIVE ORDER 11652, 1976

Records accompanying survey:

Boat sheets .1.; sounding vols. .2...; wire drag vols. .0...;  
 bomb vols. .0.....; graphic recorder rolls .0....;  
 special reports, etc. .3.0slid prints.....  
 .....

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

Number of positions on sheet	.....	<i>No position numbers used. Each sdg had independent location on range line</i>
Number of positions checked	.....	
Number of positions revised	.....	
Number of soundings recorded	2398.	
Number of soundings revised (refers to depth only)	.15..	
Number of soundings erroneously spaced	..9..	
Number of signals erroneously plotted or transferred	..2..	
✓ Topographic details	Time ..1..	
Junctions	Time ..2..	
Verification of soundings from graphic record	Time ..2..	

Verification by *P.H. Andros*..... Total time .30 hrs. Date *April 6, 1943*

Review by *R.H. Carstens*..... Time ..11.. Date *April 12, 1943*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
PHOTOSTAT OF

No. H **H6795**

No. T [REDACTED]

received **march 3, 1943**  
registered **march 3, 1943**  
verified  
reviewed  
approved

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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			
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90			

RETURN TO

82	R.W.Knox
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*R.W.Knox*



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 GUIDELINES AS DESCRIBED IN SECTION  
 1.4, EXECUTIVE ORDER 12356

b. -- H-4514b W.D. (1925) 1:10,000

Present survey depths are in harmony with the effective depths from this wire drag survey.

6. Comparison with Chart 8261 (latest print date 1-15-42)

The charted hydrography originates with the previously discussed surveys and needs no further consideration.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

The survey was accomplished in compliance with instructions issued by the Commanding Officer of the Sitka Naval Air Station. The method of taking soundings at measured distances along a range line was utilized in surveying this area. It is felt that if the angular values of all range lines from a long base line had been measured the accuracy of the sounding line plotting would have been increased.

9. Additional Field Work Recommended

This is a very closely developed survey which needs no additional work.

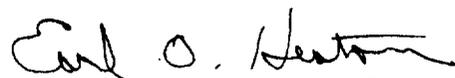
10. Superseded Surveys

H-4327 (1923) in part  
 H-4514a (1925) " "

Examined and approved:

  
 Chief, Surveys Branch

  
 Chief, Division of Charts

  
 Chief, Section of Hydrography

  
 Chief, Division of  
 Coastal Surveys

Applied to UN 8261 - Apr 1943 . D.H.B.  
No correction to Cht. 8252 - (4/19/44) G.R.