

FE50

WIRE DRAG

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NOAA FORM 76-35A	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT (HYDROGRAPHIC)	
Type of Survey	Field Examination
Field No.	PA 1444
Office No.	FE-50 (1944)
LOCALITY	
State	Alaska
General Locality	Delarof Islands
Locality	SE Corner Gareloi Island
Aleutian Islands	
<u>19 44</u>	
CHIEF OF PARTY	
C. Pierce	
LIBRARY & ARCHIVES	
DATE	January 27, 1945

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as:

FE No.1 1945

FENo.1

1945

FE-50

1945

FENo.1

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PA 1444 Office No. F.E. No. 1
(1945)

LOCALITY

State ALASKA

General locality Delarof Islands

Locality Southeast corner Careloi Island

Aleutian Islands

194 4

CHIEF OF PARTY

Charles Pierce

LIBRARY & ARCHIVES

DATE **JAN 27 1945**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. PA 1444

REGISTER NO.

State Alaska

General locality Aleutian Islands

Locality S.E. side Gareloi

Scale 1:10,000 Date of survey Aug. - Sept., 19 44

Vessel M.V. PATTON

Chief of Party Charles Pierce

Surveyed by Chas. Pierce, M. G. Ricketts, A. G. Anderson

Protracted by Marion T. Gwinn

Soundings penciled by Marion T. Gwinn

Soundings in fathoms ~~meters~~ Fathoms

Plane of reference MLLW

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated Feb. 1, 1944 CS-218, 19____

Remarks: Smooth Sheet and Plotting by the Seattle Processing Office.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC

SURVEY _____ FIELD PA-1444

GARELOI ISLAND--SOUTHEAST SIDE--ANCHORAGE SURVEY

Scale 1 - 10,000

Charles Pierce ----- Chief of Party

SURVEY VESSEL -- PATTON

A PROJECT CS-218 INSTRUCTIONS dated February 1, 1944 (DIRECTOR'S)

B SURVEYS LIMITS AND DATES

The locality of this survey is close inshore on the southeast side of Gareloi Island in Latitude 51-46', Longitude 178-44" (Unalaska Datum). ✓

The field work was started on August 9, 1944 and carried on intermittently when visiting the camp party until September 30, 1944. ✓

C VESSELS AND EQUIPMENT

The vessel PATTON was used exclusively for sounding on this project. ✓

The Dorsey III fathometer and the 808A depth recorder were both used while sounding on this sheet. The slopes are very steep, on the north end of the hydrography in particular, simulating the steep cinder slopes of the adjacent shores, and it was difficult and at times impossible to catch the soundings where the submarine profiles dropped off sheerly. The echoes under these conditions were weak and unless the depth recorder reader caught the reading on the bell it was not possible to accurately scale it from the fathograms. ✓

TIDE AND CURRENT STATIONS

A tide staff was established in the cove, at the site of the triangulation camp, but due to its exposed position it was carried away after a few days of observations on the staff. ✓ Several high and low waters were recorded which when compared with the tide marigrams from Tanaga Bay showed practically the same times for

high and low waters and very little difference in range.

The soundings on this sheet have been reduced from Tanaga Bay tide data, except Sept. 18 which is reduced with tide readings from Sweeper Cove. Sweeper Cove corrected to Tanaga Bay by subtracting 30 min from time and applying a range factor of 1.1. No bench marks were established at the site of the tide staff in the camp cove since it was impracticable to maintain a tide staff here.

F CONTROL STATIONS

This hydrographic work was undertaken to furnish anchorage data off Gareloi Island while engaged in establishing and maintaining a triangulation camp party on the southeast shore of Gareloi Island.

Reconnaissance running with the PATTON in this area showed very steep slopes and deep water close to the shore line and it was considered desirable to have some soundings available for our operations and for future work in the area where a vessel could temporarily anchor off this volcanic topography of Gareloi Island.

Consequently with no geodetic data what ever available a tape and transit traverse was made in the cove at the camp site and this data plotted directly on the boat sheet on a scale of 1-10,000. From this meagre beginning additional points were located by sextant cuts from the PATTON for hydrographic control.

Later the following stations were occupied with a 4" transit (all other theodolites being in use) and observations made to triangulation control just south of Gareloi Island then being established by all parties in the area. The positions of these stations occupied were computed by the three point problem computation method. Stations PAR--SHAG-- and LAD were so determined.

The triangle "Traverse Station 7"--PAR-- and SHAG was occupied in order to connect the tape and transit traverse with the geodetic controlled stations. Transit station 7 was computed from stations SHAG and PAR.

Hydrographic point SAL was computed from a distance and direction from Traverse Station 7.

Stations RIP, NOR, and WET were located by the tape and transit traverse.

Hydrographic points LEG and BUB were cut in by sextant angles from the PATTON for additional control.

The projection lines were drawn on the boat sheet after completion of the survey from data derived from the geographic positions and azimuths of stations SHAG and PAR.

It is recommended that the short traverse in the cove at the camp site be traced directly from the boat sheet since this is the original plotting from the field data.

G Shore line and Topography

The shore line and signals from SAL to NOR were plotted directly on the boat sheet from the field data of the tape and transit survey.

The shore line from SHAG to LAD is sketched from air photographs five lens of Gareloi Island. These photographs are not very clear and without the aid of a stereoscope we were unable to spot any control points accurately on the photographs.

No sketching of shore line has been done north of station NOR since the air photographs are clouded over in this area.

The sketched shore line is not considered accurate enough for charting purposes.

An unusually solid tripod was erected at SHAG for future use.

Leg, Sal and BUB are well white washed and should be recoverable for several years without difficulty.

Signals NOR and WET altho white washed will probably be not recoverable after next season.

LAD is marked with a hydrographic disc and a small cairn of stones.

PAR is marked with a standard topographic disc but the large tripod erected over this station blew from the bluff at the end of the season.

J ADEQUACY OF SURVEY

This work was carried on only at such times as the PATTON supplied the camp party on Gareloi Island. The survey is not complete in any sense but merely furnishes some information for anchoring in only available area discovered off this section of Gareloi Island. N. B.

When hydrographic surveys are taken up in this area in the future this reconnaissance hydrography will be of value for the units operating here. Beyond that fact this survey should not be considered complete, developed, or indicating all dangers in the area but it is considered that the control used is adequate for standard surveys and that any junctions of future hydrography with this sheet should not disclose any serious discrepancies. See below.

No prior surveys of any kind exist in this area and chart No. 8863 is a complete blank for the small area sounded.

No dangers or shoals were discovered in the limited area covered by this sheet but no development of indications was accomplished.

A temporary anchorage lies three miles northeast of the most southerly point on Gareloi Island, facing a small bight with a rocky beach, where party camped in 1944. Floor boards from tents still remain. The PATTON anchored in 16 fathoms, rocky bottom, about 800 yards off the beach. A prominent boulder at the center of bight, just offshore, bears 278 degrees true from anchorage. To southeastward the first vertical high water cliff on range with rocky point to southeastward. Tide rips and moderate currents were encountered at the anchorage. Some protection from westerly weather is afforded at this anchorage but swells make around the island from both ends and anchoring here is for temporary purposes except when weather conditions are good.

Respectfully Submitted

Charles Pierce

Charles Pierce, Lieut. Cmdr USC&GS
Commanding PATTON

Junction with H-7976 adequate and area is adequately covered. Apply edg to H-7976 RMC 2/13/53

*Washington Office.
March 15, 1945.*

The survey has been photographically reduced to a scale of 1:20,000 and a copy attached to this report. Smooth and boat sheets have been destroyed. The survey is good reconnaissance and can be used as a guide when the area is systematically surveyed. No attempt should be made to use it as a junction survey.

J. A. Mc Cormick

STATISTICS FOR HYDROGRAPHIC SURVEY H _____ (PA-1444) FIELD PROJECT CS-218

DATE	VOL.	LETTER DAY	SNDGS. HL	SNDGS WIRE	POSITIONS	STATUTE MILES SOUNDING
August 9	1	A			20	1.1
August 27	1	B			40	9.2
Sept. 18	1	C			28	5.5
Sept. 30	1	D			1	
					<u>89</u>	<u>15.8</u>

Area, Squ. Stat. Mi. 1.0

VELOCITY CORRECTIONS DETERMINED FROM SERIAL TEMPERATURES

TAKEN JULY 2, 1944 in TANAGA BAY AREA, Aleutian Ids.

VELOCITY CORRECTIONS DETERMINED BY GRAPHIC MEANS

FOR FIELD HYDROGRAPHIC SHEET NO. 1444

<u>DEPTHS IN FATHOMS</u>	<u>CORRECTION IN FEET</u>
5 to 12½	- 1
12½ - 19½	- 2
19½ - 27	- 3
27 - 34	- 4
34 - 41	- 5
41 - 49	- 6
49 - 56	- 7
56 - 63½	- 8
63½ - 71	- 9
71 - 78	- 10
78 - 84½	- 11
84½ - 92	- 12
92 - 98½	- 13
98½ - 104½	- 14
104½ - 111½	- 15 feet
111½ - 152	- 3 fathoms
152 - 190	- 4 "
190 - 228	- 5
228 - 266	- 6
266 - 304	- 7
304 - 342	- 7)pressure corr. applied here)
342 - 380	- 8
380 - 418	- 9

Serial temperature to depth of 205 fathoms. Corrections beyond this depth from extrapolated curve.

Note: Velocity Correction data for season 1944 by C. Pierce is filed in report with those for H-7026, 7023, 7004, 7005, 7006.

Field No. PA 1444

List of Signals

LAD	4th Order Triangulation,
SHAG	Charles Pierce, 1944
SAL	"
PAR	"
RIP	Located by traverse on boat sheet only
NOR	"
WEST	"
LEG	Sextant cuts in sounding book.
BUB	"

lac

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 23, 1945

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: MR. HAROLD W. MURRAY

Plane of reference approved in
1 volumes of sounding records for

F.F. 1/1/1945

HYDROGRAPHIC SHEET PA 1444

Locality Southeast Coast, Gareloi Island, Aleutian Islands, Alaska.

Chief of Party: Chas. Pierce in 1944

Plane of reference is mean lower low water reading

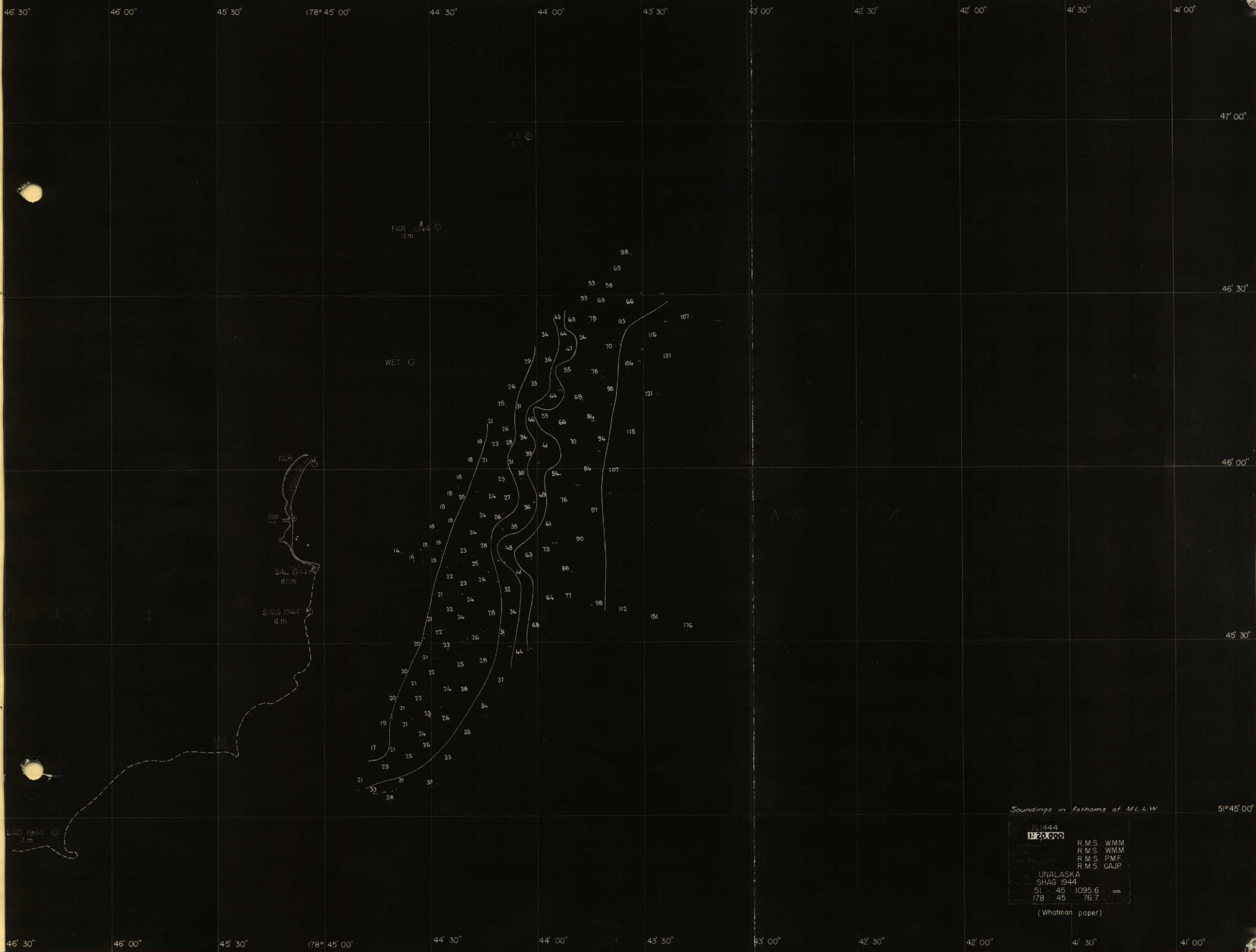
2.3 ft. on tide staff at Tanaga Bay

10.3 ft. below B. M. 1

Height of mean high water above plane of reference is 4.1 feet.

Condition of records satisfactory except as noted below:

H. A. Warner
Acting Chief, Division of Tides and Currents.



Soundings in fathoms at M.L.L.W. 51°45'00"

B 1444
 1820000
 R.M.S. WMM
 R.M.S. WMM
 R.M.S. PMF
 R.M.S. CAJP
 UNALASKA
 SHAG 1944
 51 - 45 - 1095.6 =
 178 - 45 - 76.7 =

(Whatman paper)

NA 1927 Datum of
△ SHAG, 1944
51° 45' 36.124" (1116.5 m)
178° 44' 54.602" (1047.3 m) ✓
VP 204

Bp 49358-67
Bp 38925

7804

no con tr 88.63 - 10/8/45 - JGW