

7137

Diag'd. on Diag. Ch. No. 8865

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. EX-16145 Office No. H-7137

LOCALITY

State Alaska - Aleutian Islands

General locality South of Near Islands

Locality North Side of Aleutian Trench

1946

CHIEF OF PARTY

F. L. Gallen

LIBRARY & ARCHIVES

DATE April 8, 1947

7137

APR 8 1947

Form 537
(Ed. Nov. 1941)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

H-7137

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.

REGISTER NO. H-7137

Field No. EX 16145

State Alaska - Aleutian Islands

General locality North Pacific

Locality North Side of Aleutian Trench South of Attu and Agattu Islands ^{Near}

Scale 1:160,000 Date of survey 19 September - 2 October 1946

Instructions dated Feb. 3, 1938 - Supplemental Instructions 16 March 1946

Vessel EXPLORER

Chief of party F. L. Gallen

Surveyed by J.C. Partington; C.A. Schanck; E.C. Baum, and P. Taylor

Soundings taken by fathometer, graphic recorder, ~~hand lead, etc.~~

Protracted by C.A.J. Pauw

Soundings penciled by C.A.J. Pauw

Soundings in fathoms ~~Feet~~ at ~~MLLW~~ MLLW

REMARKS:

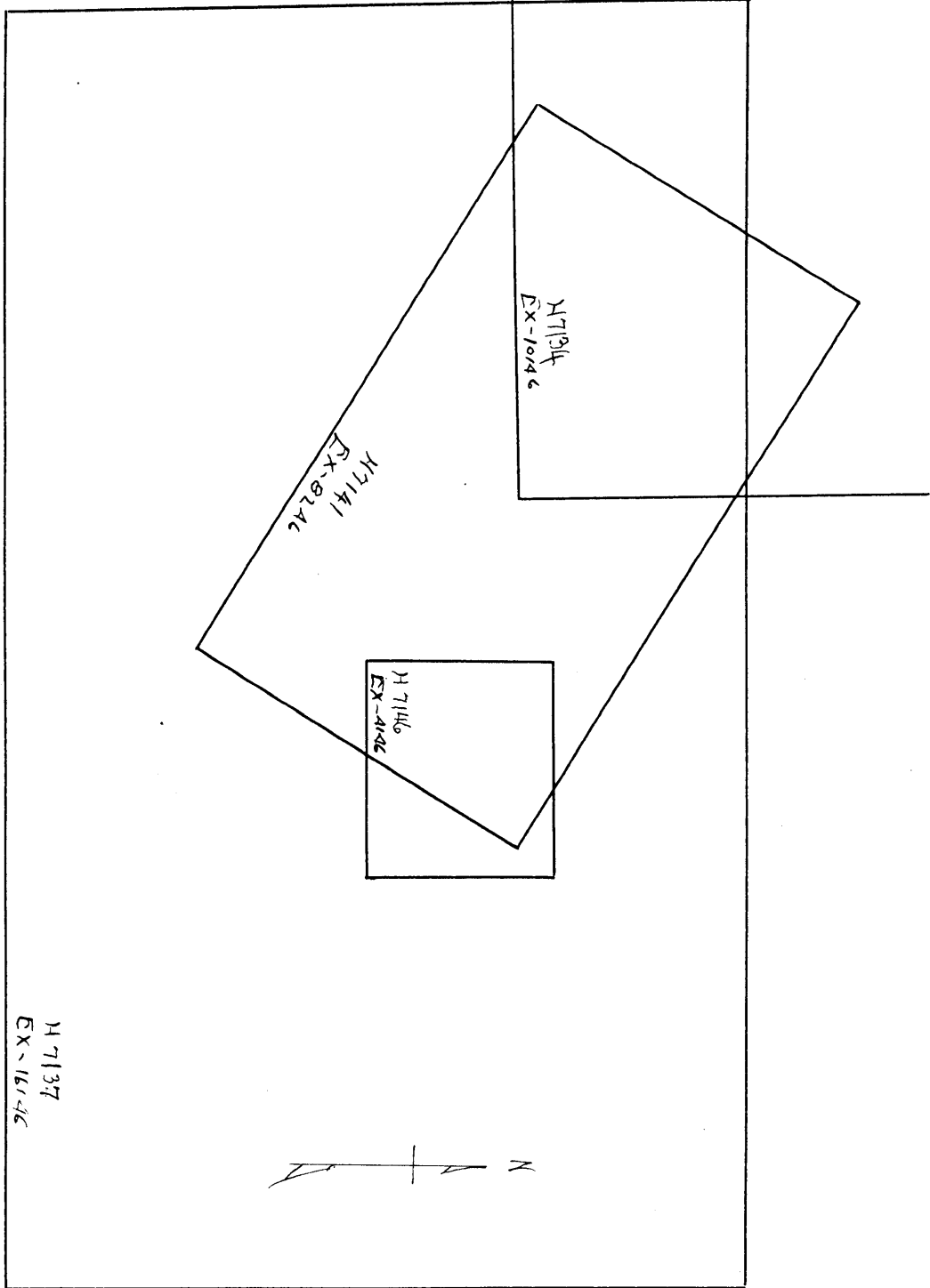
Plotted in the Seattle Processing Office

INDEX SHEET

For

Survey H- 7137

(Field No. EX-16146)



DESCRIPTIVE REPORT

TO

ACCOMPANY HYDROGRAPHIC SURVEY H - 7137

FIELD NO. EX-16146

NORTH PACIFIC

SOUTH OF ATTU AND AGATTU ISLANDS

1946

SCALE 1:160,000 USC&GSS EXPLORER

F. L. GALLEN, COMMANDING

SURVEYED BY: J. C. PARTINGTON, C. A. SCHANCK, E. C. BAUM, P. TAYLOR

-o-

A. PROJECT:

Instructions Project CS-218 dated February 3, 1938;
Revised Instructions dated April 16, 1943; Supplemental Instructions,
18 March 1946 (Subproject No. 33, Liaison Officer).

B. SURVEY LIMITS AND DATES:

Locality - South of Attu and Agattu Islands, Alaska. This
survey is an extension of Sheets Nos. ^{H-7141}EX-8246 and ^{H-7146}EX-4146 to the limit
of shoran fixes.

Hydrography was executed during the period September 19 to
October 2, 1946.

See index limit sheet for junctures with and scale of con-
temporary surveys.

C. VESSELS AND EQUIPMENT:

The Ship EXPLORER executed all the hydrography on this sheet.

The turning radius of the EXPLORER is 275 and 360 meters to port and starboard respectively. The vessel sounded at standard speed, about $12\frac{1}{2}$ knots.

The N.M.C. (Navy type) fathometer made by the Radio Corporation of America (RCA) was used for all the soundings. The graphic recorder was used for the most part.

D. TIDE STATION:

The reduction for tides was based on data from the standard tide gage at Massacre Bay, Attu Island. Tide reducers were entered for all depths of 200 fathoms or less, and none were entered for depths greater than 200 fathoms.

E. SMOOTH SHEET:

Function of the Processing Office.

F. CONTROL:

Datum, USN GANNET 1934, local triangulation; Roland D. Horne 1945, F. L. Gallen and A. P. Ratti 1946. No graphic control stations were used.

G. SHORELINE AND TOPOGRAPHY:

The shoreline and topographic detail for this sheet may be taken from 1:10,000 air photographs flown by the U.S. Navy in 1945 and 1946. These photographs have been field-inspected, but no compilations have been made to date.

H. SOUNDINGS:

The soundings were taken with an NMC (Navy type) RCA fathometer and depth recorder. Except in rare cases all soundings were

recorded graphically. Depths up to 3885 fathoms, which reduced to 4025 fathoms, were recorded on the graphic recorder. Soundings were read off the graphic recorder at one-minute intervals and recorded in the sounding volume. These soundings were checked against the graphic recorder later and corrections made where necessary.

I. CONTROL OF HYDROGRAPHY:

Sounding lines were controlled with shoran fixes. Whenever one station failed to give a return, single arcs and course and distance run were used until returns from both stations were received.

Shoran stations DAR, IMP, and STAR were plotted on the sheet. Arcs were swung around the stations at ten-statute-mile intervals in the areas covered by these stations where hydrography was to be executed. An Odessey protractor graduated to two tenths of a statute mile was used in plotting the shoran fixes.

No corrections to the shoran distances were entered because these corrections were so small that they were not plottable on the scale of this sheet.

J. ADEQUACY OF SURVEY:

The survey is adequate and no further work is necessary.

Junctures with adjoining surveys are satisfactory. Depth curves at the junctures can be adequately drawn. No holidays or excessive differences exist at the junctures.

K. CROSSLINES:

Adequate crosslines were run indicating close agreement. ✓

L. COMPARISON WITH PRIOR SURVEYS:

The area south of Agattu Island to the 1000-fathom curve was covered by the reconnaissance survey^{H-6936} of 1943. The two surveys are in closer agreement than would be expected taking into consideration the lack of control on the 1943 survey. The 1946 survey is complete and should take precedence over the 1943 survey. ✓

There are no prior surveys in the area covered by the remainder of the sheet.

M. COMPARISON WITH CHART:

There are only a few soundings on the chart outside the area covered by the 1943 reconnaissance survey. The origin of these soundings is unknown and they should be disregarded. ✓

↘ C.L. No. 418 (1944) -- U.S. Navy
Bp. 37922 (1943) -- U.S. Navy

N. DANGERS AND SHOALS:

There are no dangers or shoals within the area of this survey.

Respectfully submitted,

J. C. Partington
Lieut. Comdr., C&GS


C. A. Schanck
Lieut. Comdr., C&GS

E. C. Baum
Lieut. Comdr., C&GS

P. Taylor
Lieut., C&GS

Approved and forwarded:

F. L. Gallen
Lieut. Comdr., C&GS
Commanding Ship EXPLORER

STATISTICS FOR HYDROGRAPHIC SURVEY H 7137 (1946)

FIELD NO. EX-16146

USC&GSS EXPLORER

Survey Unit	Vol.	Day Letter	Date 1946	Number Positions	Stat.Mi. Sdg.Lines	Sq.Stat. Miles
EXPLORER	1	A	19 Sept.	91	205.0	
EXPLORER	1	B	20 Sept.	7	11.5	
EXPLORER	1	C	27 Sept.	50	108.1	
EXPLORER	2	D	2 Oct.	115	218.5	
T O T A L S				263	535.1	3685

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TIDE NOTE

Tide reducers for soundings for Hydrographic Survey No. H - 7137 (1946), Field No. EX-16146, are based on data taken from standard tide gage records at Pier 2, Massacre Bay, Attu Island, Alaska, Latitude $52^{\circ} 50' .5$ N., Longitude $173^{\circ} 11' .6$ E. The hourly heights were scanned from the tide rolls. The plane of reference, MLLW, is 3.4 feet above zero of the staff as determined by leveling to existing bench marks in May 1946.

H-7137

EX 16146

South of Attu and Agattu Islands

Seattle Processing Office Notes

The position of STAR ECC. is:

Latitude	52° 44'	626.4 M.
Longitude	174 06	771.5 M.

The projection is hand made.

The positions were plotted with an Odessey protractor.

Respectfully submitted,

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

H-7137

List of Geographic Names

Attu Island

Agattu Island

Pacific Ocean

H.W.M.

TIDE NOTE FOR HYDROGRAPHIC SHEET

APR 24 1947

~~Division of Hydrography and Topography:~~

Division of Charts: H. W. MURRAY

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 7137

Locality - South of Attu and Agattu Islands, Aleutian Islands, Alaska

Chief of Party: F. L. Gallen in 1946

Plane of reference is mean lower low water

3.4 ft. on tide staff at Massacre Bay

6.8 ft. below B. M. 1

Height of mean high water above plane of reference is 3.3 feet.

Condition of records satisfactory except as noted below:

E. C. McKay

Section

Chief, ~~Division of Tides and Currents.~~

GEOGRAPHIC NAMES
 Survey No. **H7137**

Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Aleutian Islands</u> ⁽⁷¹¹²⁾											1
<u>Aleutian Trench</u>											2
<u>Near Islands</u> ⁽⁷¹¹²⁾											3
<u>Attu Island</u>										USFB	4
<u>Aqattu Island</u>										"	5
<u>Shemya Island</u>										"	6
											7
											8
											9
											10
											11
											12
<u>Massacre Bay</u>											13
											14
											15
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											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red approved
 by L. Hack on 6/26/47

(location of tide staff)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7137**

Records accompanying survey:

Boat sheets 1...; sounding vols. 2.....; wire drag vols.;
bomb vols.; graphic recorder rolls; *1 envelop 5/12/47*
rec'd
special reports, etc.
.....

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

Number of positions on sheet		263.
Number of positions checked		28.
Number of positions revised		0.
Number of soundings revised (refers to depth only)		3.
Number of soundings erroneously spaced		0.
Number of signals erroneously plotted or transferred		0.
Topographic details	Time	0.
Junctions	Time	2 hrs.
Verification of soundings from graphic record	Time	47 hrs.

Verification by *Stephen Rose* Total time 49 hrs. Date 5/20/47

Reviewed by *J. F. Jordan* Time 12 Date 6/25/47

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7137

FIELD NO. EX-16146

Alaska-Aleutian Islands, South of Near Islands, North Side of
Aleutian Trench
Surveyed in Sept. to Oct., 1946 Scale 1:160,000
Project No. CS-218

Soundings:

Control:

NMC Fathometer

Shoran

Chief of Party - F. L. Gallen

Surveyed by - J. C. Partington, C. A. Schanck, E. C. Baum
and P. Taylor

Protracted by - C. A. J. Pauw

Soundings plotted by - C. A. J. Pauw

Verified and inked by - S. Rose

Reviewed by - G. F. Jordan, June 25, 1947

Inspected by - H. W. Murray

1. Control and Topography

The Shoran control stations DAR and IMP were located by triangulation in 1946. According to the Descriptive Report of contemporary survey H-7143 (1946), the position of Shoran station STAR ECC was established by magnetic bearing and distance from triangulation station STAR, 1944.

No shoreline is shown on this offshore survey.

2. Bottom Configuration and Depth Curves

The bottom delineated by the few lines of hydrography on the present survey is fairly smooth. The survey includes portions of the northern slope and bottom of the Aleutian Trench. The deepest soundings obtained in the Trench are the two 4027 fms., one at lat. $51^{\circ} 38.8'$, long. $172^{\circ} 57.5'$ E and the other at lat. $51^{\circ} 42.3'$, long. $172^{\circ} 33.8'$ E.

Because of the limited hydrography on this survey, the depth curves will be drawn at a later date when the survey on the north is received and sheet junctions made.

3. Sounding Line Crossings

The excellent agreement of soundings at crosslines in 2100-to 3500-fm. depths 70 miles from a Shoran control station attests to the accuracy of this survey.

4. Junctions with Adjoining Surveys

The present survey overlaps H-6936 (1943) and H-6935 (1943) on the north and east. These are very good reconnaissance surveys and are in good agreement with the present survey.

Superseded by
H-7141
H-7146
H-7626

The junctions on the north will be considered when H-7134, H-7141 and H-7146 of 1946 are reviewed. H-7134 and H-7141 have not been received from the Processing Office.

There are no registered surveys of the present project on the east. The present survey includes the southern limits of the project.

The few soundings on the chart south of the present survey are not in harmony with the bottom delineation shown by the present survey soundings. These will be considered in more detail in par. 6a, below.

5. Comparison with Prior Surveys

There are no prior surveys by this Bureau in the area of the present survey.

6. Comparison with Chart 9198 (Print date of Feb. 3, 1947)
Chart 8865 (Print date of May 12, 1947)

a. Hydrography

Charted hydrography originates principally with various random track lines run by the U. S. Navy and the U. S. Coast Guard. This material has been reported in Bps. 29969, 29971, 37911 and 37922, and Chart Letters 862 (1943) and 418 (1944).

These reported soundings have been carefully studied with respect to the bottom relief on the present survey. It is evident that a number of these soundings are inaccurate with respect to horizontal position. On the basis of this comparison, the charted soundings listed below should be deleted:

<u>Charted Sd'g</u>	<u>Latitude</u>	<u>Longitude</u>
✓ 1300 fm.	52° 37.0'	171° 24.6'E
✓ 2600 fm.	52° 30.7'	171° 16.3'E
✓ 1900 fm.	52° 30.0'	171° 29.0'E
✓ 3150 fm.	52° 19.8'	171° 37.2'E
✓ 3400 fm.	52° 16.5'	171° 34.7'E
✓ 2520 fm.	52° 12.6'	171° 33.2'E
✓ 3300 fm.	52° 12.2'	171° 51.7'E
✓ 2463 fm.	52° 07.8'	172° 02.9'E
✓ 2474 fm.	52° 04.2'	171° 53.0'E
✓ 2564 fm.	52° 04.7'	172° 01.8'E
✓ 2414 fm.	52° 05.2'	172° 08.1'E
✓ 2514 fm.	52° 05.1'	172° 14.5'E
✓ 2414 fm.	51° 59.0'	172° 22.5'E
✓ x 4087 fm.	51° 54.5'	172° 21.3'E
✓ 2164 fm.	51° 53.3'	172° 27.3'E
✓ 3600 fm.	51° 53.8'	172° 37.8'E
✓ 3100 fm.	51° 54.0'	172° 51.2'E
✓ 3000 fm.	51° 47.4'	172° 24.8'E
✓ 1160 fm.	51° 42.7'	172° 27.6'E

✓ 3100
Records
9/27

7. Condition of the Survey

The Descriptive Report and sounding records are complete and comprehensive. The smooth plotting was very good.

8. Compliance with Project Instructions

The survey adequately complies with the project instructions.

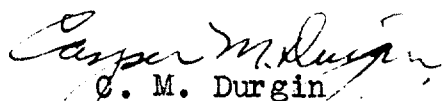
9. Additional Field Work

This is a basic survey and no additional field work is recommended.

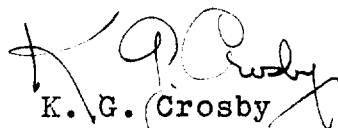
Examined and approved:


I. E. Rittenburg

Chief, Nautical Chart Branch


C. M. Durgin

Chief, Division of Charts


K. G. Crosby

Chief, Section of Hydrography


C. K. Green

Chief, Division of Coastal Surveys

