

7007a

Diag. Cht. No. 8865

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey TOPOGRAPHIC

Field No. EX-C-45 Office No. T-7007a

LOCALITY

State Alaska - Aleutian Islands

General locality Attu Island

Locality Abraham Bay

1945

CHIEF OF PARTY

R.D.Horne

LIBRARY & ARCHIVES

DATE Feb. 11, 1946

B-1870-1 (1)

7007a

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. Ex-C-45

REGISTER NO. T-7007a

State Alaska-(Aleutian Islands)

General locality Attu Island

Locality Abraham Bay

Scale 1 : 20,000 Date of survey June & July, 1945

Vessel Ship EXPLORER

Chief of party Roland D. Horne

Surveyed by Raymond M. Stone

Inked by Raymond M. Stone

Heights in feet above MHW to ground ~~XXXXXXXXXXXX~~

Contour, Approximate contour, Form line interval --- feet

Instructions ~~XXXXX~~ For Project CS-218, 19---

~~XXXXXXXX~~ Supplemental Instructions for Proj. No. 5

dated 16 May 1944

DESCRIPTIVE REPORT

To Accompany

GRAPHIC CONTROL SHEET ^{T-7007a}

Field No. Ex-C-45

ALEUTIAN ISLANDS, ATTU ISLAND,

ABRAHAM BAY

Ship EXPLORER

R. D. Horne, Comdg.

AUTHORITY:

Original Instructions for Project CS-218.

Supplemental Instructions for Project No. 5, dated 16 May 1944,
submitted by the USC&GS Liaison Officer, Com. 17, Adak, Alaska.

CONTROL:

Triangulation was done by the USC&GS Ship EXPLORER during 1945.

The datum of this sheet is USN GANNET 1934.

This sheet joins with Graphic Control Sheet ^{T-7006b} (Ex-E-45) on the east
and with Graphic Control Sheet ^{T-7007b} (Ex-D-45) on the west.

METHODS:

Standard topographic methods were used in locating all signals.

All signals within the limits of this sheet were located by means
of three or more planetable cuts from various triangulation stations or
from planetable setups located by resection.

No traverse was run as good control by resection was found at
all points where it was necessary to locate the table.

ERRORS:

No discrepancies were noted in regards to the intersections of
planetable cuts used in determining signal locations.

TOPOGRAPHIC FEATURES:

The shoreline within the limits of this sheet, except as noted below, is adequately covered by air photographs taken during 1945 on a scale of approximately 1 to 10,000, by the U. S. Navy, stationed on Attu Island.

Inadequate coverage was found on these air photographs regarding the southwesterly tip of Mikhail Point, and the rock awash, (same as triangulation station RAW 1945), located 3.2 miles eastnortheast of Mikhail Point and 500 meters south of the northwest shore of Abraham Bay.

Station RAW 1945, the rock awash as mentioned above, was located by means of triangulation and its position then plotted on this sheet. No other topographic features lie in the immediate vicinity of this station.

The areas that are not shown on the 1 to 10,000 scale air photographs as mentioned above, are covered by the 1 to 26,000 scale air photographs taken during 1943, by the U. S. Navy, stationed on Attu Island.

During the 1945 season, arrangements were made with the U. S. Navy on Attu Island, to photograph the outer tip of Mikhail Point as well as the area recommended in the descriptive report on Graphic Control Sheet No. (Ex-D-45).
T-7007b
70074

By the close of the 1945 season, the areas as mentioned above, still had not been photographed due to unfavorable weather conditions.

CONTROL FOR AIR PHOTOGRAPHS:

The air photographs taken during 1945 on a scale of approximately 1 to 10,000, covering shoreline within the limits of this sheet, were field inspected by this vessel during the 1945 season.

Adequate control was pricked on each air photograph.

CONTROL FOR AIR PHOTOGRAPHS: (Cont.)

During the 1945 season, all triangulation stations and most topographic and hydrographic signals had been established in the area within the limits of this sheet before the 1 to 10,000 scale air photographs were taken. As a result, adequate control was more easily identified and more accurately pricked on each photograph inspected.

RECOVERABLE TOPOGRAPHIC STATIONS:

The following planetable position has been described on Form #524, (Description of Recoverable Hydrographic or Topographic Station):

SOL	Lat.	52° 52'	1630 meters	NA1927 (-486m.)
	Long.	172° 40'	1058 meters	(-82m.)

Topographic station SOL is also described on Form #567, (Landmarks For Charts).

No further recoverable topographic stations are involved since existing triangulation stations are spaced at less than 1-mile intervals along the coastline.

MAGNETIC DECLINATION:

A declinoire observation was made with declinoire No. 254 at each of the following stations: RIB 1945, BRA 1945 and HAIL 1945. The value obtained at each of the above stations is respectively, 03° 20' E, 02° 50' E, and 03° 05' E, which agree fairly well with what was expected. (within 1°)

A transit magnetometer observation was made at triangulation station MARY 1945.

The error pertaining to declinoire No. 254 is not known at the present time, however, this declinoire has been checked and the results forwarded to the Washington Office. A copy of the report on "Standardization of Declinoire" is attached hereto.

-4-

PREVIOUS SURVEYS:

There are no previous surveys covering this locality.

GEOGRAPHIC NAMES:

814 ✓
No additional geographic names are involved.

LANDMARKS:

The following landmark for charts was selected:

L. 7 (1946) WATERFALL, approx. 80 feet in height, on northwest shore of Abraham Bay, 2.5 miles eastnortheast of Mikhail Point; same as topographic station SOL.

For position of the above landmark, refer to Form 567 "Landmarks For Charts", a duplicate of which is attached hereto.

STATISTICS:

18.2 statute miles of shoreline (graphic control).

Respectfully submitted,

Raymond M. Stone

Raymond M. Stone,
Lieut. USC&GS

Approved and Forwarded,

Roland D. Horne

Roland D. Horne,
Comdr. USC&GS,
Comdg. Ship EXPLORER

STANDARDIZATION OF DECLINATOIRES

1945 Field Season

Project OS-218

Ship **EXPLORER**

R. D. Horne, Comdg.,

In connection with the graphic control work done on Project OS-218 on Attu Island and Shemya Island of the Aleutian Islands, during the 1945 season, declinatoire No. 254 was used throughout.

According to the records, no standardization was made of declinatoire No. 254 at the close of the 1944 season, nor at the beginning of the 1945 season.

On January 22, 1946, declinatoires (Nos. 252 & 254) were checked at magnetic station INGLEWOOD - 1940, (Inglewood Park, Washington). Transit Magnetometer No. 38981 was also checked at this time. Two sets of observations were made with this transit magnetometer before and one set following the standardization of the declinatoires. As a result, the actual variation was determined to be $23^{\circ} 00'$ East at the time the standardization was made.

Four readings were taken for the standardization of each declinatoire. The angles made with the true azimuth line were then scaled with a steel protractor, and the four values meaned. The resulting mean angle was applied to the true azimuth of the mark in each case to determine the value of magnetic north by declinatoire.

Following are the computations for each standardization:

Magnetic Station - INGLEWOOD 1940 (King County, State -- Washington)
Lat. -- $47^{\circ} 44.5'$ Long. -- $122^{\circ} 15.0'$ Source -- 1940 Observations
Mark -- Water tank on skyline (near Richmond Highlands).
Date -- January 22, 1946 (Tuesday)

	Declinatoire #252 (11:59)	Declinatoire #254 (11:40)
120th Meridian Time -----		
True Azimuth of Mark -----	$107^{\circ} 31'$	$107^{\circ} 31'$
Mean of Measured Angle (4) ---	95 23	95 17
	-(180 00)	-(180 00)
Magnetic North by declinatoire	$22^{\circ} 54' E$	$22^{\circ} 48' E$
Actual Variation -----	$23^{\circ} 00' E$	$23^{\circ} 00' E$
Declinatoire Error -----	+ 06'	+ 12'

Approved Forwarded:

A. P. Ratti
Lieut. Comdr. USCGS
Comdg. Ship **EXPLORER**

Respectfully submitted:

Raymond M. Stone
Raymond M. Stone
Lieut. USCGS

Shoreline Compilation T-7007a

The details shown in green have been added to this graphic control sheet from field inspected photographs. These photographs were completely field inspected; consequently, office interpretation was necessary in very few instances.

There are two sets of photographs available for this compilation - 1:10,000 and 1:26,000. The 1:10,000 Navy photographs were field inspected by R. M. Stone and J. E. Shultz in August 1945. They gave complete coverage for the area except at Mikhail Pt. This point was covered by photographs taken during the 1946 season. There was no field inspection made on the 1946 photographs.

No radial line plot was necessary because the triangulation and topographic stations on the control sheet were identified on the photographs at close enough intervals so that the detail could be projected directly. The hydrographic control stations Fat, Dop, Bag, and Ate were transferred from H-6866 for better control in the vicinity of Mikhail Pt. The detail was compiled in the projector on the 1:20,000 graphic control board in August 1947. Office interpretation with field inspection data has been applied with conventional symbols to shoreline and offshore features. Office interpretation only was used to compile the bluff line.

The accuracy of the compilation is in keeping with the graphic control and is considered of an accuracy not to exceed 1 mm. of its true horizontal position.

Reconciliation between this survey and H-6866 has been made and no appreciable conflicts were found.

Compiled by: Charles Theurer
C. Theurer

Approved by: L. C. Lande
L. C. Lande

Review in D.R. of T-7007b
This compilation has been applied to H-6866(1949) and H-6866(1945).
No further consideration by the Hydrographic Retrieval Section is necessary.
G.F.d.
2/20/50

7007b

7007b

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Topographic
Field No.	Ex-D-45
Office No.	7007b
LOCALITY	
State	Alaska (Aleutian Islands)
General locality	Attu Island
Locality	Etienne Bay
194 5	
CHIEF OF PARTY	
Roland D. Horne	
LIBRARY & ARCHIVES	
DATE	Feb. 11 1946

B-1870-1 (1)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. Ex-D-45

REGISTER NO. T-7007 b

State Alaska-(Aleutian Islands)

General locality Attu Island

Locality Etienne Bay

Scale 1 : 20,000 Date of survey June & July, 1945

Vessel Ship EXPLORER

Chief of party Roland D. Horne

Surveyed by Raymond M. Stone

Inked by Raymond M. Stone

Heights in feet above MHW to ground ~~XXXXXXXXXXXX~~

Contour, Approximate contour, Form line interval -- feet

Instructions ~~xxxx~~ For Project CS-218, 1945

~~XXXXXXXX~~ Supplemental Instructions for Proj. No. 5

dated 16 May 1944

DESCRIPTIVE REPORT

To Accompany

GRAPHIC CONTROL SHEET T-7007b

Field No. Ex-D-45

ALEUTIAN ISLANDS, ATTU ISLAND,

ETIENNE BAY

Ship EXPLORER

R. D. Horne, Comdg.

AUTHORITY:

Original Instructions for Project CS-218.

Supplemental Instructions for Project No. 5, dated 16 May 1944,
submitted by the USC&GS Liaison Officer, Com. 17, Adak, Alaska.

CONTROL:

Triangulation was done by the USC&GS Ship EXPLORER during 1945. ✓

The datum of this sheet is USN GANNET 1934.

This sheet joins with Graphic Control Sheet (Ex-C-45) on the east
and with Graphic Control Sheet (Ex-F-45) on the west. ✓

Triangulation station CLOUD 1945 and ET 1943 are one and the
same. ET 1943 is the highest point of a prominent 2200-foot peak, located
by means of hydrographic cuts from the Ship EXPLORER during 1943. ✓

Triangulation station CLOUD 1945 was established on the highest point of
the prominent peak mentioned above by this vessel during the 1945 season.

Triangulation stations HEAD 1945 and CLOUD 1945 represent the
most westerly limit of the triangulation scheme observed during the 1945
season. However, a proposed triangulation scheme to the westward is
described in the descriptive report pertaining to Graphic Control Sheet
(Ex-F-45). ✓

METHODS:

Standard topographic methods were used in locating all signals.

All signals within the limits of this sheet were located by means
of three or more planetable cuts from various triangulation stations or from
planetable setups located by resection.

No traverse was run as good control by resection was found at all points where it was necessary to locate the plane table.

ERRORS:

No discrepancies were noted in regards to the intersections of planetable cuts used in determining signal locations.

TOPOGRAPHIC FEATURES:

The shoreline on the east side of Etienne Bay, except for Mikhail Point, is adequately covered by air photographs on a scale of approximately 1 to 10,000, taken during 1945, by the U. S. Navy, Attu Island, shortly after most whitewash and tripod signals were built.

Inadequate coverage was found regarding these air photographs, pertaining to shoreline on Mikhail Point. However, the 1 to 26,000 scale air photographs taken during 1943, by the U. S. Navy, Attu Island, cover the entire area within the limits of this sheet.

During the 1945 season, arrangements were made with the U. S. Navy on Attu Island, to photograph the remaining shoreline west of ETI EAST BASE 1945 and the shoreline on Mikhail Point, on a scale of 1 to 10,000.

CONTROL FOR AIR PHOTOGRAPHS:

The air photographs taken during 1945 on a scale of approx. 1 to 10,000, covering shoreline on the east side of Etienne Bay, were field inspected by this vessel during the 1945 season.

Adequate control was picked on the 1 to 10,000 scale air photographs.

RECOVERABLE TOPOGRAPHIC STATIONS:

The bench marks used in connection with the tide gage in vicinity of triangulation station RYE 1945 were located. Descriptions were furnished with the report on the installation of the gage. None of the bench marks are particularly good for hydrographic signals.

No recoverable topographic stations are involved since existing triangulation stations are spaced at approximate 1-mile intervals along the coastline.

MAGNETIC DECLINATION:

A declinatoire observation was made with declinatoire No. 254 at each of the following stations: HAIL 1945, RYE 1945, and HEAD 1945. The value obtained at each of the above stations is respectively, $02^{\circ} 54'$ E, $02^{\circ} 30'$ E, and $02^{\circ} 49'$ E, which agree fairly well with what was expected. ^(within 10')

A transit magnetometer observation was made at triangulation station ETI EAST BASE 1945.

The error pertaining to declinatoire No. 254 is not known at the present time, however, this declinatoire has been checked and the results forwarded to the Washington Office. A copy of the report on "Calibration of Declinatoire" is attached hereto.

PREVIOUS SURVEYS:

There are no previous surveys covering this locality.

GEOGRAPHIC NAMES:

No additional geographic names are involved.

LANDMARKS:

The following landmark for charts was selected:

Perpendicular-sided TABLE - TOPPED SHELF, approximately 500 feet high, is located on the east shore of Etienne Bay, $1\frac{1}{2}$ miles from the head of bay. (Refer to Air Photograph No. 1-160 of the 1945 USN 1 to 10,000 scale air photographs, Attu Island.)

For the position of the above landmark, refer to Form #567, "Landmarks For Charts", a duplicate of which is attached hereto.

STATISTICS:

11.0 statute miles of shoreline (graphic control).

Respectfully submitted,

Raymond M. Stone

Raymond M. Stone,
Lieut. USC&GS

Approved and Forwarded:

Roland D. Horne

Roland D. Horne,
Comdr. USC&GS,
Comdg. Ship EXPLORER

STANDARDIZATION OF DECLINATOIRES

1945 Field Season

Project CS-218

Ship **EXPLORER**

R. D. Horne, Comdg.,

In connection with the graphic control work done on Project CS-218 on Attu Island and Shemya Island of the Aleutian Islands, during the 1945 season, declinatoire No. 254 was used throughout.

According to the records, no standardization was made of declinatoire No. 254 at the close of the 1944 season, nor at the beginning of the 1945 season.

On January 22, 1946, declinatoires (Nos. 252 & 254) were checked at magnetic station INGLEWOOD - 1940, (Inglewood Park, Washington). Transit Magnetometer No. 38951 was also checked at this time. Two sets of observations were made with this transit magnetometer before and one set following the standardization of the declinatoires. As a result, the actual variation was determined to be 23° 00' East at the time the standardization was made.

Four readings were taken for the standardization of each declinatoire. The angles made with the true azimuth line were then scaled with a steel protractor, and the four values meaned. The resulting mean angle was applied to the true azimuth of the mark in each case to determine the value of magnetic north by declinatoire.

Following are the computations for each standardization:

Magnetic Station - INGLEWOOD 1940 (King County, State -- Washington)
Lat. -- 47° 44.5' Long. -- 122° 15.0' Source -- 1940 Observations
Mark -- Water tank on skyline (near Richmond Highlands).
Date -- January 22, 1946 (Tuesday)

	Declinatoire #252 (11:59)	Declinatoire #254 (11:40)
120th Meridian Time -----		
True Azimuth of Mark -----	107° 31'	107° 31'
Mean of Measured Angle (4) ---	95 23	95 17
	-(180 00)	-(180 00)
Magnetic North by declinatoire	22° 54' E	22° 48' E
Actual Variation -----	23 00 E	23 00 E
Declinatoire Error -----	+ 06'	+ 12' ✓

Approved Forwarded:

A. P. Ratti
Lieut. Comdr. USCGS
Comdg. Ship EXPLORER

Respectfully submitted:

Raymond M. Stone
Raymond M. Stone
Lieut. USCGS

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

TO BE CHARTED } STRIKE OUT ONE
~~TO BE DELETED~~

USCGS SHIP EXPLORER

December 21, 1933

1945

c/o 400 Insurance Bldg., Seattle, Wash.

I recommend that the following objects which have (~~been~~) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing.

L.7 (1946)

Roland D. Horne

Chief of Party

GENERAL LOCALITY	NAME AND DESCRIPTION	POSITION						METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
		LATITUDE		LONGITUDE									
		°	'	D. M. METERS	°	'	D. P. METERS						
Aleutian Islands Attu Island	Perpendicular-sided TABLE-TOPPED SHELF, Etienne Bay (Approx. 500 feet in elevation, on east shore of Etienne Bay, 1½ miles south of head of bay). (Refer to Air Photograph No. 1-160 of the	52 53		1830	172 37		1055	USN Cannet 1934	1945				9198
	1945 USN 1 to 10,000 scale air photographs, Attu Island).												
NATURAL BRIDGE, Cape Wrangell (On Wily islet of group of large islets off Cape Wrangell, the westernmost extremity of Attu Island, same as topographic station SNOW).		52 55		1154.1	172 26		849.4	USN Cannet 1934	July 1945				9198
HAYSTACK ROCK, North Shore Attu (Approx. 20 feet in height, 5.2 miles west of Red Head, 350 meters south of HWL, on low flat strip of land approx. ½ mile wide, lying between shoreline & inland mountains). (Same as hydro signal HAY). (Above position was sealed from Boat Sheet (Ex-2244). (It is recommended that this position be verified by referring to		53 00.8			172 46.4			USN Cannet 1934	1944				9198
	Smooth Sheet H-7016(1944)).												

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

Shoreline Compilation T-7007b

The details shown in green have been added to this graphic control sheet from field inspected photographs. The photographs that cover the east shore of Etienne Bay from Mikhail Pt. to triangulation station ETI, East Base were completely field inspected; consequently office interpretation was necessary in very few instances. The photographs from ETI, East Base to Etienne Point, while not field inspected as completely as desired, furnished enough information that office interpretation of the remaining details can be considered accurate.

There are two sets of photographs available for this compilation - 1:10,000 and 1:26,000. The 1:10,000 Navy photographs covering from Mikhail Pt. to ETI, East Base were field inspected by R. M. Stone in July 1945. The 1:10,000 photographs from ETI, East Base to Etienne Pt. were field inspected by A.L.W. in September 1946. They gave complete coverage of the area and were used in the compilation.

A radial line plot was used to bridge the areas between triangulation stations Soda and Ave and Ave and topographic station Coy.

Triangulation stations Soda, Ave and Tie and topographic stations Jet, Laf, Mid, Sor and Coy were used in laying the plot.

The detail was compiled in the projector on the 1:20,000 graphic control board in August 1947. Office interpretation with field inspection data has been applied with conventional symbols to shoreline and off-shore features. Office interpretation only was used in detailing the bluff line.

The accuracy of the compilation is in keeping with the graphic control and is considered of an accuracy not to exceed 1 mm. of its true horizontal position.

Reconciliation between this survey and H-6866 has been made and no appreciable conflicts were found.

Compiled by: C. Theurer
C. Theurer

Approved by: L. C. Lande
L. C. Lande

*This compilation has been applied to H-6866(1946). No further consideration
by the Hydrographic Review Section is necessary.*
OK.
G.F.L.
2/20/50

GEOGRAPHIC NAMES

Survey No. 7007206

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
<u>Attu Island</u>									USGB	1
<u>Abraham Bay</u>									"	2
<u>Etienne Bay</u>									"	3
<u>Chuniksek Pt</u>									"	4
<u>Mikhail Pt</u>									"	5
<u>Etienne Head</u>									"	6
										7
										8
<u>Alaska</u>										9
<u>Aleutian Islands</u>										10
										11
										12
										13
										14
										15
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										24
										25
										26
										27

Names underlined in red
are approved

3-1-50
L. H. H. C.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-7007a & b

EX-C-45

FIELD NO. EX-D-45

Alaska-Aleutian Islands, Attu Island, Abraham and Etienne Bays
Surveyed in June and July, 1945 Scale 1:20,000
Project No. CS-218

Plane Table Survey

Aluminum Mounted

Chief of Party - R. D. Horne
Surveyed by - R. M. Stone
Inked by - R. M. Stone
Reviewed by - G. F. Jordan, February 28, 1950
Inspected by - R. H. Carstens

1. The control for the present survey is based on triangulation of 1945. The shoreline and foreshore detail in green were compiled in the Washington Office in 1947 from field-inspected air photographs, as discussed in the attached "Report on Shoreline Compilation".
2. Adequate junctions were effected with T-7006b (1945) on the east and with T-7008a (1945-46) on the west.
3. No prior surveys of the area were executed by this Bureau. The shoreline on Chart 9149 (print date of February 23, 1946) originates with an advance field compilation of the present survey (Bp. 40248). The charted shoreline is therefore subject to revision in order to conform to the office-compiled shoreline. No important discrepancies were noted during this review.
4. A comparison of the present survey with contemporary hydrographic surveys H-6866 (1945) and H-6868 (1945) reveals no conflicts.
5. The declinatoire observations revealed magnetic declinations which are within 1° of the charted value.

NAUTICAL CHARTS BRANCH

SURVEY NO. 7007a, b.

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.