

7008a & b

Diag'd. on diag. ch. No. 8865

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey ~~GRAPHIC CONTROL SHEET~~

Field No. Ex-P-15 Office No. _____

LOCALITY

State Alaska - Aleutian Islands

General locality Attu Island

Locality Etienné Head
to
Cape Wrangell

194 5

CHIEF OF PARTY

Roland D. Horne

LIBRARY & ARCHIVES

DATE FEB 11 1946

6-1870-1 (1)

7008a & b

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-F-45

REGISTER NO. 7008 a

State Alaska- Aleutian Islands

General locality Attu Island

Locality Etienne Head to Cape Wrangell

Scale 1 : 10,000 Date of survey July, 1945

Vessel Ship EXPLORER

Chief of party Roland D. Horns

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 ~~REMARKS~~ For Project CS-218, 1945

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

dated 16 May 1944

DESCRIPTIVE REPORT

To Accompany

GRAPHIC CONTROL SHEET

Field No. Ex-F-45

ALEUTIAN ISLANDS, ATTU ISLAND,

ETIENNE HEAD to CAPE WRANGELL

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-D-45) on the
east and covers Cape Wrangell, the western extremity of Attu Island.

Triangulation stations HEAD 1945 and CLOUD 1945 represent the
most westerly limit of the triangulation scheme observed during the 1945
season. A proposed triangulation scheme to the westward was planned,
involving stations COVE 1945, FOG 1945, RANG 1945 and CAPE 1945, which
were established and located by means of graphic control during this
season, and are described on Form No. 525 (Description of Triangulation
Station).

Triangulation station CLOUD 1945 and hydrographic signal ET 1943
are one and the same. ET 1943 is the highest point of a prominent 2200 ft.
peak, located by the methods described below. Triangulation station
CLOUD 1945 was established on the highest point of the prominent peak
mentioned above by this vessel during the 1945 season.

Hydrographic signals ET 1943, GELL 1943, JACK 1943 and BOB 1943
were located by means of hydrographic cuts from the Ship EXPLORER during
the 1943 season, and by graphic control during the 1945 season.

METHODS:

Standard topographic methods were used throughout. ✓

Special attention was given to long orientation lines.

All signals, as shown on this graphical control sheet, were located by the traverse method when traversing from triangulation station HEAD 1945 to Cape Wrangell, the western extremity of Attu Island. Planetable cuts were drawn to topographic stations DAR, GELL 1943, and ET 1943 whenever possible. Triangulation station CLOUD 1945 and the proposed triangulation station FOG 1945 were established after the graphic control work was near completion. Station FOG 1945 was located by means of a triangulation cut from HEAD 1945 and a planetable cut from signal MUG on Cape Wrangell. ✓

ERRORS:

There is no check to be had on the distance, since the traverse was run from east to west in one direction only, however, no discrepancy was noted in regards to the intersection of planetable cuts used in determining the position of topographic station DAR. After triangulation station CLOUD 1945 was established and its position determined by triangulation and plotted on this sheet, a slight difference was noted between this position and the topographic position of ET 1943. Since triangulation station CLOUD 1945 and hydrographic signal ET 1943 are one and the same, an adjustment was made on this sheet between stations RANG 1945 and HEAD 1945 to correct this error by means of the distribution method. The adjustment of the position of RANG 1945 is within the allowable limit. ✓

See Review for error at signal CAPE-1945

TOPOGRAPHIC FEATURES:

The shoreline within the limits of this sheet is covered by air photographs on a scale of approximately 1:26,000, taken by the US Navy, stationed on Attu Island, during 1943. ✓

During the 1945 season, arrangements were made with the US Navy on Attu Island to photograph this shoreline on a scale of 1 to 10,000 at the first opportunity. By the close of the 1945 season, this area still had not been photographed due to unfavorable weather conditions.

Shoreline transferred to planetable sheet from field inspected air photographs taken in 1946

No air photographs on a scale of 1 to 26,000, covering the area within the limits of this sheet, were field inspected during this season.

CONTROL FOR AIR PHOTOGRAPHS:

Adequate control is furnished on this sheet for 1 to 10,000 scale air photographs. ✓

RECOVERABLE TOPOGRAPHIC STATIONS:

The stations involved in the proposed triangulation scheme to the westward of HEAD 1945 and CLOUD 1945 have been described on Form #525, (Description of Triangulation Station). The planetable positions of the stations involved in this scheme are as follows: ✓

COVE 1945	Lat.	52°	55'	644.0	meters
	Long.	172°	29'	544.0	meters
FOG 1945	Lat.	52°	55'	1221.4	meters
	Long.	172°	28'	894.9	meters
RANG 1945	Lat.	52°	54'	1576.8	meters
	Long.	172°	28'	113.5	meters
CAPE 1945	Lat.	52°	55'	1077.5	meters
	Long.	172°	27'	60.2	meters

1067.0 } by triangulation
64.5 } of 1946

The following hydrographic signals were used by the USC&GS Ship EXPLORER during 1943 and were located by graphic control methods and described on Form #524, (Description of Recoverable Topographic Station), during the 1945 season: ✓

GELL 1943	Lat.	52°	55'	1217.4	meters
	Long.	172°	28'	928.3	meters
JACK 1943	Lat.	52°	55'	1127.8	meters
	Long.	172°	27'	87.4	meters
BOB 1943	Lat.	52°	55'	1075.0	meters
	Long.	172°	26'	711.5	meters
ET 1943	(Same as triangulation station CLOUD 1945).				

cards filed
in Photogrammetry

The following planetable positions have been described on Form #524,
(Description of Recoverable Topographic Station):

NUN	Lat.	52°	54'	1161.3	meters
	Long.	172°	31'	53.0	meters
OWN	Lat.	52°	54'	822.3	meters
	Long.	172°	30'	925.5	meters
BEL	Lat.	52°	55'	568.0	meters
	Long.	172°	30'	15.0	meters
CUS	Lat.	52°	55'	1001.5	meters
	Long.	172°	30'	23.9	meters
JAZ	Lat.	52°	55'	935.4	meters
	Long.	172°	29'	1080.0	meters
DAR	Lat.	52°	55'	1222.6	meters
	Long.	172°	28'	888.1	meters
HI	Lat.	52°	55'	361.0	meters
	Long.	172°	28'	274.5	meters
TOY	Lat.	52°	54'	1517.0	meters
	Long.	172°	28'	95.3	meters
SNOW	Lat.	52°	55'	1154.1	meters
	Long.	172°	26'	849.4	meters

MAGNETIC DECLINATION:

A declinoire observation was made with declinoire No. 254 at each of the following stations: TIE 1945, HEAD 1945, and RANG 1945. The value obtained at each of the above stations is respectively, 02° 26' E, 03° 01' E, and 02° 30' E, which agree fairly well with what was expected.

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 "Calibration of declinoire" is attached hereto.

PREVIOUS SURVEYS:

There are no previous surveys covering this locality. ✓

GEOGRAPHIC NAMES: 814 ✓

The designation of "Wrangell Cove" is recommended to the Board of Geographic Names for the cove lying to the westward of Etienne Head, between triangulation stations HEAD 1945 and RANG 1945. ✓

This cove has not been previously named.

LANDMARKS:

The following landmark for charts was selected:

NATURAL BRIDGE and buttress on the northeasterly islet of a group of large islets off Cape Wrangell, the westernmost extremity of Attu Island; same as topographic station SNOW. This natural bridge forms an opening which has the deceptive appearance of a large patch of snow against the dark rocks. ✓

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

STATISTICS:

5.4 statute miles of traverse.

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 GS-215

Ship **EXPLORER**

H. D. Morse, Comdg.

In connection with the graphic control work done on Project GS-215 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. 35951 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° 45' E
Actual Variation -----	23 00 E	23 00 E
Declinatoire Error -----	+ 06'	+ 12'

Respectfully submitted:


Raymond M. Stone
Lieut. USNAGS

Approved: Forwarded:

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

LANDMARKS FOR CHARTS

TO BE CHARTED }
TO BE DELETED } STRIKE OUT ONE

USAGS SHIP EXPLORER

December 21, 1945

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

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

The positions given have been checked after listing.

CH L 7 (1946)

7 (1946)

Roland D. Horne
Chief of Party.

GENERAL LOCALITY	NAME AND DESCRIPTION	POSITION						DATE OF LOCATION	METHOD OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
		LATITUDE		LONGITUDE		DATUM							
		D. M. METERS		D. P. METERS									
		°	'	°	'								
Aleutian Islands Attu Island	Perpendicular-sided TABLE-TOPPED SHOAL, 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 1945 USN 1 to 10,000 scale air photographs, Attu Island).	52 53	1830	172 37	1055	USN Cannet Photo 1934	1945	Air Cannet Photo Inspect.	x			9198	
	NATURAL BRIDGE, Cape Wrangell (On NE'ly 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 Central 1934	July 1945	Graphic Cannet Central (Sheet) (Ex-P-45)	x			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 scaled from Boat Sheet (Ex-2244). (It is recommended that this position be verified by referring to Smooth Sheet H-7016(1944).	53 00.8		172 46.4		USN Cannet Out 1934	1944	Hydro. Cannet Out	x			9198	

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.

80
49STANDARDIZATION OF DECLINATOIRES1945 Field SeasonProject CS-218T-7006 a b
7007 a b
7008 a b
7009 a b

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. 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° 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'

Respectfully submitted:

Approved Forwarded:

*A. P. Ratti*A. P. Ratti
Lieut. Comdr. USC&GS
Comdg. Ship EXPLORER*Raymond M. Stone*
Raymond M. Stone
Lieut. USC&GS

NAUTICAL CHARTS BRANCH

SURVEY NO. 7008a

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.

Shoreline Compilation 7008a

The details shown in green have been added to this graphic control sheet from field inspected photographs. These photographs, while not field inspected as completely as desired, have furnished enough information that office interpretation of the remaining details can be considered to be accurate. Where the hydrographic survey verification is subsequent to this compilation, any discrepancies that may occur should be brought to the attention of the Division of Photogrammetry and at that time more accurate interpretation may be determined in view of the additional information.

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 in 1946, gave complete coverage for the area, and were used in the compilation. At the time of this compilation the only descriptive report available to accompany this graphic control sheet was the 1945 report, Roland D. Horne, Chief of Party. No report is available pertaining to the 1946 field inspected photographs. The photographs were flown in 1946 by Naval Air Station personnel based on Attu Island.

No radial plot was layed. The detail was compiled in the projector on the 1:10,000 graphic control board. All detail shown in green has been added from 1946 field inspected photographs. This sheet was compiled in August 1947.

Office interpretation with field inspection data has been applied with conventional symbols to shore and offshore features. Office interpretation was used in compiling the bluff line. No M.L.L.W. line was indicated on the photographs as such. Office interpretation was used in compiling the M.H.W. line and ledges where these features were not indicated on the field inspected photographs.

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

Reconciliation between this survey and hydrographic sheets 6864 and 6865 has been made. The inshore limits of the soundings on the hydrographic sheets did not conflict with the shoreline, ledges and rocks on the topographic sheet. The shoreline and ledge as shown on the hydrographic sheet do not agree with this sheets M.H.W. and ledge line, but the shoreline on the hydrographic sheet was sketched during field operations and should not be used. *Present shoreline transferred to H-6864 and H-6865*

Detailed by:

J. V. Blankenshaw

No field inspection seasons' report was submitted with the photos for this sheet.

Approved by: L. C. Lande

Sept. 24, 47
Division of Photogrammetry
Graphic Compilation Section

GEOGRAPHIC NAMES

Survey No.

T-7008a

Name on Survey

	A	B	C	D	E	F	G	H	K	
<u>Alaska</u>			(for title)							1
<u>Aleutian Islands</u>		"	"							2
<u>Attu Island</u>									USGB	3
<u>Cape Wrangell</u>										4
<u>Wrangell Cove</u>										5
<u>Etienne Head</u>									USGB	6
										7
										8
										9
										10
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										26
										27
										M 234

Names underlined in red
are approved.
1431/47 L. Heck

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-7008a

FIELD NO. EX-F-45

Alaska-Aleutian Ids., Attu I., Etienne Head to Cape Wrangell
Surveyed in July 1945 Scale 1:10,000
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 - R. H. Carstens, December 18, 1947
Inspected by - H. W. Murray

1. The signals on the present survey were located in 1945; the shoreline was added in green from field inspected air photographs in 1947, as discussed in the report on Shoreline Compilation attached to the Descriptive Report. A formal review of the present survey is considered unnecessary.

2. It is noted that the planetable position of signal CAPE-1945 in lat. $52^{\circ} 55.58'$, long. $172^{\circ} 27.05'$, differs from the 1946 triangulation position by 10 meters. Signal CAPE, together with other signals in the vicinity, was located by an open traverse and has not been adjusted to agree with the triangulation position. These signals should be used with caution on future surveys. Revision of the shoreline detail is not considered warranted as the inaccuracy in shoreline compilation may be as great as one millimeter in horizontal position.

3. The shoreline on chart 9149 (Latest print date 2/23/46) differs from the present shoreline by as much as 90 meters in places and is superseded by the present shoreline.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey **GRAPHIC CONTROL SHEET**

Field No. **Ex-G-45** Office No. **T-70086**

LOCALITY

State **Alaska Aleutian Islands**

General locality **Shemya Island**

Locality **Aloan Cove**

194 5

CHIEF OF PARTY

Roland D. Horne

LIBRARY & ARCHIVES

DATE **FEB 11 1946**

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-G-45

REGISTER NO. T-70086

State Alaska - Aleutian Islands

General locality Shemya Island

Locality Alean Cove

Scale 1 : 2400 Date of survey September 5, 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 ~~added~~ For Project CS-218, 1945

~~REMARKS~~ Supplemental Instructions for Proj. No. 10

dated 12 April 1945 & 22 August 1945

DESCRIPTIVE REPORT

To Accompany

GRAPHIC CONTROL SHEET

Field No. Ex-G-45

ALEUTIAN ISLANDS, SHEMYA ISLAND,

ALCAN COVE

Ship EXPLORER

R. D. Horne, Comdg.

AUTHORITY:

Original Instructions for Project CS-218.

Supplemental Instructions for Project No. 10, dated 12 April 1945, and 22 August 1945, submitted by the USC&GS Liaison Officer, Com. 17, Adak, Alaska.

CONTROL:

Graphic Control Sheet No. (Ex-G-45), accompanying this report, covers an area that is within the limits of Topographic Sheet No. T-6971-B, (Ex-E-44).

As a means of control for this sheet, several positions of topographic stations were taken from an abstract of plane coordinate positions of stations as scaled from sheet No. T-6971-B, (Ex-E-44), during the 1944 season. The topographic stations involved are: HECF, TRI, ROCK, JOHN, KID and CAR. These stations were not described in previous surveys, but, were recovered during this season by personnel who were connected with 1944 surveys of this area.

Additional control was obtained from the Army, consisting of U.S.E.D. traverse stations A-3, A-5, A-7, A-8, and H-5. These stations were established and located by the U.S.E.D. during the latter part of 1944.

A list of coordinates of all signals on the U.S.E.D. grid is enclosed with this report.

Topographic station TRI acts as a tie between the topographic stations as shown on sheet No. T-6971-B and all of the U.S.E.D. stations

concerned in this area, in that this station was also one of the army traverse stations in conjunction with surveys made by the U.S.E.D. during 1943 and 1944. Since that time, station TRI has been renamed (A-3) by the U.S.E.D. in connection with their surveys made during the later part of 1944.

All of the control as listed above is connected to triangulation done by the U.S.E.D. during 1943 and triangulation done by the USC&GS Ships EXPLORER and SURVEYOR during 1944. Traversing in this area was done by the U.S.E.D. at various times during 1943 and 1944.

The datum of this sheet is based on triangulation which is on the USN GANNET 1934 datum.

The projection pertaining to this sheet is that of the U. S. Engineers plane coordinate grid, the distance between the northings and eastings being 1000 feet on a scale of 1 to 2400. It was intended that the polyconic projection be put on this sheet at a later date.

*Polyconic projection on
N.A. 1927 added 12/22/47*

METHODS:

Standard topographic methods were used in locating all signals.

All signals other than those mentioned above as shown on this sheet, were located by means of three or more planetable cuts.

Planimeter setups were made at the following stations in the order shown: TRI, A-8, H-5 and OFF. The position of signal OFF was determined by the resection method.

ERRORS:

When the planetable was setup over station TRI, (one of the army 1944 traverse stations), no error was found when orienting on KID and JOHN, which are from Topographic Sheet No. T-6971-B, (Ex-E-44), and cutting in anyone of the 1944 U.S.E.D. traverse stations as listed above. These 1944 U.S.E.D. traverse stations as plotted were considered correct for the remainder of the work.

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

The positions of CAR and HECF differ slightly on this sheet as compared to their positions on Topographic Sheet No. T-6971-B, (Ex-E-44), in that the position of CAR moved 1.8 meters to the westward, and likewise, the position of HECF moved 2.4 meters to the southeastward.

Signal CHECK was actually moved in the field to make way for an air landing strip since the 1944 surveys were made. The new position of this signal was renamed ECK.

TOPOGRAPHIC FEATURES:

The shoreline within the limits of this sheet is adequately covered by air photographs. Data pertaining thereto is as follows:

Air Photograph Nos. (A-1) to (A-5) inclusive.

(Assigned by the USC&GS Ship EXPLORER).

Flown By:

U. S. Army, 404 Bomber Squadron
(Stationed on Shemya Island).

Scale:

These air photographs were enlarged by the U. S. Army to a scale of 1 to 2400 from their source of material on hand.

Date Flown:

June 11, 1945

Time of Day:

1530 (150th Meridian Time).

The air photographs mentioned above were field inspected by the USC&GS Ship EXPLORER during the 1945 season.

CONTROL FOR AIR PHOTOGRAPHS:

Adequate control was picked on the air photographs mentioned above.

RECOVERABLE TOPOGRAPHIC STATIONS:

The topographic stations as listed on the following page have been described on Form No. 524, (Description of Recoverable Topographic Station):

RECOVERABLE TOPOGRAPHIC STATIONS: (Cont'.)

STATION	U.S.E.D. Plane Coordinates	
	North	East
HECP	27,818.90	104,813.39
✓ ROCK	27,428.15	106,656.17
✓ A-3 (U.S.E.D. 1944) or TRI	27,112.63	106,119.41
✓ A-5 (U.S.E.D. 1944)	27,772.47	107,891.79
✓ A-7 (U.S.E.D. 1944)	29,227.93	109,199.92
✓ A-8 (U.S.E.D. 1944)	30,548.16	109,536.25
✓ H-5 (U.S.E.D. 1944)	28,565.74	109,124.35

The plane coordinates of (U.S.E.D. 1944) stations A-3, A-5, A-7, A-8 and H-5, as shown above, were taken from the abstract of U.S.E.D. plane coordinates of stations enclosed with this report.

The position of ROCK, as listed above, was scaled from Topographic Sheet No. T-6971-B, (Ex-E-44), during the 1944 season, and is the position plotted on sheet No. (Ex-G-45). *present survey*

The position of HECP was scaled from sheet No. (Ex-G-45). *present survey*

The positions of all of the above stations will have to be converted over to the polyconic projection whenever this type of projection is plotted on this sheet.

Bench Mark No. 6 was established and located on this sheet in lieu of Bench Mark No. 3, which could not be found during the 1945 season. The description of Bench Mark No. 6 was furnished with the report on the installation of tide gage in this area. ✓

MAGNETIC DECLINATION:

A declinoire observation was made with declinoire No. 254 at each of the following stations: TRI and A-8. The value obtained at each of the above stations is respectively 03° 15' E and 02° 53' E, which agree fairly well with what was expected. ✓

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:

Surveys of Alcan Cove, Shemya Island, were completed by the USC&GS Ships EXPLORER and SURVEYOR during the early part of the 1944 season. Since that time, a resurvey of Alcan Cove was requested as a result of destruction of the breakwater and dock facilities in this area caused by winter storms during 1944-45.

This graphic control sheet, No. (Ex-G-45), which is on a scale of 1 to 2400, covers an area that is within the limits of Topographic Sheet No. T-6971-B, (Ex-E-44), - the latter being on a scale of 1 to 5000.

GEOGRAPHIC NAMES:

No additional geographic names are involved.

LANDMARKS:

No additional landmarks are involved.

Topographic station HECP, described on Form #524, (Description of Recoverable Topographic Station), is the center of a Marine Signal Tower. The position of HECP as scaled from Graphic Control Sheet No. (Ex-G-45), checks the position of the SIGNAL TOWER as shown on C&GS chart No. 9125.

STATISTICS:

2.0 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

See vol 3, pages 33-34 H-6873 for notes
when compiling shoreline
RHC 10/31/46

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. 35981 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 -(180 00)	95 17 -(180 00)
Magnetic North by declinatoire	22° 54' E	22° 45' E
Actual Variation -----	23 00 E	23 00 E
Declinatoire Error -----	+ 06'	+ 12'

Respectfully submitted:


Raymond M. Stone
Lieut. USCGAS

Approved: Forwarded:

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

Shoreline Compilation 7008b

The details shown in green have been added to this graphic control sheet from field inspected photographs. The field inspection of these photographs is complete with the exception of the area on the west and north side of the neck forming the west side of Alcan Cove. This area was compiled using office interpretation of the photographs. The office interpretation in the area covered by field inspection consisted mainly of bluff line and rocky areas adjacent to the M.H.W. line. Where the hydrographic survey verification is subsequent to this compilation, any discrepancies that may occur should be brought to the attention of the Division of Photogrammetry and at that time a more accurate interpretation may be determined in view of the additional information.

The field inspected photographs, Flight A1 to A5, used in this compilation were flown by the U. S. Army's 404th Bomber Sqdn. stationed on Shemya Island on June 11, 1945. The photographs Nos. A1 and A2 used in this compilation were field inspected by R. M. Stone on September 9, 1945. The photographs were enlarged by the Army to a scale of 1:2400.

No radial plot was layed. The detail was compiled in the projector on the 1:2400 graphic control board in September 1947. All detail shown in green has been added from 1945 field inspected photographs. The following topographic stations were used for control: Use, Hut, Sad, Rock, Gas, Sog, Ear, Day, Ace, John, and Kid.

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 exception of the area on the west and north side of the neck forming the west side of Alcan Cove mentioned above.

No reconciliation between this survey and a hydro-graphic survey has been made.

The seasons' report "Inspections of Aerial Photographs by F.L. Gatten, Chief of Party on the EXPLORER in 1945 is filed in library as 1945/125.

Detailed by:

J. D. Blankenship

Approved by: *L. C. Lande*
Sept. 24, 1947

*Shoreline
transferred to
H-6873 (1945)
by RHC
12/19/47*

Sta.	Elev.	North	East	Distance		Azim D M S
				To	Length	
AIR	163,309	22,239.47	122,164.61	C 6	761.79	275-40-21
AIR	-	-	-	C 7	1197.63	88-41-40
COVE	224,541	31,407.77	110,075.96	A 8	1014.87	212-07-22
COVE	-	-	-	B 1	1793.03	118-41-54
COVE	-	-	-	SHEMYA	877.42	63-01-31
FOR	253,562	28,485.16	115,740.65	B 4	1119.78	298-56-07
FOR	-	-	-	B 5	582.65	147-08-38
MID	191,282	25,750.91	115,347.99	C 1	1439.92	112-42-13
MID	-	-	-	O 5	1074.81	199-24-03
MID	-	-	-	K 1	1071.97	322-20-48
PHI	90,002	21,295.21	121,971.79	D 13	511.29	251-04-57
PHI	-	-	-	D 14	938.24	76-25-31
RAD	243,888	27,029.23	121,567.03	B 10	1020.30	260-51-13
RAD	-	-	-	B 11	848.26	150-42-52
SAN 2	73,340	23,636.74	109,460.54	E 8	846.31	276-58-44
SAN 2	-	-	-	D 1	418.33	119-38-15
SAN 2	-	-	-	H 1	1510.53	350-48-06
SAN 2	-	-	-	SAN 2A	1457.49	62-18-29

Sta.	Elev.	North	East	Distance		Azim		
				To	Length	D	M	S
SAN 2A		24,314.09	110,751.13	G 1	629.31	31	45	44
SAN 2A	-	-	-	SAN 2	1457.49	242	18	29
SEA		21,035.87	123,930.52	C 11	772.79	196	30	15
SEA	-	-	-	D 14	1150.67	294	37	38
SHEMYA	243,759	31,805.82	110,858.02	COVE	877.42	243	01	31
SHEMYA	-	-	-	B 1	1486.85			
WES	78,626	25,862.21	103,366.83	A 1	771.95	31	54	50
WES	-	-	-	E 1	827.43	162	31	52
WES	-	-	-	END	585.54	91	47	20
A-1	37,625	26,517.56	103,774.97	A-2	1357.62	44	28	18
A-2	65,151	27,486.48	104,726.18	A-3	1442.35	105	01	27
A-3	66,482	27,112.63	106,119.41	A-4	842.81	62	43	42
A-3	-	-	-	F-1	367.66	176	25	10
A-4	21,909	27,498.86	106,868.64	A-5	1058.97	75	01	44
A-5	17,864	27,772.47	107,891.79	A-6	1175.33	38	22	19
A-6	18,469	28,694.05	108,621.49	A-7	787.05	47	17	38
A-6	-	-	-	H 5	519.08	104	18	35
A-7	34,347	29,227.93	109,199.92	A-8	1362.21	44	17	33
A-8	132,887	30,548.16	109,536.25	COVE	1014.87	32	07	22

Sta.	Elev.	North	East	Distance		Azim		
				To	Length	D	M	S
B-1	204,364	30,546.66	111,649.08	B-2	1502.69	102	53	07
B-1	-	-	-	J-4A	327.34	186	34	31
B-2	230,567	30,211.52	113,114.26	B-3	1084.86	105	46	26
B-3	253,070	29,916.57	114,158.50	B-4	1065.94	145	36	49
B-4	244,668	29,036.81	114,760.65	-	-	-	-	-
B-4	-	-	-	K-3	550.35	256	38	30
B-4	-	-	-	FOR	1119.78	118	56	07
FOR	-	-	-	B-5	582.65	147	08	38
B-5	213,189	28,005.79	116,056.88	B-6	1366.62	87	35	56
B-6	245,928	28,063.05	117,422.79	B-7	1148.48	98	24	17
B-7	251,483	27,898.52	118,559.83	B-8	890.00	119	27	44
B-8	234,724	27,460.84	119,335.02	B-9	785.67	113	25	55
B-9	228,447	27,148.46	120,056.16	B-10	576.40	119	13	49
B-10	219,584	26,867.03	120,559.34	RAD	1020.30	80	51	13
RAD	-	-	-	B-11	848.26	150	42	52
B-11	224,178	26,289.18	121,982.12	B-12	1235.89	188	26	00
B-12	201,038	25,066.32	121,800.93	B-13	766.65	159	12	38
B-13	201,357	24,349.40	122,073.13	B-14	560.61	167	07	32
B-14	178,871	23,802.73	122,198.08	B-15	654.71	121	03	57

Sta.	Elev.	North	East	Distance		Azim		
				To	Length	D	M	S
B-15	166,479	23,464.79	122,759.09	B-16	530.12	117	18	50
B-16	136,313	23,221.48	123,230.27	C-7	963.54	172	08	10
C-1	152,152	25,195.07	116,676.66	C-2	1026.39	122	53	26
C-2	147,797	24,637.62	117,538.74	C-3	1324.54	116	02	50
C-3	149,033	24,055.92	118,729.04	C-4	807.14	118	07	48
C-4	147,637	23,675.32	119,441.01	C-5	1425.17	124	41	32
C-5	144,193	22,864.05	120,613.10	C-6	964.67	124	42	07
C-6	122,535	22,314.78	121,406.37	AIR	761.79	95	40	21
AIR	-	-	-	C-7	1197.63	88	41	40
C-7	157,048	22,266.75	123,362.15	C-8	962.45	93	41	15
C-7	-	-	-	B-16	963.54	352	08	10
C-8	139,117	22,204.83	124,322.78	C-9	894.12	165	44	15
C-9	105,250	21,337.96	124,337.96	C-10	1264.56	156	22	02
C-10	76,009	20,179.04	125,050.12	C-11	1344.45	274	57	28
C-11	67,161	20,295.19	123,710.94	SEA	772.79	16	30	15
D-1	57,100	23,429.75	109,824.17	SAN-2	418.33	299	38	15
D-1	-	-	-	D-2	1617.96	111	11	19
D-2	26,819	22,844.63	111,332.89	D-3	586.33	133	57	20
D-3	15,860	22,437.43	111,755.02	D-4	1239.66	115	26	47

Sta.	Elev.	North	East	Distance		Azim		
				To	Length	D	M	S
D-4	22,656	21,904.48	112,874.53	D-5	1031.63	129	18	00
D-5	27,686	21,250.70	113,672.93	D-6	1151.15	71	32	19
D-6	26,690	21,615.02	114,764.94	D-7	789.84	99	55	35
D-7	27,180	21,478.79	115,543.03	D-8	806.88	107	21	28
D-8	31,274	21,237.93	116,313.24	D-9	919.81	103	05	41
D-9	19,622	21,029.42	117,209.22	D-10	1355.02	95	18	10
D-10	37,066	20,904.12	118,558.57	D-11	1561.30	92	12	51
D-11	55,915	20,843.77	120,118.85	D-12	441.10	88	26	35
D-12	62,118	20,855.74	120,559.83	D-13	967.74	73	33	18
D-13	77,982	21,129.54	121,488.07	FHI	511.29	71	04	57
FHI	-	-	-	D-14	938.24	76	25	31
D-14	130,195	21,515.41	122,884.15	SEA	1150.67	114	37	38
E-1	49,386	25,072.98	103,615.22	E-2	501.43	132	23	53
E-2	21,882	24,734.90	103,985.53	E-3	829.88	116	21	50
E-3	34,269	24,366.39	104,729.13	E-4	577.93	71	46	11
E-4	25,472	24,547.20	105,278.07	E-5	1057.74	103	28	52
E-5	13,960	24,300.62	106,306.71	E-6	893.76	94	27	55
E-6	53,314	24,231.04	107,197.79	E-7	853.08	132	15	37
E-6	-	-	-	F-4	683.49	22	33	33

Note: D-5 thru D-12 subject to slight change in final adjustment.

Sta.	Elev.	North	East	Distance		Azim		
				To	Length	D	M	S
E-7	49,029	23,657.37	107,829.17	E-8	795.53	84	04	10
E-8	64,676	23,739.57	108,620.47	SAN 2	846.31	96	58	44
F-1	95,686	26,745.69	106,142.37	F-2	1385.60	150	26	47
F-2	102,456	25,540.35	106,825.78	F-3	672.63	79	33	48
F-3	109,858	25,662.20	107,487.26	F-4	800.43	181	57	07
F-4	73,166	24,862.23	107,460.00	E-6	683.49	202	33	33
G-1	40,928	24,849.17	111,082.41	SAN 2A	629.31	211	45	44
G-1	-	-	-	G-2	1325.89	81	56	30
G-1	-	-	-	J-1	1177.83	24	03	03
G-2	90,909	25,035.04	112,395.25	G-3	1213.02	124	27	02
G-3	112,955	24,348.87	113,395.55	G-4	1197.55	97	18	22
G-4	130,719	24,196.59	114,583.42	G-5	676.90	37	01	03
G-5	150,166	24,737.08	114,990.96	MID	1074.81	19	24	03
H-1	69,696	25,127.97	109,219.13	SAN 2	1510.53	170	48	06
H-1	-	-	-	H-2	936.44	3	23	57
H-2	61,100	26,062.84	109,274.66	H-3	1210.63	358	05	22
H-3	89,269	27,272.90	109,234.31	H-3A	318.54	340	19	10
H-3A	-	27,572.86	109,127.05	H-4	868.85	27	08	41
H-4	97,383	28,346.07	109,523.53	H-5	455.70	298	49	00

Sta.	Elev.	North	East		Distance		Azim		
					To	Length	D	M	S
D-10A	35,111	20,880.77	118,459.39	D-10		101.89	76	44	58
C-9A	97,891	21,306.92	124,594.70	C-8		937.87	343	08	58
B-7A	250,531	27,827.26	118,539.94	B-8		875.45	114	44	41
L-1	231,680	26,255.64	120,507.16	B-9		999.99	333	12	15
L-1	"	"	"	L-2		796.31	170	04	26
L-2	212,246	25,471.06	120,644.48	L-3		1249.44	207	43	56
L-3	167,170	24,364.88	120,063.32	C-4		928.91	222	05	05
M-1	"	27,169.62	117,386.91	B-6		893.96	02	18	01
M-1	"	"	"	M-2		718.67	227	12	36
M-2	"	26,681.31	116,859.57	M-3		625.47	140	03	06
M-3	"	26,201.71	117,261.22	C-1		1163.90	210	09	07
C-11A	"	20,439.75	124,095.21	C-11		410.56	290	37	00
QAS	"	23,695.73	105,475.30	E-3		1003.30	311	56	50
QAS	"	"	"	E-2		1816.40	304	53	50

Sta.	Elev.	North	East	Distance		Azim		
				To	Length	D	M	S
H-5	83,971	28,565.74	109,124.35	A-6	519.08	284-18-35		
J-1	68,354	25,924.78	111,562.22	G-1	1177.83	204-03-03		
J-1	-	-	-	J-2	1588.34	7-26-41		
J-2	119,568	27,499.78	111,767.93	J-3	901.14	19-36-37		
J-3	118,284	28,348.67	112,070.24	J-4	1622.72	345-05-45		
J-4	182,469	29,916.85	111,652.69	J-4A	307.35	352-19-23		
J-4A	-	30,221.46	111,611.61	B-1	327.34	6-34-31		
K-1	197,777	26,599.79	114,693.14	MTD	1071.97	142-20-48		
K-1	-	-	-	K-2	891.62	332-59-25		
K-2	193,262	27,394.33	114,288.22	K-3	1516.29	357-37-03		
K-3	235,248	28,909.63	114,225.19	B-4	550.35	76-38-30		
GAS	56,056	23,694.97	105,476.15	E-4	875.11			
D-13	-	-	-	D-12A	588.57	260-07-33		
D-12A	-	21,028.66	120,908.16	D-12B	231.80	243-34-34		
D-12B	-	20,925.57	120,700.56	D-12	157.11	243-35-37		
D-10A	35,111			D-10				
C-9A	97,891							
C-11A	77,960							
B-7A	250,531							

GEOGRAPHIC NAMES

Survey No.

T-7008b

Name on Survey

	A	B	C	D	E	F	G	H	K	
<u>Alaska</u>			(for title)							1
<u>Aleutian Islands</u>		"	"							2
<u>Shemya Island</u>										3
<u>Alcan Harbor</u>										4
										5
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Names underlined in red
are approved. 12/31/47
L. Heck.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-7008b

FIELD NO. EX-G-45

Alaska-Aleutian Ids., Shemya I., Alcan Cove
Surveyed in September 1945 Scale 1:2,400
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 - R. H. Carstens, December 18, 1947
Inspected by - R. H. Carstens

The shoreline on the present survey originates with air photographs and was compiled directly on the planetable sheet as discussed in the report on Shoreline Compilation attached to the Descriptive Report. A formal review of the present survey is considered unnecessary.

Subsequent to the preceding survey of the area, T-6971b (1944), a new pier was constructed, changes were made in two other piers and the breakwaters were destroyed by winter storms. The present survey adequately shows the changed shoreline. Additional inshore rocks awash and sunken rocks, however, have been added to the present survey from T-6971b.

The charted shoreline on chart 9125 (Latest print date 2/3/47) is principally from advance information on Bp. 40249 (1945). Agreement with the present shoreline is generally adequate except for the sunken rocks on the present survey in the vicinity of lat. $52^{\circ} 43' 53.5''$, long. $174^{\circ} 04' 49.5''$, and lat. $52^{\circ} 43' 47.2''$, long. $174^{\circ} 04' 45''$, which have not been charted.