

7009

Graphic Control

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-K-45** Office No. **T-7009**

Graphic Control

LOCALITY

State **Alaska (Aleutian Islands)**

General locality **Attu Island**

Locality **Steller Cove to Holtz Bay**

194 5

CHIEF OF PARTY

Roland D. Horne

LIBRARY & ARCHIVES

DATE **FEB 11 1946**

6-1870-1 (1)

7009

Graphic Control

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-K-45

REGISTER NO. T-7009

State Alaska-{Aleutian Islands}

General locality Attu Island

Locality Steller Cove to Holtz Bay

Scale 1 : 20,000 Date of survey 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, 19...

~~XXXXXXXX~~ Supplemental Instructions for Proj. No. 30

dated 24 May 1945

DESCRIPTIVE REPORT

To Accompany

GRAPHIC CONTROL SHEET

Field No. Ex-K-45

ALEUTIAN ISLANDS, ATTU ISLAND,

STELLER COVE to HOLTZ BAY

Ship EXPLORER

R. D. Horne, Comdg.

AUTHORITY:

Original Instructions for Project CS-218. ✓

Supplemental Instructions for Project No. 30, dated 24 May 1945,
submitted by the USC&GS Liaison Officer, Com. 17, Adak, Alaska. ✓

CONTROL:

The main triangulation scheme in Holtz Bay and the local triangulation scheme in Steller Cove as well as the traverse run from Holtz Bay to Steller Cove was done by the USC&GS Ship EXPLORER during 1944.

The datum of this sheet is USN GANNET 1934. ✓

METHODS:

During the 1944 field season, the main triangulation scheme was carried westward by the USC&GS Ship EXPLORER along the north coast of Attu Island as far as triangulation station BRAD 1944, which is located on the west side of Holtz Bay. A traverse was run along the north coast from BRAD 1944 to FOX 1944 and LIB 1944, which are located on the east side of Steller Cove. This traverse was run from Holtz Bay to Steller Cove in one direction only, primarily to furnish an approximate connection between the main triangulation scheme in Holtz Bay and the local triangulation scheme in Steller Cove.

Refer to report on Graphic Control Sheet No. (Ex-H-44). T-6973a

During the 1945 field season, the USC&GS Ship EXPLORER ran a traverse over the same area from FOX 1944 to BRAD 1944 to complete the above traverse.

The traverse run during the 1944 season was done on Graphic Control Sheet No. (Ex-H-44)^{T-6973a}. The continuation of this traverse, run during the 1945 season, was done on Graphic Control Sheet No. (Ex-K-45)^{T-7009}. The control used on the latter sheet consists of BRAD 1944, FOX 1944, and LIB 1944, which were transferred from sheet No. (Ex-H-44)^{T-6973a}.

Orientation at FOX 1944, to start the traverse, was obtained by using the orientation line FOX to PRIT 1944, as constructed on this sheet.

Standard topographic methods were used throughout.

Special attention was given to long orientation lines.

Planetable cuts were drawn to some prominent object at most every set-up, so as to keep a check on the rod readings.

ERRORS:

A closing error of 72 meters was noted at triangulation station BRAD 1944, which represents the closing error of the traverse run from BRAD 1944 to FOX 1944 during the 1944 season, and the traverse run in the reverse direction from FOX 1944 to BRAD 1944 during 1945. This error is well within the allowable limit.

As a check on the azimuth of the traverse terminating at BRAD 1944, planetable cuts were drawn to triangulation stations COOP 1944 and PARK 1944 from BRAD. It was found that these cuts coincided with the orientation lines to these stations as constructed on this sheet. This check indicated no error in azimuth.

^{T-6973a} The topographic position of FOX 1944 as determined on sheet No. (Ex-H-44)^a, and the triangulation position of BRAD 1944 were held fixed and all signals between these two stations were adjusted by the distribution method to correct this closing error.

The position of FOX 1944 was not adjusted at this time due to the fact a proposed triangulation scheme was planned to the westward of Steller Cove, to connect the local triangulation scheme of Steller Cove with the main triangulation scheme of the Aleutian Chain. After this proposed

scheme will have been completed, a final adjustment of the position of station FOX 1944, as well as the adjustment of all stations involved in the local Steller Cove triangulation scheme and all topographic signals between FOX and BRAD will be made.

*Position of Fox not adjusted
11/29/49*

TOPOGRAPHIC FEATURES:

The rocks awash and islets shown on this sheet were located by cuts while running the traverse and are not necessarily the limits of the dangers.

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

During the 1945 season, the U. S. Navy photographed the same area except for a portion of shoreline within one mile west of BRAD 1944. The scale of this series is approximately 1 to 10,000.

No air photographs on a scale of approximately 1 to 10,000, covering the area within the limits of this sheet, were field inspected during this season. However, a set of air photographs on a scale of approx. 1 to 26,000, covering the entire area, were field inspected by the USC&GS EXPLORER during the 1944 season.

CONTROL FOR AIR PHOTOGRAPHS:

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

RECOVERABLE TOPOGRAPHIC STATIONS:

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

WASH	Lat.	52°	59'	855.5	meters
	Long.	173°	08'	501.0	meters
CLUB	Lat.	52°	59'	1459.0	meters
	Long.	173°	07'	161.0	meters
NIG	Lat.	52°	59'	1202.0	meters
	Long.	173°	05'	735.0	meters

RECOVERABLE TOPOGRAPHIC STATIONS: (Cont'.)

HID	Lat.	52°	59'	811.5	meters
	Long.	173°	04'	574.0	meters
LET	Lat.	53°	00'	158.0	meters
	Long.	173°	03'	461.5	meters
ELL	Lat.	53°	00'	99.0	meters
	Long.	173°	01'	706.0	meters

MAGNETIC DECLINATION:

A declinatoire observation was made with declinatoire No. 254 at each of the following stations: FOX 1944 and BRAD 1944. The value obtained at each of the above stations is respectively, 03° 58' E and 01° 30' E. The transit magnetometer observations made at ADA 1944 in Steller Cove during 1944, indicate that the declination was approximately 03° 31' E and similar observations made at DOW 1944 in Holtz Bay during 1944 indicate that the declination was approximately 02° 18' E. All of the above values obtained during 1944 and 1945 indicate that the magnetic declination is somewhat greater in the Steller Cove area than in the Holtz Bay area.

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:

This graphic control sheet (Ex-K-45) ^{7-7009 (1944)} has the same limits as graphic control sheet (Ex-H-44) ^{7-69973 (1944)} and is a continuation of surveys done by the USC&GS Ship EXPLORER during the 1944 season.

GEOGRAPHIC NAMES:

No additional geographic names are involved.

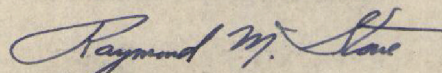
LANDMARKS:

No additional landmarks are involved.

STATISTICS:

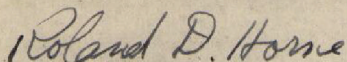
8.6 statute miles of traverse.

Respectfully submitted,



Raymond M. Stone,
Lieut. USC&GS

Approved and Forwarded,



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

11/29/30

This graphic control survey has been compared with contemporary hydrographic surveys and no further review by the Hydrographic Survey Section is considered necessary at the present time.

I. M. Zeiskind

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. 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.

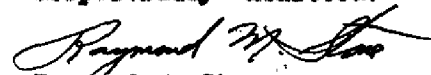
Four readings were taken for the standardization of each declinatoire. The angles made with the true azimuth line were then scaled with a steel protractor, and the four values meaned. The resulting mean angle was applied to the true azimuth of the mark in each case to determine the value of magnetic 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° 45' E
Actual Variation -----	23 00 E	23 00 E
Declinatoire Error -----	+ 06'	+ 12'

Respectfully submitted:


Raymond M. Stone
Lieut. USCGS

Approved: Forwarded:

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

80
49STANDARDIZATION OF DECLINATOIRES1945 Field SeasonProject CS-2181-7006 a b
7007 a b
7008 a b
7009 a b

Ship EXPLORER

R. D. Horne, Comdg.,

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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:

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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	Declinatoire #254
120th Meridian Time -----	(11:59)	(11:40)
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 00 E	23 00 E
Declinatoire Error -----	+ 06'	+ 12'

Respectfully submitted:

Approved Forwarded:

A. P. Ratti

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

Raymond M. Stone
Raymond M. Stone
Lieut. USCGS

NAUTICAL CHARTS BRANCH

SURVEY NO. T 7009

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.