

7031 a

~~SECRET~~

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

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

TOPOGRAPHIC

Type of Survey

Field No. EX-A-46 Office No. T-7031 a

LOCALITY

State ALASKA

General locality ATTU ISLAND

Locality CAPE WRANGELL to KRESTA POINT

194 6

CHIEF OF PARTY

F. L. Gallen

LIBRARY & ARCHIVES

DATE MAR 6 1947

B-1870-1 (1)

7031 a

Sample Control

7031a.

1/12/51 ~~For~~ ~~Recons~~ Completely applied after review

Oct 9/47 - completely applied before review. L.A.M. 8.3.48

Oct 9/47 Exam no cov. after review ~~For~~ ~~Recons~~ 6.25.51

" 9/49 Recons. after review

Henry L. Goodloe Jr. 1954
2/11/4

5-27-63 8865 ~~For~~ ~~Recons~~ Exam after review NO cov

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

GRAPHIC CONTROL
~~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-A-46

REGISTER NO. T-7031 a

State Alaska - Aleutian Islands

General locality Attu Island

Locality Cape Wrangell to Kresta Point

Scale 1:20,000 Date of survey August, 1946

Vessel U.S.C. & G.S.S. EXPLORER

Chief of party F. L. Gallen

Surveyed by John C. Ellerbe - H. C. Applequist

Inked by John C. Ellerpe - H. C. Applequist

Heights in feet above MEW to ground ~~to tops of trees~~

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

Instructions dated Feb. 3, 1938 - Apr. 16, 1943, 1943

Remarks: _____

~~REG. NO.~~
REG. NO.

17031

DESCRIPTIVE REPORT

to accompany

GRAPHIC CONTROL SHEET

T-7031a(1946)
Field No. Ex-A-46

ALEUTIAN ISLANDS, ATTU ISLAND

CAPE WRANGELL to KRESTA POINT

Ship EXPLORER

F. L. Gallen, Comdg.

(A) CAPE WRANGELL to Δ MIST

AUTHORITY:

Original instructions for project CS-218.

PURPOSE:

The purpose of this survey was to locate signals for hydro-graphic surveys.

CONTROL:

This survey was made in advance of the triangulation. Stations DAR, RANG and CAPE, located on Graphic Control Sheet Field No. T-7008a(1945) Ex-F-45 by means of an unclosed traverse in advance of triangulation, were transferred to this sheet and furnished the original control. Triangulation executed in 1946 by the Ship EXPLORER later formed the basis for adjusting positions to the GANNET 1934 datum.

SURVEY METHODS:

The positions of DAR, RANG and CAPE as located on Sheet Field No. T-7008a(1945) Ex-F-45 were transferred to this sheet. The angle at CAPE between RUM and RANG, as obtained by the triangulation party, was laid off on the sheet. RUM was occupied with the planetable, orientation obtained

by the line to CAPE and position by resection on DAR. Standard topographic methods were then used and the signals located by means of traverses run to CAPE and MIST.

ADJUSTMENT OF TRAVERSES:

The traverse from RUM to CAPE, about $2\frac{1}{2}$ miles, differed from the triangulation distance by 16 meters. The azimuth as obtained by means of the original control differed from the triangulation azimuth by about 12 minutes. This difference in azimuth held over the other traverses also.

The traverse from RUM to GUTE, about 1 mile, differed from the triangulation distance by 6 meters.

The traverse from GUTE to MIST, about 2 miles, differed from the triangulation distance by 9 meters.

The triangulation positions of CAPE, RUM, GUTE and MIST were plotted and the topographic positions adjusted proportionately.

AIR PHOTOGRAPHS:

No photographs were available at the time of the survey.

MAGNETIC DECLINATION: Shoreline transferred to planetable sheet from field-inspected air photographs taken in 1946.

A declinoire observation was made at RUM. The difference of the azimuth of the line RUM to CAPE as used in starting the survey and the final triangulation azimuth was 12 minutes and this should be applied as a minus correction to the declinoire observation. The declinoire correction (Alidade No. 254) as obtained January 22, 1946, was plus 12 minutes. No correction should therefore be applied to the

declinatoire observation as shown on this sheet. The scaled value of the declination was $2^{\circ} 24'$ E.

STATISTICS:

7.4 statute miles of graphic control.

Respectfully submitted,

H C Applequist
H. C. Applequist
H & G Engr., C&GS

Forwarded, Approved:

H. Arnold Karo
H. Arnold Karo
Comdg. Ship EXPLORER

(B) △ MIST to KRESTA POINT

AUTHORITY:

Original instructions for project CS-218.

PURPOSE:

To locate signals for control of hydrographic surveys. To supplement control of air photos in the area.

CONTROL:

This survey was made in advance of the triangulation control. The position of △ KRES was assumed and a double traverse run from that station to △ MIST and return. The geographic position of △ MIST was later determined by triangulation and the position of △ KRES from an observed azimuth from △ MIST, and a scaled distance between the two stations as determined by traverse.

SURVEY METHODS:

The planetable was set up at △ KRES, and oriented on △ MIST, the orientation line being drawn on the sheet. Position of △ KRES was assumed. A traverse was then run to △ MIST. Two additional cuts were taken to △ MIST along the traverse, giving slim angles of intersection with the original orientation line to that station. The measured distance by traverse checked the position determined by these cuts without error. The planetable was then set up on △ MIST and the traverse rerun in the opposite direction, using different set-up points. The original assumed position of △ KRES was checked flat in azimuth and by 6 meters in distance. This traverse was then extended approximately one mile to

join work done by the SURVEYOR, at signal ^{YET} ~~YET~~. $\phi 53^{\circ}00.5'$, $\lambda 172^{\circ}39.8'$ (Gannett datum)

ADJUSTMENT:

The position of Δ MIST having been determined by triangulation, and an azimuth to Δ KRES observed, the position of the latter was determined by computation, using the observed azimuth and the distance between the two stations scaled from the planetable sheet. The planetable position of Δ KRES was determined from the mean of the two traverse positions.

The resulting computed position of Δ KRES was then plotted on sheet ^{T-7031a (1946)} EX-A-46, and the positions of signals and other features transferred and adjusted thereon by means of tracing.

AIR PHOTOGRAPHS:

At the time of execution of this control, photographs were available for only that area between Δ KRES and signal KIP. New photos were obtained, however, at a later date, and field inspection of the later pictures in this area was accomplished in conjunction with inspections of the areas on either side.

MAGNETIC DECLINATION:

A declinoire observation was obtained at Δ KRES and at Δ MIST, using declinoire No. 254. Scaled declinations are as follows:

At Δ MIST $3^{\circ} 00'$ E.

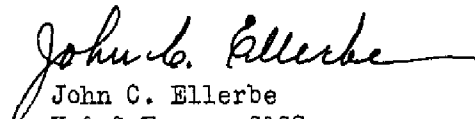
At Δ KRES $1^{\circ} 40'$ E.

Standardization of this instrument at Magnetic Station SEWARD on December 17, 1946, at 1130 indicated no error (see Report of Magnetic Observations, EXPLORER, December 17, 1946).


STATISTICS:

Statute miles of graphic control: 5.5

Respectfully submitted,


John C. Ellerbe
H & G Engr., C&GS

Forwarded, Approved:


H. Arnold Karo
Comdg. Ship EXPLORER

Shoreline Compilation 7031a

All details shown in green have been added to this graphic control board from photographs which were field inspected by F. L. Gallen, Chief of Party, during the 1946 season.

Field Inspection.

The field inspection data with office interpretation were applied to the shoreline and the offshore features, using conventional symbols. No M.L.L.W. line was shown on the board. The interpretation of the bluffline was done in the office.

While the photographs were not field inspected as completely as desired, office interpretation of the remaining detail is believed to be correct. The accuracy of the compilation is in keeping with that of the graphic control survey. Any discrepancies between this compilation and the hydrographic survey 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.

Photographs available.

There were two sets of photographs available for this compilation, 1:10,000 photographs taken by the Navy in 1946 and 1:26,000 photographs taken by the Navy in 1943. The 1:10,000 photographs were used exclusively as they had been field inspected and could be used to greater advantage.

Radial plot.

No radial plot was laid as enough control was available to make this unnecessary. The compilation was done in the projector at a scale of 1:20,000 using the following triangulation stations: Kres, 1946; Mist, 1946; Gute, 1946; Pinnacle Rock, 1946; Rum, 1946; Cape, 1946; and numerous topographic stations which were located by graphic control methods.

Comparison.

The station Snow at the point of Cape Wrangell is believed to be station Den as shown on hydrographic sheet H-6864 and on photograph 23-14-29, the station Snow being more to the westward. (Discrepancy investigated; station name changed to "Den").

A comparison was made with this graphic control board and hydrographic sheet H-6864, 1946 season, and no apparent discrepancies exist. ✓

No difficulty was encountered in the compilation and the junctions with the adjoining sheets have been checked. ✓

Detailed by:

N. A. Cluff

Approved by: *L. C. Hardy*

Division of Photogrammetry
Graphic Compilation Section

*No seasons' field inspection report
was submitted for this sheet.*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-7031a

FIELD NO. EX-A-46

Alaska-Aleutian Ids., Attu I., Cape Wrangel to Kresta Pt.
Surveyed in August 1946 Scale 1:20,000
Project No. CS-218

Planetable Survey

Aluminum Mounted

Chief of Party - F. L. Gallen
Surveyed by - J. C. Ellerbe and H. C. Applequist
Inked by - J. C. Ellerbe and H. C. Applequist
Reviewed by - T. A. Dinsmore, October 1, 1948
Inspected by - R. H. Carstens

1. The signals on the present survey were located in 1945 and later adjusted to triangulation established in 1946. 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 not considered necessary.
2. Adequate junctions were effected with T-7034 (1946) on the northeast and with T-7008a (1945) on the southwest.
3. There are no prior surveys of the area by this Bureau. The shoreline on chart 9198 (Latest print date 6/16/47) originates with Corps of Engineers Quadrangles as shown on Blueprint 37851 (1943). The charted shoreline differs from the present shoreline as much as 500 meters in places and is superseded by the present shoreline.
4. A comparison of the present survey with contemporary hydrographic survey H-6864 (1945-46) reveals no conflicts.
5. The results of the magnetic meridian observations on the present survey are in substantial agreement with the charted values.

GEOGRAPHIC NAMES

Survey No. **T-7031a**

GEOGRAPHIC NAMES										
Survey No. T-7031a										
Name on Survey	<div>On Chart No. On previous survey No. On U. S. quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List</div>									
	A	B	C	D	E	F	G	H	K	
<u>Alaska</u>			(for title)							1
<u>Aleutian Islands</u>			"	"						2
										3
<u>Attu Island</u>									USGB	4
<u>Kresta Pt.</u>									"	5
<u>Cape Wrangell</u>										6
										7
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Names underlined in red are approved. 10/5/48

L. Heck

7031 b

~~Graphic Control~~

7031 b

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

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

TOPOGRAPHIC

Type of Survey ~~GRAPHIC CONTROL~~

Field No. EX-B-46 Office No. T-7031 b

LOCALITY

State ALASKA

General locality ALEUTIAN ISLANDS

Locality OTKRITI BAY, AGATTU ISLAND

1946

CHIEF OF PARTY

F. L. Gallen

LIBRARY & ARCHIVES

DATE MAR 6 1947

8-1870-1 (1)

7031 b

~~Graphic Control~~

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

~~GRAPHIC CONTROL~~
~~TOPOGRAPHIC~~ TITLE SHEET
Topographic

REG. NO.

T7031 b

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-B-46

REGISTER NO. T-7031 b

State Alaska - Aleutian Islands

General locality Agattu Island

Locality Otkriti Bay

Scale 1:10,000 Date of survey June, 1946

Vessel U.S.C. & G.S.S. EXPLORER

Chief of party F. L. Gallen

Surveyed by John C. Ellerbe

Inked by John C. Ellerbe

Heights in feet above MHW to ground ~~to tops of trees~~

Contour, Approximate contour, Form line interval — feet

Instructions dated Feb. 3, 1938 - Apr. 16, 1943, 19—

Remarks: —

DESCRIPTIVE REPORT

to accompany

GRAPHIC CONTROL SHEET

Field No. EX-B-46 T-7031b(1946)

ALEUTIAN ISLANDS - AGATTU ISLAND

OTKRITI BAY

Ship EXPLORER

F. L. . Gallen, Comdg.

AUTHORITY:

Original instructions for project CS-218.

PURPOSE:

To furnish control for hydrographic surveys in the vicinity.

CONTROL:

The triangulation stations were established, but not located, at the time of this survey. Therefore, a system of graphic control, using a measured distance and assumed azimuth between DOWN and SADE, was initiated and carried across the sheet. Triangulation executed in 1946 by the EXPLORER later formed the basis for adjustment of the planetable work to the GANNETT, 1934 datum.

SURVEY METHODS:

The position of Δ DOWN was assumed on a blank aluminum sheet, the station occupied by planetable, and orientation lines drawn to SADE, CORA, IBEX, WILD, RADAR TOWER, and such other triangulation stations as were visible. Also, cuts to all visible hydrographic signals were taken. A double traverse was then run between Δ s DOWN and

SADE, thus establishing the position of SADE on the orientation line from DOWN. After establishing this base, a system of planetable triangulation was carried across the sheet, cutting in and rodding hydrographic signals as the work progressed, and positions of all triangulation stations were thus obtained. These positions were later used as the basis for adjusting the positions of hydrographic signals between each pair of triangulation stations.

ADJUSTMENT:

When the triangulation was completed in this area, and plotted on an aluminum sheet, the planetable work was transferred by tracing from the blank sheet on which the field work had been done. Adjustment was made between each adjacent pair of triangulation stations. The maximum error in the position of any station as determined by planetable was found to be 10 meters, except in the case of Δ RADAR TOWER, which had been located by intersection of three exceedingly slim cuts. This station was therefore disregarded in the adjustment of the work. All hydrographic signals were plotted in their correct relationship to the adjacent triangulation on the new aluminum sheet. No attempt was made to construct a projection on the field sheet.

AIR PHOTOGRAPHS:

No photographs were available at the time of this survey. Pictures flown at a later date were field inspected before the close of the season. (See page 4.)

MAGNETIC DECLINATION:

Declinatoire observations were made at Δ s DOWN, SADE, WILD,

Shoreline Compilation 7031b

The details shown in green have been added to this graphic control sheet from photographs which were field inspected by F. L. Gallen, Chief of Party, during the 1946 season.

Photographs available.

There were three different sets of photographs available for this compilation - 1:10,000 photographs taken in May 1946, 1:15,000 photographs taken in August 1944, and 1:26,000 photographs taken in September 1943. The 1:10,000 photographs were used exclusively as they had been field inspected and could be used to greater advantage.

Field inspection.

Office interpretation with field inspection data has been applied with conventional symbols to shoreline and offshore features. No M.L.L.W. line was shown on the compilation. The interpretation of the bluffline was done in the office.

The photographs were not field inspected as completely as desired but the office interpretation of the remaining detail is believed to be correct.

Compilation.

In compiling the area around Radar Tower, 1946, it was difficult to hold all the points. A radial plot was attempted but due to the great amount of water in this area no azimuths could be obtained, therefore the plot was of no use.

In holding to the triangulation station Radar Tower, 1946, it was found that the land area would have to be displaced to the westward in order to hold the station Elf. The field descriptive report states that the station Radar Tower, 1946, was not included in the triangulation adjustment and was therefore assumed to be in doubtful position in this case.

No field inspection photographs of the stations Ado, Cur, and Gem could be found. Therefore, these stations were of no value in shoreline detailing in that area.

The compilation was done in the projector at a scale of 1:10,000 using the following triangulation stations: Down, 1946; Sade, 1946; Wild, 1946; Yard, 1946; Cora, 1946; Ibex, 1946; Radar Tower, 1946; Jewel, 1946; and numerous topographic stations which were located by graphic control methods. ✓

Comparison.

A comparison was made with this graphic control board and hydrographic sheet H-7138 and no apparent discrepancies exist. (1946) ✓

The junctions with the adjoining sheets have been checked. ✓

Detailed by: *N. G. Cluff*

Approved by: *L. C. Lande*

Division of Photogrammetry:
Graphic Compilation Section

*No seasons' field inspection report
was submitted for this sheet.*

NAUTICAL CHARTS BRANCH

SURVEY NO. T 7031 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.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-7031b

FIELD NO. EX-B-46

Alaska-Aleutian Ids., Agattu., Otkriti Bay
Surveyed in June 1946 Scale 1:10,000
Project No. CS-218

Planetable Survey

Aluminum Mounted

Chief of Party - F. L. Gallen
Surveyed by - J. C. Ellerbe
Inked by - J. C. Ellerbe
Reviewed by - T. A. Dinsmore, October 4, 1948
Inspected by - R. H. Carstens

1. The signals on the present survey were located in 1946; 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 not considered necessary.
2. Adequate junctions were effected with T-7033a (1946) on the west and with T-7032a (1946) on the east.
3. There are no prior surveys of the area by this Bureau. The shoreline on chart 9149 (Preliminary Standard - no date) originates with the present survey prior to review. No discrepancies were noted during the review of the present survey.
4. A comparison of the present survey with contemporary hydrographic survey H-7138 (1946) reveals no conflicts.
5. The magnetic meridian observations revealed the existence of a strong local disturbance in the vicinity of triangulation station IBEX (lat. $52^{\circ} 22.7'$, long. $173^{\circ} 37.65'$), where a reading of $7^{\circ} 9' E$ is about 4° greater than the mean value of observations taken elsewhere on the present survey.

GEOGRAPHIC NAMES

Survey No. T-7031b

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>Alaska</u>			(for title)						1
<u>Aleutian Islands</u>			" "						2
									3
<u>Agattu Island</u>								USGB	4
<u>Otkriti Bay</u>								"	5
<u>Karab Cove</u>								"	6
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Names underlined in red are approved. 10/5/48 L. Heck