

8439

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Air Photographic

Field No. T-8439 Office No. T8439

LOCALITY

State Alaska

General locality Yakutat Bay

Locality Khantsak Island and Vicinity

194 2

CHIEF OF PARTY

R. W. Knox

LIBRARY & ARCHIVES

DATE FEB 27 1943

Previously applied (before review) - from unfinished
original prints see Hist. orig slip of Org. dated 8-5-'42
Fully applied to chart 8455 4-10-'45 PHA.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

REG. NO. 18439

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. T 8439

REGISTER NO.

18439

State Alaska

General locality Yakutat Bay

Locality Khantask Island

Scale 1:20000 Date of survey 1942

Vessel

Chief of party R.W.Knox (Chief of Surveys)

Surveyed by Compiled

Inked by

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated None, 19

Remarks:

T8439

Note: T-8439 was plotted together with
T-8451 and T-8452 and the data for all
three sheets are contained in this report.

Form T-1

DATA RECORD

T- 8439

~~Quadrangle (II):~~~~Base (I) (II) (III)~~~~Field Office:~~~~State of (I) (II) (III)~~

Washington

~~Compilation Office:~~Chief of Party: R. W. Knox
Chief, Surveys Section

Instructions dated (II III):

~~Copy filed in Descriptive~~
~~Report (I) (II) (III) (IV) (V) (VI)~~

None

Completed survey received in office: These sheets were compiled in
the office at the request of the Army Engineers, submitted thru the
Supervisor, N.W. District.

Reported to Nautical Chart Section:

Reviewed: October 13, 1942 Applied to chart No.

Date:

Redrafting Completed:

Registered:

Published: Not published. Printed
for Army only.

Compilation Scale: 1:20,000

Published Scale: 1:20,000

Scale Factor (III): 1.00

Geographic Datum (III): N.A. 1927 Datum Plane (III): M H W

Reference Station (III): Center Radio Tower 1941

Lat.: 59-32-40.51 (1253.6)

Long.: 139-43-35.99 (565.4)

~~Adjusted~~
Unadjusted~~Local System of~~~~State~~ Plane Coordinates (VI): ~~Local Grid~~~~X = 50,000 ft.~~~~Y = 50,000 ft.~~~~The above station is origin of the grid. See page 3 of the Descriptive Report.~~

Military Grid Zone (VI)

Not shown.

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
5614-5623	5/27/41	12:10-12:33 P.M.	1:20,000	6.4 ft. above M.L.W.
5692-5695	5/27/41	3:05-3:07 P.M.	1:20,000	8.3 ft. above M.L.W.
9855-9860	7/28/42	4:52-4:58 P.M.	1:20,000	5.8 ft. above M.L.W.
9874-9881	7/28/42	5:23-5:32 P.M.	1:20,000	5.8 ft. above M.L.W.

Tide from (III): Predicted Tables

Mean Range:

Spring Range:

Camera: (Kind or source) C. and G. S. Nine Lens

Field Inspection by: Not Field Inspected date:

Field Edit by: None date:

Date of Mean High-Water Line Location (III): Shoreline is date of the above photographs except for sections covered by planetable surveys T-6830 and T-6831 (1941) which were traced from those surveys.

Projection and Grids ruled by (III) J. C. O'Neill date:

" " " checked by: G. C. Tewinkel date:

Control plotted by: G. C. Tewinkel date:

Control checked by: G. C. Tewinkel by comparing with planetable surveys. date:

Radial Plot by: G. C. Tewinkel date:

Detailed by: G. C. Tewinkel date:

Reviewed in compilation office by: B. G. Jones date:

~~Reviewed in compilation office by: B. G. Jones~~
~~checked by:~~

~~date:~~

STATISTICS (III)

Land Area (Sq. Statute Miles):

Shoreline (More than 200 meters to opposite shore):

Shoreline (Less than 200 meters to opposite shore):

Number of Recoverable Topographic Stations established:

Number of Temporary Hydrographic Stations located by radial plot:

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:

DESCRIPTIVE REPORT

T-8439

T-8439 was plotted together with T-8451 and T-8452. This report covers all three sheets. Since T-8451 is confidential and the other two sheets are not, a separate copy of the report has been filed for each sheet.

These air photographic surveys cover Yakutat and vicinity, Alaska. They were compiled in the Washington Office at the request of the Corps of Engineers, U. S. Army. This request was submitted thru the Supervisor, Northwestern District.

FIELD INSPECTION

There was no field inspection of the photographs. The control for the photo plot was identified from details shown on the 1941 planetable surveys T-6830 and T-6831, and with the assistance of Lieut. George Nelson who worked in the area during 1941.

CONTROL

The following C. and G. S. Stations were used to control the plot:

Center Radio Tower 1941

Khantaak I. Lighthouse 1941

Church Cross 1941

Bold 1941

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Cain 1941

Dolgoi I. Rock 1941

Gregson I. Boulder 1941

Sawmill Gable 1941

Kriwai Boulder 1941

Kriwai House Gable 1941

Also, the following three C. and G. S. described recoverable topographic stations were used:

Lip

Nat

Bul

Triangulation Station Situk situated on the outer coast of longitude $139^{\circ}37'$ was marked on the ground but the observations were not completed and no position is available. However, the direction from Ankau 2, 1941 to Situk was observed and the azimuth of this line was plotted and used to control the radial plot.

RADIAL PLOT

The main radial plot was made with templates and the three sheets were plotted as one unit. The photographs consisted of three flight strips parallel to the coast.

The radial plot was well controlled at Yakutat and was extended S.E. from Yakutat without control except for the azimuth Ankau 2, 1941 to Situk.

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Station Situk was identified closely with the assistance of Lieut. Nelson and cut in by the radial plot before plotting the azimuth Ankau 2, 1941 to Situk. The azimuth was then laid out on the map sheet and checked the radial plot position of Situk exactly. This furnished an excellent check on the azimuth of the radial plot as extended from the vicinity of Yakutat. No check was available on the extended plot as regards distance.

LOCAL GRID (*Applies to T 8451 only*)

None of the U. S. G. S. stations on the local grid could be identified on the photographs except the initial station "Central Radio Tower".

The railroad and the building S.W. of grid station T.Tr. 5 as shown on U. S. G. S. map "Yakutat Air Base and Vicinity" were identified and located by the photo plot.

The local grid North or Zero Azimuth of the grid was determined by astronomic observations by the U. S. G. S. in 1940. Assuming the grid orientation to be true north, the azimuth of the railroad as located by the radial plot on geographic positions and the azimuth of the railroad as shown on the U. S. G. S. map failed to agree by approximately 13 minutes. Near station Central Radio Tower (the initial of the grid) the two positions agree but from that point south eastward they swing apart in azimuth.

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The radial plot also failed to check the U. S. G. S. map in overall distance from Central Radio Station to the house near station T.Tr. 5. An attempt was made to lay the plot to agree with the U. S. G. S. azimuth of the railroad and positions of the house but without success.

The difference in distance is assumed to be due to error in the ground location of the house as shown on the U. S. G. S. map.

The difference in railroad azimuth is due to a difference in azimuth between the local grid control by the U. S. G. S. and the Coast Survey control. These schemes are entirely independent, the only common stations being the Center Radio Tower (zero of the grid) and station U.S.L.M. 179, 1941 which is within about 200 meters of station Center Radio Tower. The U. S. G. S. control was put in in 1940 and the U. S. C. & G. S. control in 1941.

The grid has been oriented on the map projection of T-8451 by holding the common station Center Radio Tower (grid zero point) and swinging the grid until the railroad azimuth on the U. S. G. S. map agreed with the railroad as shown on T-8451. The following note is shown on the map:

"This map was plotted from air photographs taken 5/27/41 and 7/28/42.

The photographic plot was controlled by U. S. C. & G. S. stations in the vicinity of Yakutat. The local grid control stations

could not be identified on the photographs and were not used. The local grid has been placed on the polyconic projection by holding the initial point on station "Center Radio Tower" and swinging the grid to agree with the azimuth of the railroad as determined by the photographic plot.

No ground examination has been made of either the photographs or the map manuscript."

The rocks awash shown on T-8439 and T-8451 were taken from planetable surveys T-6830 and T-6831 and have been generalized somewhat since the air photographic surveys are on a smaller scale. The larger scale planetable surveys should be used for chart correction of details shown on those surveys.

Reviewed in office by: G. C. Tewinkel and B. G. Jones

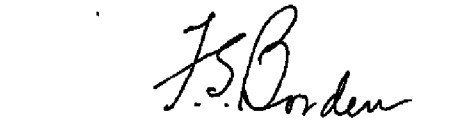
Examined and approved:



Chief, Surveys Section



Chief, Section of Topography



Chief, Division of Charts



Chief, Division of Coastal Surveys

Appendage

The NA 1927 Datum on this map has been adjusted from 1959 traverse observations.

RWD 4/79