

4940

U. S. COAST AND GEODETIC SURVEY  
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Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

\_\_\_\_\_, Director

State: S. E. ALASKA

DESCRIPTIVE REPORT

Topographic  
~~Hydrographic~~

Sheet No. "H"  
(Formlines)

LOCALITY

TAKU INLET

*Taku Inlet*

19 37

CHIEF OF PARTY

H. Arnold Karo

U. S. GOVERNMENT PRINTING OFFICE: 1928

4940

Applied to Reconstruction of 8235-4-5-40 Chas. O.P. Bush Jr.  
Applied to cdt. 8202 (via cdt. 8235 where possible) J.M.A. May 1942

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. H - 37

REGISTER NO. **T4940**

State S.E. ALASKA

General locality ~~SOUTHEASTERN ALASKA~~ Taku Inlet

Locality TAKU INLET

Scale 1:60,000 Date of survey APRIL-JULY, 19 37

Vessel M. V. WESTDAHL

Chief of Party H. ARNOLD KARO

Surveyed by H. ARNOLD KARO

Inked by JAMES H. S. BILLMYER

Heights in feet above M. H. W. to ground to tops of trees

~~Contour, Approximate contour~~, Form line interval 100 feet

Instructions dated NOVEMBER 11, 1936, 19

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT

TOPOGRAPHIC SHEET "H" FORMLINES

PROJECT H.T. 213

TAKU INLET - S. E. ALASKA

1937

- 0 -

U.S.C. & G.S.M.V. WESTDAHL

H. ARNOLD KARO, H. & G. ENGR., COMMANDING

DESCRIPTIVE REPORT  
T-4940  
TOPOGRAPHIC SHEET "H" FORMLINES

PROJECT H.T. 213

TAKU INLET - S. E. ALASKA

1937

AUTHORITY:

The authority for the work executed on this sheet was contained in the instructions from the Director dated November 11, 1936.

SCALE AND AREA COVERED:

This sheet was executed on a scale of 1:60,000 and included the area surrounding Taku Inlet as far back as it was possible to obtain satisfactory definite locations of the existing features. This represented an average of from 2 to 5 miles back from the beach.

GENERAL DESCRIPTION:

For general description of the coast, see descriptive reports for sheets "A", "B", "C", "D", "E", and "F", 1937, as this sheet is entirely for formlines and is used to supplement the above sheets. In general, trees are found with fair regularity to about 1000 feet elevation, with scattered trees between 1000 and 1700 feet elevation, and generally bare above 1700 feet. The mountain tops appear very bare and in many instances, very ragged and abrupt. Snow is found on most of the peaks for all but the late summer months, and on those a short

distance back from the beach, all the year around. Numerous small glaciers are to be found on the sides of the higher peaks, which feed the higher streams and lakes. Most of these glaciers are beyond the limits of the work executed on this sheet, but are occasionally visible from one or two points in the inlet.

LANDMARKS:

No landmarks of sufficient value to be charted, are included in the limits proper of this sheet.

CONTROL AND METHOD OF SURVEY:

The numerous triangulation stations which are to be found in Taku Inlet, gave excellent control, and the majority of cuts for formlines were taken from these triangulation stations. In a few instances it was necessary to resort to sextant cuts from the various anchorages, etc. After the elevations and locations of the peaks and various features were determined, the formlines were sketched in the field from various points and from the WESTDAHL while hydrography was in progress. Numerous pictures were taken whenever the weather was favorable, which were of great aid in delineating the formlines as so much of the time low hanging clouds, rain and fog, obscured the landscape. These pictures are not appended as they are not believed to be of any further value. The formlines were verified from the ship when cruising up and down the inlet and weather conditions were favorable.

The air photos taken in 1929 were consulted and copies of the drainage lines, etc., reduced from these air photos by the Forest Service, were used to supplement and verify the work. These reductions were of a scale nearly equal to that of the present survey, and by determining a scale factor from the locations of the various peaks and other known features, it is believed that a reasonably accurate location of rivers, creeks, lakes, etc., was obtained. The completed sheet was again checked against the air photos to pick up any possible discrepancies.

The shoreline was reduced and transferred from the 10,000 scale sheets and form lines were sketched down to the beach. The formlines determined on the 10,000 scale sheets were checked against those on this 60,000 scale sheet and agreed very closely. Any discrepancies were corrected and adjusted in the field if possible, after which the formlines on the 10,000 scale sheets were pantographed down and transferred to the 60,000 sheet as a final check. These transferred formlines were finally inked on this formline sheet. The shoreline was also inked solid to give a better contrast to the sheet and does not represent shoreline surveyed on this sheet which was used for the delineation of formlines only.

Appropriate note shown on smooth sheet

Rivers, watercourses, lakes, etc., are believed to have been located by the use of the air photos, etc., with sufficient accuracy to warrant their being shown in solid lines<sup>on the scale of this survey</sup> and are so indicated.

COMPARISON WITH PREVIOUS SURVEYS:

No previous formline survey was executed in this area. The topographic sheets of the original survey of 1890 showed the location of several peaks, which in the main, were reasonably accurate. However, in a few instances, notably back of Jaw Point, considerable discrepancy existed in the location of some of the peaks. These discrepancies were checked in the field and the locations on this 60,000 sheet should be retained as correct. See Rev. par. 4 b (2) for further details.

PLACE NAMES, ETC.:

✓ GHE

Reference should be made to the various 10,000 scale sheets of this area for the majority of the place names shown. The names of the various lakes where named, were taken from maps of the Forest Service and represent the best local usage. The Hole-In-The-Wall Glacier is a local name which is in general usage. It is recommended that all names shown on this sheet be adopted.

GENERAL:

This sheet was inked by James H. S. Billmyer, Seaman, ab., on the WESTDAHL, a former draftsman on various engineering projects. All formlines were first drawn in pencil in the field by myself, and all inking was carried on under my constant supervision.

Respectfully submitted,



H. Arnold Karo,  
Commanding Officer,  
U.S.C. & G.S.M.V. WESTDAHL.

## Remarks

## Decisions

1		see H-6267
2		" "
3		USGB decision
4		" "
5		" "
6	Annex Lakes (Two lakes)	" "
7		See T-6577
8		see T-6579
9		" "
10		see T-6580
11		" "
12		see T-6581
13		see T-6582
14		USGB decision
15		
16		
17		see T-6578
18		" "
19		USGB decision
20		" "
21		see H-6267
22		
23		
24	<del>where?</del> <del>Annex Lakes</del> A very small branch of Taku Glacier	Lat. 58°-28.5 Long. 134-01.5
25	* Not app'd for GNS. but OK for Topo sheet Does not appear of any importance, probably will never be charted.	
26		
27		

# GEOGRAPHIC NAMES

Survey No. T-4940

GEOGRAPHIC NAMES		Survey No. T-4940											
Name on Survey	<div>On Chart No. 8202</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Admiralty Maps / Island From local D. R. information pg. 4</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>												
	A.	B.	C.	D.	E.	F.	G.	H.	K.				
✓ <u>Taku Inlet</u>	✓									1			
✓ <u>Taku River</u>	✓									2			
✓ <u>Taku Glacier</u>	✓									3			
✓ <u>Norris Glacier</u>	✓									4			
✓ <u>Annex Creek</u>	✓									5			
✓ <u>Annex Lakes</u>	✓									6			
✓ <u>Swede Point</u>	GNS									7			
✓ <u>Scow Bay</u> <u>COVE</u>	GNS									8			
✓ <u>Flat Point</u>	✓									9			
✓ <u>Carlson Creek</u>	GNS									10			
✓ <u>Sunny Cove</u>	✓									11			
✓ <u>Cooper Point</u>	✓									12			
✓ <u>Bishop Point</u>	✓									13			
✓ <u>Greely Point</u>	✓									14			
✓ <u>Dorothy Creek</u> <u>Dorothy</u> <del>XXXXXXXXXX</del> <u>Creek</u>				✓						15			
✓ <u>Dorothy Lake</u> <u>Dorothy</u> <del>XXXXXXXXXX</del>			Lake Dorothy	✓						16			
✓ <u>Jaw Point</u>	✓									17			
✓ <u>Turner Lake</u>	✓									18			
✓ <u>Turner Creek</u>	GNS									19			
✓ <u>Davidson Creek</u>	GNS									20			
✓ <u>Taku Point</u>	✓									21			
✓ <u>Lake</u> <u>Veronica Lake</u>				✓						22			
✓ <u>Lake</u> <u>Mary Lake</u>				✓						23			
✓ <u>Hole-in-the-Wall</u> <u>Glacier</u>				✓						24			
										25			
										26			
										27			
										28			

Names underlined in red approved

by KAE on 5/2/38

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT } ~~No. 44~~  
 PHOTO STAT OF } No. T -4940

{ received April 4, 1938  
 { registered April 22, 1938  
 { verified  
 { reviewed  
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
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90			

RETURN TO

82	T. B. Reed
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✓ *TBR*

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 4940 (1937) FIELD NO. H

Taku Inlet, S. E. Alaska

Surveyed in April - July 1937, Scale 1:60,000

Instructions dated November 11, 1936 (WESTDAHL)

Plane Table Survey

Aluminum Mounted

Chief of Party - H. Arnold Karo.

Surveyed by - H. A. K.

Inked by - J. H. S. Billmyer.

1. Condition of Survey.

The survey is neat and legible and conforms to the requirements of the Topographic Manual except that the sketched streams in the northeast portion of the present survey were not extended sufficiently westward so as to have an outlet with the sketched shoreline. Prior surveys in this area, T-2017 (1890) and T-2182 (1893) show the intervening gap to be a low flat area and it is possible that the stream patterns are indeterminate.

The Descriptive Report is clear, comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project.

3. Junctions with Contemporary Surveys.

a. The junction of topographic detail in the area contiguous to Taku Inlet with the 1937, 1:10,000 scale survey, T-6576 to T-6582, inclusive is satisfactory, all shoreline of Taku Inlet and the more important details on the larger scale surveys having been transferred to the present survey. (See D. R., page 3, par. 2).

b. No other contemporary surveys adjoin the present survey. For charting purposes, however, the junctions made on the NE with T-2182 (1893) and on the SE with T-3847 (1921) are not very satisfactory since differences of as much as 480 m. are noted in the position of identical form lines. On the southwest no standard form line surveys have been made by this Bureau.

4. Comparison with Prior Surveys.

The present survey is essentially a form line survey except for portions of inland lakes, streams and glaciers which are outside the limits of the contemporary 10,000 scale surveys: T-6576 (1937) to T-6582 (1937) inclusive, which surveys embrace the area

contiguous to Taku Inlet. The discussion of topographic details in the area common to the above mentioned 10,000 scale surveys (see par. 3a above) was included in the reviews of those surveys and is, therefore, not repeated here.

- a. T-1888 (1888), T-3849 (1921) and T-4487 (1929), scales 1:40,000, 1:20,000 and 1:10,000.

These surveys contain shoreline details only which were considered in the reviews of T-6581 (1937) and T-6582 (1937).

- b. T-2017 (1890) and H-1920 (1888), scales 1:80,000.

These two surveys cover the entire area of the present survey except that the shoreline detail on H-1920 (1888) does not extend above lat.  $58^{\circ} 15'$ . They contain very little, if any, inland details.

(1) Topography.

The sketched shoreline in the NE portion of the present survey generally differs 150 to 360 m. with that shown on T-2017 (1888). This area, however, is low and flat and is easily subject to change. Hole in the Wall Glacier in lat.  $58^{\circ} 27'$ , long.  $134^{\circ} 02'$  has advanced 2000 m. eastward, considerable differences are also noted in its north and south limits. Taku Glacier has apparently advanced approximately 4000 meters along its center line. Norris Glacier has exhibited practically no movement, since the present survey shows the front only 330 m. eastward.

(2) Form Lines.

Form lines on these surveys are limited to the definition of the tops of peaks and embrace the entire area of the present survey. An accurate comparison cannot be made since the present survey shows many additional peaks and because of the discrepancies noted there is no certainty in all cases as to which peak is common to both surveys. In several cases on T-2017 (1888), however, where no doubt exists as to identity, it is noted that the peaks vary as much as 1000 m. in position and 320 feet in elevation, the elevations on the present survey being generally higher.

The peaks on H-1920 (1888) which fall within the limits of the present survey are common to T-2017 (1890) except the two in lat.  $58^{\circ} 25'$ , long.  $134^{\circ} 00'$ , with elevations of 3395 and 3805 feet. These are grossly out of position since they fall within the water of Taku Inlet.

c. T-2182 (1893), scale 1:40,000.

A part of this survey covers the northeastern portion of the present survey.

(1) Topography.

Comparison of shoreline in the area north of lat.  $58^{\circ} 27'$  shows differences of as much as 690 m. A portion of this area, however, is low and flat and is easily subject to change. Lake Surprise in lat.  $58^{\circ} 28'$ , long.  $134^{\circ} 01'$  on the 1893 survey is now enclosed by Hole in the Wall Glacier.

(2) Form Lines.

Agreement of form lines is poor, differences of as much as 420 m. being noted in the positions of identical form lines. The saddle shaped mountain on the 1893 survey is connected by the 2000 foot form line. The present survey shows the two peaks separated including a determined elevation of 1790 feet in the valley between the two peaks. The peak in lat.  $58^{\circ} 29.4'$ , long.  $133^{\circ} 54'$  agrees closely in position and height with the present survey information.

d. T-3847 (1921), scale 1:20,000.

A small part of the form lines on this survey falls just within the limits of the present survey in the vicinity of lat.  $58^{\circ} 10'$ , long.  $134^{\circ} 04'$ . The agreement is unsatisfactory since differences of as much as 540 m. are noted in the positions of identical form lines.

5. Comparison with Chart 8202 (New Print dated May 11, 1938).

a. Topography.

Topography shown on the chart originates with surveys discussed in previous paragraphs of this review except the following:

- (1) Blueprint 12640 of 1908 covers Turner Lake on a scale 1:12,000. It is generally borne out by the present survey except that the position on the latter differs slightly.
- (2) The authority for the peak with an elevation of 4460 feet in lat.  $58^{\circ} 20'$ , long.  $133^{\circ} 55'$  could not be readily ascertained but it is charted on the Standard of Chart 8300 in 1914. The present survey shows this peak approximately 540 m. southward but its elevation of 4478 feet agrees closely with the charted value.

The present survey should supersede this information in future charting.

b. Magnetic Declination.

The magnetic declinations were determined on T-6576 (1937) to T-6582 (1937) inclusive.

6. Field Drafting.

The inking of topographic features and lettering is excellent.

7. Additional Field Work Recommended.

No additional field work is required.

8. Superseded Prior Surveys.

In so far as the topography actually included on the present survey is concerned, the present survey supersedes the following for charting purposes:

T-1888 (1888) in part	T-3847 (1929) in part
H-1920 (1888) in part, topography only	T-3849 (1921) in part
T-2017 (1890) in part	T-4487 (1929) in part
T-2182 (1893) in part	

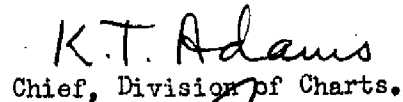
9. Reviewed by - Harold W. Murray, August 9, 1938.

Inspected by - E. P. Ellis.

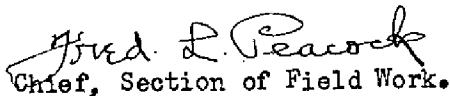
Examined and approved:



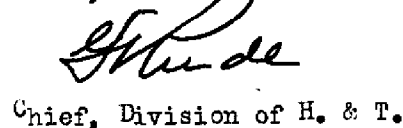
T. B. Reed,  
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.