

6757

2020

Form 504  
Rev. April 1935  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

# DESCRIPTIVE REPORT

Topographic } Reg. No. T-6757  
Hydrographic } Sheet No. D-1940

U. S. COAST & GEODETIC SURVEY  
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State SE Alaska

## LOCALITY

Glacier Bay

Muir Inlet

1940

CHIEF OF PARTY

Robert M. Rice

U. S. GOVERNMENT PRINTING OFFICE

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. D-1940

76757

REGISTER NO. T-6757

State S.E. Alaska

General locality Glacier Bay

Locality Muir Inlet

Scale 1:20000 Date of survey July, August, 1940

Vessel WESTDAHL

Chief of party Benjamin H. Rigg

Surveyed by William F. Deane

Inked by William F. Deane

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

~~Contours, approximate contours~~ Form line interval 100 feet

Instructions dated March 10, 1938 and April 19, 1939

Remarks: Form lines determined on small scale sheet.

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET NUMBER D-1940

REG. NO. T-6757

SOUTHEASTERN ALASKA

1940

M. V. WESTDAHL

PROJECT HT - 221

INSTRUCTIONS:

This survey was made in compliance with the Director's Instructions dated March 10, 1938 and supplemental instructions dated April 19, 1939.

LOCALITY:

The sheet covers both sides of Muir Inlet from and including Adams Inlet on the south to Cushing Arm on the north.

METHOD OF SURVEY:

Standard planetable methods were used and no traverses were run. Resections and three-point fixes were used throughout. Aerial photographs were used to obtain drainage.

ELEVATIONS:

Elevations were determined from vertical angles with the alidade. All elevations are from mean high water to ground level. Wherever there were trees the height was taken to be 25 feet. All elevations were taken to supplement the work on the small scale formline sheet.

GENERAL DESCRIPTION OF COAST:

Commencing with the east side of the area at the south side of the entrance to Adams Inlet one finds terminal moraine in the vicinity of triangulation station SELL 1939. This gravel shore gives way about

one mile eastward to a short stretch of sheer rocky bluff after which the moraine benches extend to a region of terminal moraine south of triangulation station ADAMS 1939. For one-half mile south of this station to the limit of the sheet there are steep unconsolidated and rocky shores. Trees are numerous near the entrance to Adams Inlet but fade away to isolated shrubs at the east limit of the survey. Northeast of triangulation station UPPER 1939 is a short section of moraine beach that is supplanted by a rocky shore until topographic station DIRT 1940 is reached, from here on to the limit of the sheet the coast is made up of lateral moraine. From triangulation station UPPER 1939 to triangulation station XMAS 1939 the shoreline is of lateral moraine. From XMAS 1939 to the entrance to Adams Inlet the coast is mostly steep with gravel beaches and rocky bluffs interspersed. The vegetation here is more numerous.

From the north side of the entrance to Adams Inlet there is a half mile of gravel beach backed up by a steep bluff line that extends northward. From here on past triangulation station CUSH 1939 the shoreline is generally rocky and steep. Vegetation is sparse and most of the higher places are bare. The remains of pre-glacial trees are strikingly exposed in the bight north and east of CUSH 1939. From this bight northward is found the largest terminal moraine in Muir Inlet. This moraine is of gravel and boulders all of which have been carved and tossed about by a large number of glacial streams from Casement Glacier. The larger streams are unfordable without a lifeline although this condition probably only exists from late Spring to early Autumn. A short section of lateral moraine with

steep benches extends northward giving way to another large terminal moraine near triangulation station MORaine 1939. Vegetation is sparse along this moraine being made up entirely of alders, grass, and several varieties of wild flowers.

Beginning at triangulation station QUILL 1939 on the west side a short stretch of terminal moraine from Morse Glacier gives way to lateral moraine until triangulation station MORSE 1939 is reached. The vegetation here is dense in creek areas, more scattered in others; as usual, alders predominate. The point on which MORSE 1939 is located is rocky but lateral moraine with high benches is found for a half mile northward; there another small terminal moraine exists. On both sides of triangulation station DENSON 1939 the shoreline is generally rocky and steep with scattered vegetation at all but the highest levels. On entering PLATEAU COVE a shoreline of lateral moraine with benches extends for about a half mile to a small terminal moraine; there is another short stretch of lateral moraine then another terminal moraine that is interlaced with streams from Plateau Glacier. Scattered alders are found on the lateral moraine; the terminal moraine here is of finer material, being made up of sand as well as the usual gravel. The point on which triangulation station PLATEAU 1939 is located is rocky and precipitous in places. From PLATEAU 1939 to triangulation station CUSHING 1939 there is a high lateral moraine bench broken once by streams. The vegetation here is scattered.

It was not possible to obtain all the low water line on this sheet because of the weather and time element. It should be noted,



however, that the low water area in Adams Inlet extends considerably offshore leaving a relatively narrow channel as far northeastward as triangulation station UPPER 1939. The survey of Adams Inlet did not include all of the inlet but extended 2 miles further than the limits of the hydrography. The inlet extends for an indefinite distance but the water area is made hazardous by large low water areas and swift currents caused by the glaciers at the upper end. It is thought that the present survey is sufficient for charting purposes and that the remainder of the inlet can wait until it can be surveyed more economically.

ICE CONDITIONS:

This party found ice always present in various amounts in this area. The quantity and size of the bergs differs with the weather and season. Because of the discharge of ice from Adams Glacier and the influx of ice from Muir Inlet, Adams Inlet is not a good anchorage. Here the bergs, because of cross currents and eddies, move crazily around and give one no idea of where they will dart next. PLATEAU COVE provided a good anchorage for the WESTDAHL but ice is found here too, though not moving erratically as in Adams Inlet.

OFFLYING DANGERS:

Two rocks  <sup>$\phi 58^{\circ}55' \wedge 136^{\circ}07'$</sup>  awash lie a short distance off the point on which triangulation station PLATEAU 1939 was established. These rocks were located by the hydrographic party and are shown on Hydrographic Sheet Reg. No. H-6576 (1940)

LANDMARKS FOR CHARTS:

There are no objects of sufficient prominence for charting.



DECLINATOIRE OBSERVATIONS:

Declinatoire No. 209 was used for all observations. This instrument was standardized at Lincoln Park, Seattle on April 1, 1940. The declinatoire variation was  $22^{\circ} 54'$  E., the variation from the chart was  $23^{\circ} 15'$  E., the correction to be applied is then  $+0^{\circ} 21'$ .

OBSERVATIONS

Station	Date	Scaled Value	Corrected Value
Triang. CUSHING 1939	July 1, 1940	$30^{\circ} 09'$ E	$30^{\circ} 30'$ E *
Triang. SELL, 1939	Aug. 7, 1940	$29^{\circ} 08'$ E	$29^{\circ} 29'$ E

\* These values approximate. HWM

GEOGRAPHIC NAMES:

Local inhabitants both white and native were queried as to names now in use but they could give the party no assistance. The country is probably too recently bared by the retreating glaciers to have established names. A new name is suggested for an important geographical feature:

✓ PLATEAU COVE for the cove formed by the recession of Plateau Glacier. This cove is a good anchorage and is worthy of a name mainly because the present field party found difficulty in discussing it with people who might have occasion to use it.

JUNCTIONS WITH OTHER SHEETS:

This sheet joins Sheet Field No. C-1940 on the south, Sheet Field No. <sup>T-6756</sup> E-1940 on the north, and unsurveyed area on the east in Adams Inlet.

CONTROL STATIONS:

The following triangulation stations appear on this sheet and were used for control of the survey:

SELL, 1939	Lat. 58° 50'	841.9 m.	Long. 136° 02'	752.7 m.
WHITE, 1939	58° 50'	1418.6 m.	136° 00'	670.9 m.
SHOE, 1939	58° 51'	433.2 m.	135° 58'	701.4 m.
ADAMS, 1939	58° 52'	603.4 m.	135° 57'	163.5 m.
UPPER, 1939	58° 51'	1563.5 m.	135° 58'	836.6 m.
XMAS, 1939	58° 51'	852.8 m.	136° 00'	523.4 m.
LICE, 1939	58° 51'	472.3 m.	136° 03'	337.0 m.
WESTDAHL, 1939	58° 52'	1191.7 m.	136° 03'	851.6 m.
CUSH, 1939	58° 53'	402.2 m.	136° 03'	901.4 m.
MORaine, 1939	58° 55'	754.5 m.	136° 03'	358.1 m.
CUSHING, 1939	58° 56'	99.0 m.	136° 07'	397.4 m.
PLATEAU, 1939	58° 54'	1649.3 m.	136° 06'	504.7 m.
DENSON, 1939	58° 53'	265.9 m.	136° 06'	719.8 m.
MORSE, 1939	58° 51'	1578.8 m.	136° 06'	259.2 m.
QUILL, 1939	58° 50'	512.1 m.	136° 06'	911.1 m.

The following recoverable stations were marked with standard hydrographic station disks:

DUCK, 1940	Lat. 58° 54'	1163 m.	Long. 136° 07'	852 m.
DIRT, 1940	58° 52'	824 m.	135° 58'	297 m.

STATISTICS:

Shoreline in statute miles - - - - - 23.0

Area in square statute miles - - - - - 20.2

Respectfully submitted,

*William F. Deane*  
William F. Deane,  
Lt. (j.g.). C. & G. Survey.

Approved:

*Benjamin H. Hays*  
Benjamin H. Hays,  
Chief of Party.

*A.M. Dobieralski*  
Officer in Charge,  
Seattle Processing Office.



## Remarks.

## Decisions

1		585360 U.S.G.B
2		"
3		585360
4	Do not ink pending Board decision;	"
5		
6		
7	Mentioned in Desc Report, not on sheet.	
8	Page 2	585355
9	" 3	585360
10	" 3	585360 U.S.G.B
11	" 4	585355
12	Do not ink pending Board decision.	" 1 585360
13	(see T6758).	
14		
15	See T6756. } Both drain into S. shore	585360
16	} Adams Inlet (on ch. 8306)	585355
17		
18		
19		
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21		
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23		
24		
25		
26		
27		

## GEOGRAPHIC NAMES

Survey No.

T6757

GEOGRAPHIC NAMES											
Survey No. T6757											
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>Adams Inlet</u>										1	
<u>Glacier Bay</u>										2	
<u>Muir Inlet</u>										3	
Plateau Cove										4	
										5	
										6	
										7	
<u>Casement Glacier</u>										8	
<u>Morse Glacier</u>										9	
<u>Plateau Glacier</u>										10	
<u>Adams Glacier</u>										11	
<u>Cushing Arm</u>										12	
										13	
										14	
<u>Dirt Glacier</u>										15	
<u>White Glacier</u>										16	
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Names underlined in red approved

by L. Heck on 2/19/41

M 234 18

Names underlined in red approved

by L. Heck on 2/19/41

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
PHOTOSTAT OF

~~No. T~~

No. T T6757

received Jan. 14, 1941  
registered Jan. 16, 1941  
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
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26			
30			
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RETURN TO

82	T. B. Reed
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✓ JBR



## SURVEYS SECTION

### REVIEW OF TOPOGRAPHIC SURVEY NO. 6757 (1940) FIELD NO. D-1940

S. E. Alaska, Glacier Bay, Muir Inlet  
Surveyed in July - August 1940, Scale 1:20,000  
Instructions dated March 10, 1938,  
and April 19, 1939 (WESTDAHL)

#### Plane Table Survey

#### Aluminum Mounted

Chief of Party - Benjamin H. Rigg  
Surveyed by - William F. Deane  
Inked by - William F. Deane  
Reviewed by - Harold W. Murray, August 1, 1941  
Inspected by - H. R. Edmonston

#### 1. Junctions with Contemporary Surveys

The junctions on the north with T-6758 (1940) and on the south with T-6756 (1940) are satisfactory.

#### 2. Comparison with Prior Surveys

T-2852 (1907), scale 1:80,000 and 1:127,000

This is a copy of a phototopographic survey of the Alaska-Canada boundary.

Comparison with the present survey indicates considerable differences which are due to the recession of glaciers and to inaccuracies in horizontal control. An example of both types of differences is found in Adams Inlet. The glacier here has receded a considerable distance inland. The mouth of the inlet is approximately 0.2 to 0.3 mile south of the present survey location and is attributed to inaccuracies in control of the old survey. A fair agreement in general outline exists in the shoreline common to both surveys on the west side of Muir Inlet. The present survey supersedes this survey.

Elevations and formlines will be compared when the master small scale formline survey is received from the field.

#### 3. Comparison with Chart 8306 (New Print date 9-30-40)

Charted topography originates with information discussed in the previous paragraph and no further consideration is necessary.

4. Compliance with Instructions for the Project

The survey complies with the Instructions for the Project.

5. Condition of Survey

The inking of the topographic detail is very good.

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

6. Additional Field Work Recommended


No additional field work is recommended.


The survey of Adams Inlet was not extended inland to its head. The importance of this area is minimized from a navigator's viewpoint because of the fact that the water area is shallow and such channels as exist are hazardous because of swift currents. (See D. R., page 4).


7. Superseded Surveys


T-2852 (1907) In part. (Copy, original not on file)

Examined and approved:

  
Chief, Surveys Section

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of Coastal  
Surveys