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Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic <del>Hydrographic</del>	Sheet No. # A - 1940
U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES APR 10 1941 Acc. No. ....	
State ALASKA	
LOCALITY CAPE VICINITY OF MT. FAIRWEATHER	
1940 CHIEF OF PARTY	
Ray L. Schoppe & Robert W. Knox H. & G.E. H. & G.E.	

Applied to drawing of Chart 8002 - Apr. 9, 1942 - J.G.W.

Applied to compilation of chart 8402 by L.A.M. 1947 H/7A/H/8/48

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. FL # A - 1940

REGISTER NO. **T4958**

State ALASKA

General locality GULF OF ALASKA  
CAPE

Locality Vicinity of MT. FAIRWEATHER

Scale 1:80,000 Date of survey May - Sept., 1940

Vessel U.S.S. SURVEYOR

Chief of party R.L. Schoppe - R.W. Knox

Surveyed by L.S. Hubbard

Inked by L.S. Hubbard and 100' contours by W.A.C.

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

Contour, Approximate contour, Form line interval 100 feet

Instructions dated Feb. 2, 1940, 19

Remarks: Form Line Sheet

DESCRIPTIVE REPORT

T-4958

TO ACCOMPANY FORM LINE SHEET #A-1940

VICINITY OF MT. FAIRWEATHER, ALASKA.

U.S. COAST & GEODETIC SURVEY SHIP "SURVEYOR"

RAY L. SCHOPPE

&

CHIEF OF PARTY

ROBERT W. KNOX

SCALE -- 1:80,000

SEASON 1940

DATE OF INSTRUCTIONS:

This sheet was surveyed under instructions dated February 2, 1940 for project HT-245. ✓

LOCATION AND JUNCTIONS:

The area surveyed extends from Lituya Bay to the Deception Hills, south of Dry Bay, and from the coastline to the mountainous region about ten miles inshore. ✓

On the south the survey makes a junction with topo. sheet # 4244, scale 1:20,000. On the ~~west~~<sup>east</sup> it makes a junction with sheets # 11 and # 12 of the International Boundary Survey, scale 1:250,000. On the north the survey joins in part sheet # 12 of the International Boundary Survey; but much of the region on the north side remains to be surveyed.

Along the coast the sheet makes junctions with topographic sheets - "Surveyor" B-1940 and C-1940.

T-6760

T-6761

T-6762

T 6763

SURVEY METHODS:

This area was surveyed entirely by sextant from off-shore positions. When the ship was anchored at various places along the coast, the ship's position was determined by three point fix on objects or signals previously located by triangulation or traverse. ✓

Sextant cuts and vertical angles were then taken to all geographical features in sight. Sketches of the country were made at each anchorage. All features to which angles were taken were labeled in the sketches, for future identification. ✓

Due to the mountainous nature of the country all angles taken for cuts were oblique. These oblique angles were reduced to horizontal angles by formula. All elevations are based on at least two vertical angles. Most elevations are the mean of three observations. ✓

A few photographs were taken, and used as an aid in form lining. ✓



#### COMPARISON WITH PREVIOUS SURVEYS:

The only previous surveys at hand of the region were those of the International Boundary Survey. ✓

Many discrepancies were found, more especially in the regions some distance from the path of the boundary. ✓ It is believed the former surveys lacked the definite control which the 1940 survey had available. ✓

At the outer limits of the sheet the form lines were adjusted to fit the contours of sheet #11 and #12 of the International Boundary Survey. ✓

#### GEOGRAPHIC NAMES:

Most of the names shown on the sheet are taken from the International Boundary Survey sheets. ✓

#### RECOMMENDED NAMES:

Fairweather Glacier: It is recommended that the glacier flowing through the low pass between Mt. Fairweather and Mt. Lituya and ending at Cape Fairweather be named Fairweather Glacier. This is the most conspicuous and spectacular glacier in the vicinity. ✓

Mt. Hook: A black, jagged peak with a tip lat. 58°59' resembling a hook from certain directions. Named by Mr. long. 137°40' Jesse Hill of the International Boundary Survey.

Twin Peaks. Southeast Twin Peak and Northwest Twin Peak: These two peaks appear to be the same elevation lat. 59°10' from offshore. The wall-like precipice below and between them long. 137°50' is a notable feature of the region.

#### DESCRIPTION OF COUNTRY:

This is a rugged, mountainous country, much of it submerged under glaciers. ✓

Mt. Fairweather, towering from the interior, dominates the region. It appears as a white pyramid-like head on two white shoulders. On the slopes below the shoulders black rocks protrude through the snow. Rugged spur ridges, separated from each other by glaciers, spread out from the lower slopes. A jagged black spire tops the spur which is four miles west of the summit. This spire is 8370 feet in elevation. ✓

South of Mt. Fairweather is Mt. Lituya, a blunt topped, wedge shaped peak; the edge of the wedge tilting toward the shore. A secondary peak(PK "B") is situated a few miles west of Mt. Lituya. ✓

North of Mt. Fairweather are several jagged ridges or mountain ranges, projecting above the ice sheets and glaciers. Mt. Watson is here the most distinctive peak. It is sharp tipped, black, and symmetrically steep sided. ✓

Mt. Hook is a lower, sharp peak at the upper end of a jagged ridge. ✓

The next ridge north is crowned by a flat, triangular shaped, snow covered plateau. Near the three corners of the plateau, block like masses of rock raise above the snow. At the lower end of this long rugged ridge are three spikelike peaks. ✓

At the north end of the region are the Twin Peaks. A steep, sheer-faced crag lays between and beneath the two peaks, the whole resembling a buttressed wall. ✓

At the foot of this impressive chain of peaks is a coastal range of hills from two to three thousand feet high. These hills parallel the shore. They are separated into several groups by the glaciers which break through to the coast. The tops and upper slopes of these hills are snow covered in the Spring, but by late summer are barren or grass covered. The lower slopes, up to an elevation of about 1200 feet are covered with spruce trees. The low coastal plains are covered with spruce trees, except for the terminal moraines of the glaciers. These moraines are a jumble of glacial drift and stony heaps. The heaps vary definitely from each other in color, some light brown, some red. ✓

In the range of hills situated between Lituya Bay and the moraine of Fairweather Glacier are several deep valleys. Waterfalls may be seen on the hillsides of these valleys. ✓

A few landmarks are along the shore. On the south side of Lituya Bay are the Paps. These are two rounded hills which form excellent markers for the entrance to Lituya Bay. On T-4244 ✓

On the south side of Fairweather Glacier and about one and a half miles inshore are a row of three hillocks. They raise successively from 720 feet to 865 feet high. They are tree covered, except for the north slopes, which are scoured and eroded. ✓

North of Grand Plateau Glacier are the Deception Hills. The peak immediately north of the glacier, 3635 feet high, is notably black in color to observers on ships ten to twenty miles offshore. ✓

An isolated hillock about 2700 feet high appears as an island above the ice of Grand Plateau Glacier, about five miles east of the black mountain previously mentioned. (Only a slim cut was obtained to this hillock, and it is recommended that it be definitely located, the next field season). ✓

lat. 59°03'  
long. 137°55'

Rev. par. 2. ✓

Respectfully submitted:

*L.S. Hubbard*

L.S. Hubbard, Lieut. C. & G.S.

APPROVED:

*Robert W. Knox*

R.W. Knox, Lieut. C. & G.S.  
Commanding U.S.S. SURVEYOR

*Forwarded Apr. 2, 1941*  
*Geo. L. Bean*

STATISTICS:

Area -510 square statute miles

Number of Elevations - 205

# APPENDIX A

## ELEVATIONS:

The elevations on the peaks listed below were determined from theodolite vertical angles. All other elevations shown on the sheet were obtained from sextant angles.

Peak	Latitude	Longitude	Elevations
Mt. Crillon	58 -39' -46.31	137 -10' -10.56	12,735 ✓
PK "F"	58 -39 -54.23	137 -22 -28.76	7,215 ✓
Mt. Lituya	58 -48 -16.20	137 -26 -06.87	11,910 ✓
Mt. Fairweather	58 -54 -23.96	137 -31 -29.17	15,320 ✓
PK <del>10,640</del>	58 -57 -49.39	137 -36 -38.92	10,620 ✓
Mt. Root	58 -59 -08.82	137 -29 -53.79	12,860 ✓
Mt. Hook	58 -59 -17.70	137 -39 -54.84	8,840 ✓
Mt. Watson	59 -00 -30.79	137 -33 -15.23	12,430 ✓
- Spike -	59 -01 -49.52	137 -45 -06.25	7,365 ✓
Peak <del>10,865</del>	59 -02 -21.98	137 -35 -55.98	10,860 ✓
- Big -	59 -03 -06.74	137 -40 -32.64	10,165 ✓
Peak <del>10,410</del>	59 -03 -21.27	137 -38 -03.22	10,385 ✓
PK <del>10,850</del>	59 -03 -58.53	137 -38 -37.23	10,770 ✓
S.E. Twin	59 -09 -47.22	137 -49 -41.65	7,615 ✓
N.W. Twin	59 -10 -14.96	137 -50 -59.73	7,305 ✓



## Remarks.

## Decisions

1		585375
2		590380-385
3	Submitted to U.S.G.B.: do not LHK Pending decision	585375
4	-	590380-385
5		
6		585375 U.S.G.B
7	at WAECK	585375-380
8	Near 47'/42' : Submitted to U.S.G.B.: do not LHK pending decision.	585375
9		585370
10	See bottom p. 2.	590375 U.S.G.B
11		585370 U.S.G.B
12		585375
13	Submitted to U.S.G.B.	590375
14		
15		"
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27		

## GEOGRAPHIC NAMES

Survey No. **T4958**

Name on Survey	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangl- 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	
Cape Fairweather										1
Deception Hills										2
Fairweather Glacier										3
Grand Plateau Glacier										4
Gulf of Alaska										5
Mt. Fairweather										6
Sea Otter Cr.										7
Mt. Escures										8
Lituya Mt.										9
Mt. Watson										10
Mt. Root										11
Mt. Hook										12
Twin Peaks										13
Southeast Twin Peak										14
Northwest Twin Peak										15
										16
										17
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										28

by L. Heck on 9/29/41

POST-OFFICE ADDRESS: Commanding Officer  
U S C & G S S SURVEYOR  
TELEGRAPH ADDRESS: 601 Federal Office Bldg.  
Seattle, Washington.  
EXPRESS ADDRESS:

C O P Y  
Chart Letter  
215 of 1941.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

To: Director  
U. S. Coast & Geodetic Survey  
Washington, D.C.  
From: Commanding Officer  
U S C & G S S SURVEYOR  
Seattle, Washington  
Subject: Landmarks for Charts.

1. Enclosed is a list of the more prominent peaks in the area covered by form line sheet #A-1940 Surveyor. The majority are already printed on chart 8002. The chief changes are in the elevations to be charted. Better determinations in location have been made for a few.

2. These peaks are shown on an attached copy of chart #8002. They are numbered in the order as listed on form 567.

RWE:LSH  
rh  
encl.

(Signed) Robert W. Knox  
Commanding Officer  
U S C & G S S SURVEYOR.

C O P Y

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

~~No. T~~

No. T **T4958**

received April 10, 1941  
registered May 1, 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
20			
22			
24			
25	✓	<i>File</i>	<i>Pages 2 and 3.</i>
26			
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62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
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✓ *7030*







DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF TOPOGRAPHIC SURVEY REGISTER NO. 4958 (1940)

FIELD NO. FL-A (1940)

Alaska; Gulf of Alaska; Vicinity of Cape Fairweather  
Surveyed in May - September 1940, Scale 1:80,000  
Instructions dated February 2, 1940 (SURVEYOR)

Sextant Survey

Whatman's Paper

Chief of Party - R. L. Schoppe; R. W. Knox  
Surveyed and inked by - L. S. Hubbard  
Reviewed by - J. A. McCormick, September 17, 1941  
Inspected by - H. R. Edmonston

1. Adjoining Surveys

The present survey is an offshore sextant determination of inland detail adjacent to shoreline surveys T-4244 (1926) and T-6760 to T-6763, inclusive, of 1940. Satisfactory form-line junctions were effected with T-4244, T-6761, and T-6762.

T-6760 and T-6763 do not include form lines. The present survey furnishes the necessary data for the area inland from T-6760 and it is probable that the gap between high water line of T-6763 and the Deception Hills will be taken care of when the project is resumed in this vicinity.

Form lines at the eastern and northern limits of the survey were adjusted to those of Sheets 11 and 12 of the International Boundary Survey.

2. Previous Surveys

T-2174 (1894), 1:80,000; T-2846 (1906), 1:80,000;  
T-2852 (1907), 1:80,000; H-4648 (1926), 1:100,000

Topographic information on T-2174 and H-4648 is confined mostly to elevations of some of the principal peaks of the Fairweather Range. T-2846 and T-2852 are phototopographic surveys executed by the Alaska-Canada Boundary Survey. Elevations on the old surveys are generally within 100 feet of those obtained on the current project. Form lines of the boundary surveys

overlap the outer limits of the present survey and, being in the area where Mr. Hubbard made his adjustments to conform to International Boundary Sheets 11 and 12, are naturally in fairly good agreement with his form lining. The descriptive report, page 3, mentions an isolated hillock about 2,700 feet high (Lat. 59° 03', Long. 137° 55') on which only a slim cut was obtained and recommends that it be more definitely located. T-2846 shows a hillock with elevation of 2,400 feet about 1-1/2 miles northwest. The two features are probably identical and should be investigated further.

3. Comparison with Chart 8002 (New Print of 1-8-41)  
Chart 8505 (New Print of 6-1-40)

Chart 8505, on a scale of 1:20,000, shows topography in this area from T-4244 (1926). The small scale of Chart 8002 precludes showing more than a generalized shoreline and the elevations of principal peaks. The elevations on the present survey are probably more accurate than those now charted from the older surveys.

4. Condition of Survey

Satisfactory.

5. Compliance with Project Instructions

Excellent.

6. Additional Field Work Recommended

When field work is resumed in the vicinity of Dry Bay, a more definite location should be obtained for the hillock in approximate Lat. 59° 03', Long. 137° 55' (par. 2) and form lines should be continued northwest from Grand Plateau Glacier between high water line and the Deception Hills (par. 1).

7. Superseded Surveys

T-2174 in part  
T-2846 " "

T-2852 in part  
H-4648 " "

Examined and Approved:

*Robert W. Knaf*  
Chief, Surveys Section

*F. B. Borden*  
Chief, Division of Charts

*L. P. Raper*  
Chief, Section of Hydrography

*G. H. Mudd*  
Chief, Division of Coastal Surveys