

# 8032

CS-346

Diag. Cht. Nos. 8002-2 & 8202-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey ..... HYDROGRAPHIC .....

Field No. LJ-1152 ..... Office No. H-8032 .....

### LOCALITY

State ..... SOUTHEAST ALASKA .....

General locality ..... TAKU INLET .....

Locality ..... TAKU RIVER TO FLAT POINT .....

194 .52

CHIEF OF PARTY

R. A. Gilmore

LIBRARY & ARCHIVES

DATE ..... SEPTEMBER 23, 1953 .....

B-1870-1 (1)

8032

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. **8032**

Field No. **LJ-1152**

State **SOUTHEAST ALASKA**

General locality **TAKU INLET**

Locality **Taku River to Flat Point**

Scale **1:10,000** Date of survey **13 June - 25 July 1952**

Instructions dated **20 March 1952 (Project CS-346)**

Vessel **Ship LESTER JONES and LAUNCH 98**

Chief of party **Ross A. Gilmore**

Surveyed by **Junius T. Jarman and Ross A. Gilmore**

Soundings taken by ~~Fathometer~~ ~~Graphic recorder~~ ~~hand lead~~ ~~book~~ ~~Graphic recorder~~

Fathograms scaled by **H. G. Burney and L. W. Akerlund**

Fathograms checked by **H. G. Burney, L. W. Akerlund and E. Krause**

Protracted by **C.A.J. Pauw**

Soundings penciled by **C.A.J. Pauw**

Soundings in fathoms <sup>and tenths</sup> ~~feet~~ at **MLM** MLLW *and are true depths*

REMARKS:

SEP 23 1953

Form 537  
(Ed. June 1946)

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H 8032

Field No. LJ 1152

State Southeast Alaska

General locality Taku Inlet

Locality Taku River to Flat Point

Scale 1/ 10 000 Date of survey 13 June - 25 July 1952

Instructions dated 20 March 1952 - Project CS-346.

Vessel Ship Lester Jones & Launch 98.

Chief of party Ross A. Gilmore

Surveyed by Junius T. Jarman and Ross A. Gilmore

Soundings taken by ~~fathometer~~, graphic recorder, ~~hand lead~~, ~~wire~~

Fathograms scaled by H. Burney & L. Akerlund

Fathograms checked by H. Burney, L. Akerlund & E. Krause.

Protracted by C.A.J. Pauw

Soundings penciled by C.A.J. Pauw

Soundings in fathoms ~~XXXX~~ at ~~XXXX~~ MLLW

REMARKS:

.....  
.....  
.....  
.....  
.....

*Handwritten initials*

8032

EXPLANATORY NOTE TO ACCOMPANY DESCRIPTIVE REPORT

HYDROGRAPHIC SURVEY, FIELD NO. LJ-1152

The descriptive report for this survey was written before processing of the field records was completed and the following additional information is submitted for the benefit of the smooth plotter.

Processing of all field records has been completed up to and including reduction of the soundings. The reduced soundings, however, have not been checked since time did not permit it.

Since the two senior officers on the ship were detached soon after the ship returned to Seattle in the fall, time was not available for the fathograms to be scanned by the officers. This job was turned over to members of the ship's crew, including the two men who served as fathometer operators during the field season. The scanning was found to be poor in many cases due to the lack of experience of the men. Most of it has been checked and redone where necessary, especially in critical areas, and it is believed that it will be satisfactory. However, if the smooth plotter encounters difficulty in drawing depth curves, or disagreement of soundings on crosslines, it may be necessary to check the scanning at such places.



Bruce E. Greene,  
Ensign, USC&GS

DESCRIPTIVE REPORT **8032**  
TO ACCOMPANY HYDROGRAPHIC SURVEY NO. H \_\_\_\_\_, FIELD NO. LJ-1152  
TAKU RIVER TO FLAT PT., TAKU INLET, S.E. ALASKA  
PROJECT CS-346  
SHIP LESTER JONES  
Ross A. Gilmore, Chief of Party  
Survey by J.T. Jarman and Ross A. Gilmore  
Scale 1:10,000

A. PROJECT

This survey was executed in accordance with Director's Instructions No. 22/MEK S-2-LJ dated 20 March 1952, Project CS-346, Taku Inlet, S.E. Alaska.

B. SURVEY LIMITS AND DATES

(H 8032)

Hydrographic survey, Field No. LJ-1152 covers that part of Taku Inlet, S.E. Alaska, from Taku River to Flat Pt. It covers the same area included in Hydrographic Survey No. H-6267 which was surveyed in 1937. New basic surveys were required in part of Taku Inlet because of extensive natural changes resulting from the advance of Taku Glacier and the deposit of sediment from the glacier and Taku River. (H-8033, 1952)

The present survey joins contemporary survey, Field No. LJ-1252, on the south. It also joins on the south a 1937 original hydrographic survey, No. H-6275. Field work began on LJ-1152 June 13, 1952 and ended on July 25, 1952. (H 8032)

C. VESSELS AND EQUIPMENT

Launch No. 98, a standard 30 foot diesel powered motor launch operating from the Ship LESTER JONES, was utilized to execute this survey. The turning radius of this launch was approximately 25 meters; sounding speed was maintained at approximately 6 knots. The launch day letter color is blue. On the boat sheet of this survey red was used the first few days and this color was continued to prevent confusion.

An 808-J type portable depth recorder, manufactured by the Submarine Signal Corporation, was used to obtain the soundings.

D. TIDE AND CURRENT STATIONS

Portable automatic tide gages were maintained at Taku Pt. and Annex Creek throughout the period of the survey. Records from these two gages were comparable except that the highs at Taku Pt. averaged 0.4 foot higher than the corresponding highs at Annex Creek. See tabulated data

study from the two gages which is attached to this report. This difference was probably caused by the configuration of the shoreline in the vicinity of Taku Pt. The division point between the characteristics of the two gages would probably fall just south of Taku Pt. in the general vicinity of a line joining signals ABE-LIP. However, a study of the depth curves on the sheet and at its junction with contemporary survey, Field No. <sup>H-8033</sup> LJ-1252, indicated that no appreciable error would be introduced by applying reducers from the Taku Pt. gage to sheet LJ-1152, <sup>H-8032</sup> and reducers from the Annex Creek gage to sheet LJ1252. (H-8033)

Current stations of 100 hours each were occupied off Taku Pt., and Flat Pt. before hydrographic operations began.

E. SMOOTH SHEET

Data for this sheet ~~will be~~ <sup>was</sup> processed by the Seattle Processing Office, and it is assumed that remarks under this heading will be supplied by that office.

F. CONTROL STATIONS

Since sufficient triangulation stations were recovered from control executed in 1929 and 1937, no new triangulation was necessary. In addition to the foregoing, the following marked topographic stations were recovered:

<u>Name</u>	<u>Sheet No.</u>	<u>Method of Location</u>
Rot	T-6577	planetable
Stow	T-6577	"
Dye	T-6577	"
Pop	T-6578	"
Lad	T-6578	"
How	T-6580	"
Cove	T-6580	"
Lake	T-6579	"

<sup>T-7088(1952)</sup> This recovered control was supplemented by locating additional topographic stations on graphic control sheets. Graphic control sheets, Field No. LJ-A-52 and LJ-B-52 <sup>(and LJ-C-52)</sup> are common to this sheet. Stations HOW, COVE and LAKE are common only to sheet LJ-1252, and are not shown on LJ-1152. Stations DILL, NEWT, HIGH and BILL (all 1952) are recoverable and Forms 524 <sup>H-8032</sup> have been submitted. *Graphic Control/surveys LJ-B-52 & LJ-C-52 are marked for destruction. (See T-7088, 1952, for Descript Rpts)*

G. SHORELINE AND TOPOGRAPHY

It is known that topography was accomplished in this area during the 1937 season. After referring to the descriptive cards furnished for the 1937 marked topographic stations, it is supposed that the existing topography is represented by sheet Nos. T-6577, T-6578, T-6579, and T-6580. Since bromide prints of the foregoing were not furnished the party, the limits and extent of each are not known. The shoreline shown on the boat  
\* see note first paragraph next page.

sheet was transferred from a bromide print of the 1937 hydrography.

While graphic control operations were in progress within the area of this sheet, a short length of planetable shoreline was obtained at each setup. The entire shoreline was photo inspected, using 1:20,000 scale, single lens, Navy, ratio prints. Sufficient control was identified on these photographs so that planimetric shoreline map manuscripts can be obtained from them. See "Field Inspection Report, Taku Inlet" submitted under separate cover. \*Shoreline applied to smooth sheet of present survey from T-11097 and T-11098 of 1952

H. SOUNDINGS

Except for least depth leadline soundings over shoals, all depths on this sheet were measured with an 808-J portable, recording fathometer. The projector units for this fathometer were located in the bilge of the sounding launch.

An effort was made to obtain three bar-checks daily. In the morning before beginning work, the bar was held at 2 fathoms, and the initial was set so that the sounding on the fathogram read 2 fathoms. At noon, another bar check was obtained, and recorded. Then, if the recorded sounding did not agree with the bar depth, the initial was reset. At the close of the day, a final bar check was obtained and recorded. An abstract of initial corrections is attached to this report. Values on the abstract represent variations from the correct position of the initial as determined by the bar checks.

The fathometer apparently operated too fast on portions of "c" day, sheet No. LJ-1152, and speed corrections have been applied as follows:  
(A-8032)

31 c	through	59 c
77 c	"	80 c
82 c	"	96 c
114 c	"	118 c

A brief summary of the speed computation corrections will be found attached to this report.

On the foregoing day, an inexperienced fathometer operator placed the fathogram in the machine so that the used portion of the fathogram rolled up on the sprocket drive roller. When the condition was discovered after position 30c, the fathogram was removed and replaced correctly. An inspection of the fathogram, position 1c through 30c, indicates that the fathometer speed was too fast. On the theory that the increased diameter of the sprocket drive roller would increase paper speed but not the fathometer speed, no correction has been applied to these soundings. It is suggested that an inspection be made of these soundings on the completed smooth sheet, and that an adjusted correction be applied if it appears necessary.

Other slight speed corrections were noted on the fathograms as follows:

103h	-	105h
39m	-	44m
68m	-	77m
19n	-	22n

\*  
No correction required

An abstract of the computations covering the foregoing is attached to this report.

The average correction to "B" scale soundings as obtained from all "A" and "B" scale comparisons was - 2.5 fathoms.

#### I. CONTROL OF HYDROGRAPHY

Standard methods were used throughout this survey, the position of the sounding launch being fixed by the three point fix. The sounding interval was 15 seconds, and the fix interval varied between 1 minute and 2 minutes, depending on the current encountered.

A magnetic compass with a 5 inch card was used for steering purposes. This compass was obtained on a transfer from the Supervisor, Northwestern District, in the spring of 1952. It was reconditioned by the Northwest Instrument Co. of Seattle, Washington, and was not examined closely until hydrography began in June 1952. It was then discovered that the compass card was exactly 180 degrees out in azimuth. Since this was the only compass available with a 5 inch card, it was used "as is". Therefore, all courses listed in the records are exactly 180 degrees in error.

It was assumed by members of the party that the Northwest Instrument Co. had reversed the card of this compass. A check with that company in the fall of 1952 disclosed that they had not removed the cover of the compass. It is now believed that the compass at some time in the past was subjected to a strong electric current which reversed the polarity of its magnets. During the hydrographic season, considerable difficulty was experienced in staying on a sounding line. It was assumed then that this difficulty was due to adverse currents. A recent disclosure indicates that the magnetism of the compass magnets was greatly reduced which is the more probable explanation.

#### J. ADEQUACY OF SURVEY

This survey is adequate and should supersede prior surveys. It should be mentioned that the bottom of the basin lying between the face of Taku Glacier and Taku Pt. is undergoing constant change due to pressure being exerted by the glacier. The latter statement is particularly true of the flats along the face of the glacier. Note the soundings on the line, 23r to 33r. This line is a split which was obtained in late July 1952 whereas the main system of lines were run in June of that year. It will be noted that a number of soundings on the split are shoaler than the surrounding depths. They are believed to be result of pressures exerted by the glacier after the main system of sounding lines had been run.

(H-8033)

The junction with contemporary survey, Field No. 1252, is satisfactory.



## K. CROSSLINES

Cross lines average about 10% of the system of sounding lines. All crossings are believed to be satisfactory.

## L. COMPARISON WITH PRIOR SURVEYS

The present survey supersedes Hydrographic Survey No. H-6267 executed in 1937. At this writing, the boat sheet is the only plotting of the current survey available for making a comparison with the 1937 work. The resulting discussion will be general in nature, and further reference should be made to the completed smooth sheet.

In general, shoaling is present over the entire area embraced by this sheet. The basin which lies between the face of Taku Glacier and Taku Pt. has lost about 2/3 of the area shown in 1937. Where depths were formerly 20 to 25 fathoms, they now range between 6 and 8 fathoms. The sand spit just north of Taku Pt. which is shown on the 1937 survey is now growing on the north and west sides. Formerly, it bared at MLLW for a distance of 0.3 mile off the beach; it now bares for a distance of 0.4 mile off the beach. In 1937, the 1 fathom curve followed the low water line outlining the spit very closely; this curve now extends out into basin in a northwesterly direction for a distance of 0.7 mile, and outlines an extensive underwater sand ridge. Along with these changes, the mouth of the channel leading from the basin to Taku River has shifted to the north. The controlling depth at the entrance of this channel remains about the same, or  $1\frac{1}{2}$  fathoms. The low water line north of this channel entrance and south of Swede Pt. has shifted considerably from that shown in 1937.

Changes between Taku Pt. and Flat Pt., while less spectacular than those discussed in the foregoing paragraph, do exist. The west side of this section remains "steep-to", but the depth curves with the exception of the zero and the 1 fathom curve appear to have moved from 50 to 75 meters offshore. The deep water channel between Taku Pt. and Flat Pt. remains in the same relative position, but it has lost approximately 150 meters of its width between the 10 fathom curves. South of Scow Cove, the channel has lost still more of its former width. There was a controlling depth of  $10\frac{1}{2}$  fathoms near Flat Pt. in 1937; the controlling depth is now  $9\frac{1}{2}$  fathoms. The 10 fathom curve is no longer continuous along either side of the channel, but now closes on itself at several points. The upper end of this channel south of Taku Pt. has shoaled from 5 to 10 fathoms.

Along the east side of this section over the flats between Taku and Davidson Creek, the zero and 1 fathom curve appear to be stable except for minor variations. The 2 fathom, 3 fathom, and 5 fathom curves appear to have moved off shore, and in some instances, the movement amounts to as much as 300 meters.

#### M. COMPARISON WITH CHART

The area under discussion is covered by Chart No. 8235. Since the 1937 survey is the source of most of the information shown on the chart, the remarks in the foregoing paragraph are applicable here. The shaded portion of the flats between Taku Pt. and Davidson Creek on the east side of Taku Inlet should carry the note "boulders" in the same manner as shown on the flats off the mouth of Turner Creek.

#### N. DANGERS AND SHOALS

No new dangers and shoals were discovered except the general shoaling and shifting of the depth curves as discussed under paragraph L. Attention is directed to the tip of the underwater sand ridge, Latitude  $58^{\circ} 25'$ , Longitude  $134^{\circ} 01'$ , which must be avoided by ships entering the basin between Taku Glacier and Taku Pt.

#### O. COAST PILOT INFORMATION

Coast Pilot information has been submitted under separate cover in a special report.

During the field season two 100 hour current stations were occupied, one in mid-channel off Taku Pt., and the other in mid-channel off Flat Pt. The current off Taku Pt. floods northerly and is influenced considerably by the flow from Taku River. At the time current observations were in progress off Taku Pt. in early May the river flow did not appear to be excessive, probably caused by the cold, late Spring experienced in 1952. It was noted, however, that the current pole would often times remain stationary when it was obvious that a surface current existed as evidenced by floating debris. Evidently, the lower section of the pole was being influenced by a lower current counter to the surface current. A maximum current of about  $1\text{-}3/4$  knots was noted with the average being about 1 knot.

Off Flat Pt. the current is more consistently tidal and also floods north. The maximum noted here was about  $1\frac{1}{2}$  knots with an average of about  $3/4$  knots.

#### P. AID TO NAVIGATION

There are no aids to navigation within the limits of this sheet.

#### Q. LANDMARKS FOR CHARTS

There are no landmarks within the limits of this sheet. Two objects do exist, each visible for approximately 1 mile which would be useful to vessels entering the basin between the face of Taku

Glacier and Taku Pt. They are as follows:

1. A white marble monument 4 feet high commemorating Tacou Chief, Tith-Ta-Tatin at:

Latitude  $58^{\circ} 28' 4''$  130.0 meters  
Longitude  $134^{\circ} 00'$  804.0 meters ✓

2. A large white "X" constructed of 8 inch boards about 6 feet long which is bolted to a 7 foot pipe set in concrete. This object is alongside triangulation station LIP 1893-1929 at:

$\Delta$  LIP (1893, 1929) ✓  
Latitude  $58^{\circ} 23'$  1192.5 meters ✓  
Longitude  $134^{\circ} 00'$  884.8 meters ✓

#### R. GEOGRAPHIC NAMES

No special report on geographic names is being submitted for project CS-346. All names as shown on USC&GS Chart No. 8235 were corroborated and only one additional name is recommended. This is DAVIDSON POINT, the prominent point between Davidson Creek and Turner Creek on the east side of the inlet opposite Flat Pt. This name is in common use by the Bureau of Public Roads and the Forestry Service.

NOTED 9-24-53. H. HECK.  
854-

#### S. SILTED AREAS

Most of the bottom within the limits of this sheet is covered by glacial silt of varying thicknesses.

#### T. BY-PRODUCT INFORMATION


None.

#### U. MISCELLANEOUS


Since the Commanding Officer and the writer are being detached from the LESTER JONES in the very near future, this report is based on an inspection of the boat sheet and the field records, many of which have not been processed. To make this report accurate, it will be advisable to check it against the completed smooth sheet.

TABULATION OF APPLICABLE DATA

Coast Pilot Report, LESTER JONES, 1952 season  
Field Inspection Report, Taku Inlet, S.E. Alaska, LESTER JONES, '52  
Season's Report, LESTER JONES, 1952 season  
Graphic Control Sheets LJ-A-52, LJ-B-52, LJ-C-52 and Reports.  
Tide Report, Taku Inlet, S.E. Alaska, LESTER JONES, 1952

  
J. T. Jarman  
Commander, C&GS

Approved and forwarded:

<sup>12/4/52</sup>  
  
Ross A. Gilmore, Comdr., C&GS  
Commanding Ship LESTER JONES

TIDAL NOTE  
Sheet No. H ~~8032~~, Field No. LJ-1152

The portable automatic tide gage at Taku Pt., Lat.  $58^{\circ} 24.07' N.$ ,  
Long.  $134^{\circ} 24.07' W.$ , was used to reduce all soundings on this sheet.

A reading of 1.7 feet on the staff of this gage corresponds to  
the plane of Mean Lower Low Water.

STATISTICS

Hydrographic Survey No. H 8032, Field No. LJ-1152

<u>Date</u>	<u>Vol.</u> <u>No.</u>	<u>Day</u> <u>Ltr.</u>	<u>Stat.</u> <u>Mi.</u>	<u>H.L.</u> <u>Snd.</u>	<u>Pos.</u>
6/13	1	a	26.3	1	153
6/14	1	b	4.8	0	38
6/14	2	b	28.7	1	166
6/16	3	c	19.2	1	126
6/17	3	d	13.9	1	88
6/17	4	d	28.9	0	181
6/18	4	e	6.0	0	38
6/18	5	e	19.2	0	153
6/19	5	f	10.6	0	75
6/19	6	f	14.7	0	101
6/20	6	g	19.3	0	115
6/20	7	g	10.8	0	71
6/23	7	h	16.3	0	135
6/24	8	j	34.8	0	206
6/24	9	j	2.5	0	18
6/25	9	k	28.7	0	183
6/25	10	k	1.0	0	6
6/27	10	l	23.0	0	149
7/3	11	m	11.7	0	103
7/8	11	n	7.6	0	74
7/9	11	p	3.9	0	29
7/9	12	p	1.0	0	10
7/23	12	q	6.7	22	92
7/24	12	r	4.2	16	60
7/25	12	s	4.0	0	31
Totals	12		348.2	44	2401

Area, square statute miles 9.8  
 Launch day ltr. color Blue

# 8032

## HYDROGRAPHIC SIGNALS USED ON SURVEY SHEET FIELD NO.

LJ-1152

### TRIANGULATION STATIONS

BIN, 1893-1929  
BLUFF, 1929  
DUKE, 1929  
FLAT, 1929  
FUB, 1893-1929  
JOYCE, 1937  
LET, 1893-1929  
LIP, 1893-1929  
MARY, 1937  
MID, 1937  
OOZE, 1937

### TOPOGRAPHIC STATIONS

ABE	LJ-B-52	MAG	LJ-A-52
ACE	LJ-B-52	NEWT	LJ-B-52
BAN	LJ-A-52	NEX	LJ-B-52
BIG	LJ-B-52	OUT	LJ-A-52
BILL	LJ-B-52	PIN	LJ-B-52
CAN	LJ-B-52	POP	LJ-B-52
COR	LJ-B-52	RAP	LJ-A-52
DED	LJ-B-52	RAT	LJ-C-52
DILL	LJ-A-52	RED	LJ-A-52
DYE	T-6577	ROK	LJ-A-52
GAG	LJ-B-52	SAD	LJ-A-52
HIGH	LJ-B-52	SAT	LJ-A-52
HUT	LJ-A-52	SNO	LJ-A-52
INN	LJ-B-52	STOW	T-6577
JOE	LJ-C-52	TOP	LJ-A-52
KID	LJ-B-52	TRI	LJ-A-52
LAD	LJ-B-52	VER	LJ-B-52
MIS	LJ-C-52	VID	LJ-C-52
MOP	LJ-B-52	WAT	LJ-A-52
MUD	LJ-A-52	YEL	LJ-A-52

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GEOGRAPHIC NAME LIST

SHEET NO. (FIELD) LJ-1152

- TAKU GLACIER
- SWEDE POINT
- TAKU POINT
- NORRIS GLACIER
- SCOW COVE
- DAVIDSON CREEK
- FLAT POINT
- DAVIDSON POINT (new name)



COMPARISON HIGHS & LOWS, 1952  
TAKU PT. TIDE GAGE vs ANNEX CREEK TIDE GAGE  
TAKU INLET, S.E. ALASKA

Date	<u>Heights</u>		<u>HIGHS</u>		Annex Cr. Ht.diff.	Taku Pt. Time diff.
	Taku Pt.	Annex Cr.	Taku	Annex		
6/1	11.0	10.8	0800	0750	-0.2	-10
	12.7	12.5	2055	2055	-0.2	0
6/8	17.8	17.4	0120	0110	-0.4	-10
	14.5	13.9	1435	1435	-0.6	0
6/22	16.7	16.3	0135	0130	-0.4	-05
	14.0	13.7	1435	1440	-0.3	+05
6/15	12.9	12.4	0740	0745	-0.5	+05
	14.8	14.5	2035	2035	-0.3	0
6/29	12.5	12.4	0600	0600	0.0	0
	13.6	13.3	1850	1845	-0.3	-05
7/6	17.4	16.7	0030	0010	-0.7	-20
	14.2	13.8	1400	1345	-0.4	-15
7/13	14.0	13.3	0610	0615	-0.7	+05
	15.8	15.2	1850	1855	-0.6	+05
7/20	15.8	15.5	0030	0040	-0.3	+10
	13.2	12.8	1340	1350	-0.4	+10
Mean					-0.39	-01.5 min

Date	<u>Heights</u>		<u>LOWS</u>		Annex Cr. Ht.diff.	Taku Pt. Time diff.
	Taku Pt.	Annex Cr.	Taku	Annex		
6/1	04.8	05.0	0205	0205	+0.2	0
	03.2	03.3	1420	1405	+0.1	-15
6/8	-03.1	-03.1	0740	0800	0.0	+20
	02.3	02.4	2000	2010	+0.1	+10
6/15	02.2	02.2	0200	0200	0.0	0
	01.8	01.8	1350	1350	0.0	0
6/22	-01.6	-01.5	0805	0800	-0.1	-05
	03.8	03.8	2015	2020	0.0	+05
6/29	04.2	04.2	0025	0010	0.0	-15
	02.2	02.4	1220	1215	+0.2	-05
7/6	-02.2	-02.7	0715	0700	-0.5	-15
	03.5	03.4	1930	1910	-0.1	-20
7/13	01.0	00.6	0025	0035	-0.4	+10
	00.6	00.6	1220	1230	0.0	+10
7/20	-00.9	-00.9	0715	0720	0.0	+05
	04.0	03.9	1925	1925	-0.1	0
Mean					- .04	-0.3

INDEX CORRECTIONS

LJ-1152

<u>Day</u>	<u>Pos. No's.</u>	<u>Corr.</u>	<u>Day</u>	<u>Pos. No's.</u>	<u>Corr.</u>
a	1 - 10	0.0	e	114 - 128	-0.1
	10 - 32	+0.1		128 -138+45 <sup>s</sup>	0.0
	33 - 125	0.0		138+1 <sup>m</sup> -152+1 <sup>m</sup>	-0.1
	125 - 153	-0.1		152+1 <sup>m</sup> 15 <sup>s</sup> -191	0.0
b	1 - 25	0.0	f	1 - 113	0.0
	25- 88+1 <sup>m</sup>	+0.1		113 - 120	+0.1
	88+1 <sup>m</sup> 15 <sup>s</sup> -93	+0.2		120 - 176	0.0
	94 - 96+30 <sup>s</sup>	0.0	g	1 - 31	0.0
	96+45 <sup>s</sup> -175	-0.1		31 - 57	+0.1
	175 - 200	-0.2		58 - 72	+0.2
	200 - 204	-0.3		73 - 103	0.0
c	1 - 14	0.0		103 - 175	-0.1
	14 - 30	+0.1		176 - 184	0.0
	31 - 36	0.0		184 - 186	-0.1
	36 - 44	-0.1	h	1 - 135	0.0
	44 - 49	0.0	j	1 - 5	0.0
	49 - 97	+0.1		5 - 26	+0.1
	97 - 105	0.0		26 - 35	+0.2
	105 - 126	+0.1		35 - 87	+0.3
d	1 - 52	0.0		88 - 125	0.0
	52 - 57	+0.1		125 - 224	-0.1
	58 -109	+0.2	k	1 - 12	0.0
	110 - 138	+0.1		12 - 21	+0.1
	139 - 250	0.0		21 - 22	0.0
	250 - 269	-0.1		23 - 27	+0.1
e	1 - 17	0.0		28 - 111	0.0
	17 - 28	+0.1		111 - 167	-0.1
	28 - 83	0.0		168 - 179	0.0
	84 - 89	+0.1		180 - 189	-0.1
	90 - 114	0.0			

INDEX CORRECTIONS

LJ-1152

(Cont'd.)

<u>Day</u>	<u>Pos.</u>	<u>No's.</u>	<u>Corr.</u>
l	1	- 3	0.0
	3	- 64	+0.1
	65	- 72	+0.2
	73	- 83	-0.1
	84	- 149	0.0
m	1	- 49	+0.1
	50	- 103	0.0
n	1	- 7	0.0
	7	- 31	+0.1
	32	- 65	+0.2
	65	- 74	+0.1
p	1	- 9	0.0
	10	- 39	-0.1
q	1	- 33	0.0
	34	- 41	-0.1
	42	- 57	0.0
	58	- 75	-0.1
	76	- 92	-0.2
r	1	- 33	0.0
	35	- 60	+0.1
s	1	- 31	+0.1

FATHOMETER SPEED CORRECTIONS - LJ-1152

Paper travel at 820 fm./sec. calibration - 1 in. or 25.400 mm. per 3 min. At 800 fm./sec. calibration, paper travel is:

$$\frac{25.400 \times 800}{820} = 24.7805 \text{ mm./3 min. or } 8.2601 \text{ mm./min.}$$

c day pos.No.	time (min.)	Theoretical paper travel (mm.)	Measured paper travel (mm.)	Correction
31-37	8.0	66.08	67.10	$\frac{-1.02 \times 100}{67.10} = -1.52\%$
37-45	10.75	88.80	90.80	$\frac{-2.00 \times 100}{90.80} = -1.76\%$
45-47	3.0	24.78	25.80	$\frac{-1.02 \times 100}{25.80} = -3.96\%$
47-53	9.0	74.34	78.62	$\frac{-4.28 \times 100}{78.62} = -5.44\%$
53-59	9.0	74.34	76.35	$\frac{-2.01 \times 100}{76.35} = -2.64\%$
77-80	4.5	37.17	37.50	$\frac{-0.33 \times 100}{37.50} = -0.88\%$
82-89	10.5	86.73	87.70	$\frac{-0.97 \times 100}{87.70} = -1.11\%$
90-96	8.5	70.21	71.00	$\frac{-0.79 \times 100}{71.00} = -1.11\%$
114-118	5.0	41.30	42.00	$\frac{-0.70 \times 100}{42.00} = -1.67\%$

FATHOMETER SPEED CORRECTIONS: - LJ-1152

k day pos.No.	time (min.)	Theoretical paper travel (mm.)	Measured paper travel (mm.)	Correction
66-75	13.0	107.38	106.45	$\frac{+0.93 \times 100}{106.45} = + 0.87\%$
103-104	1.5	12.39	11.94	$\frac{+0.45 \times 100}{11.94} = + 3.76\%$
104-105	1.5	12.39	12.12	$\frac{+0.27 \times 100}{12.12} = + 2.22\%$
<u>m day</u> 36-39	4.5	37.17	37.58	$\frac{-0.41 \times 100}{37.58} = - 1.09\%$
39.44	8.0	66.08	66.96	$\frac{-0.88 \times 100}{66.96} = - 1.31\%$
68-70	2.25	18.59	19.12	$\frac{-0.53 \times 100}{19.12} = - 2.77\%$
71-77	8.5	70.21	71.10	$\frac{-0.89 \times 100}{71.10} = - 1.25\%$
<u>n day</u> 19-22	4.0	33.04	33.92	$\frac{-0.88 \times 100}{33.92} = - 2.60\%$

APPROVAL SHEET

H-8032

(To Accompany Descriptive Report, Hydrographic Sheet Field No. LJ-1152)

The records and boat sheet for this survey have been examined by me and found adequate and no additional work is recommended.



Ross A. Gilmore,  
Chief of Party, C&GS

H 8032  
LJ 1152

Taku Inlet

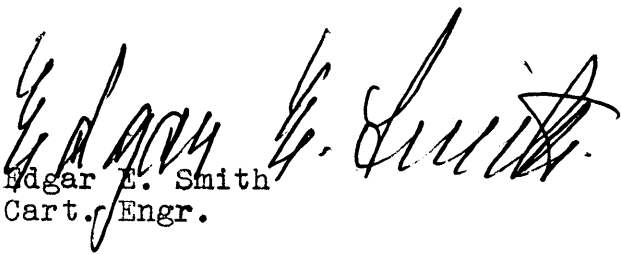
Processing Office Notes.

Smooth sheet.

The projection was made by hand on Whatman paper. Shoreline is from T 11097 and T 11098 which were compiled from inspected photographs. Control has been discussed in Paragraph F.

The rocks awash offshore between  $\Delta$  MID and  $\odot$  LIP are photo topo locations. They were not noted by the hydrographer.

At  $\phi$  58 20.85  $\lambda$  134 03.13, between positions 180 k and 183 k the soundings appeared erroneous. Soundings were rescanned and profile speed was checked. Positions in the vicinity were re-checked. The soundings for the positions indicated were omitted. The area is adequately covered anyway.

  
Edgar E. Smith  
Cart. Engr.

GEOGRAPHIC NAMES

Survey No. H-8032

Name on Survey	Sources										
	A	B	C	D	E	F	G	H	K		
<u>Southeastern Alaska</u>											1
<u>Taku Inlet</u>											2
<u>Taku River</u> ✓											3
<u>Scow Cove</u> ✓											4
<u>Davidson Creek</u> ✓									B.G.N.		5
<u>Taku Point</u>											6
<u>Swede Point</u> ✓											7
<u>Davidson Point</u>											8
<u>Flat Point</u> ✓											9
<u>Taku Glacier</u> ✓											10
											11
											12
<u>Norris Glacier</u>											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red are approved B.G.N. 9-24-53 L. Heck

This name is o.k. but it appears to lie off the limits of this sheet. B.G.N.



DIVISION OF CHARTS  
REVIEW SECTION - NAUTICAL CHART BRANCH  
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8032

FIELD NO. LJ-1152

S. E. Alaska, Taku Inlet, Taku River to Flat Point

Project CS-346

Surveyed - June - July 1952

Scale 1:10,000

Soundings:

Control:

808 Fathometer

Sextant fixes on  
shore control

Chief of Party - R. A. Gilmore  
Surveyed by - J. T. Jarman, R. A. Gilmore  
Protracted by - C.A.J. Pauw  
Soundings plotted by - C.A.J. Pauw  
Verified and inked by - C. B. Samuels  
Reviewed by - I. M. Zeskind  
Inspected by - R. H. Carstens

4-15-54

1. Shoreline and Control

The shoreline originates with unreviewed air-photographic surveys T-11097 and T-11098 of 1952.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated.

The bottom is fairly irregular at the extremity of Taku Glacier in the northwest portion of the survey and is generally smooth elsewhere in the inlet. Mud and sand Flats extending as much as one mile from the shore are found at some places on either side of the inlet. The bottom on the east side of the inlet generally slopes gradually from flats to the center of a natural channel where depths of as much as 15 fms. are found. The bottom on the west side of the inlet drops abruptly from flats or shoreline to depths of 10 fms. or greater.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-8033 (1952) on the south. The survey extends on the northeast to the limits of the Project at the entrance to Taku River. No hydrographic surveys have been made beyond the northern limit.

5. Comparison with Prior SurveysA. H-2055 (1890), 1:40,000

The prior survey has been superseded by H-6267 (1937) within the common area and is not considered in this review.

B. H-6275 (1937), 1:10,000  
H-6267 (1937), 1:10,000

The prior surveys cover the area of the present survey. A comparison between the prior and present surveys reveals changes in the bottom configuration throughout the entire area of the present survey. The greatest changes, however, occur in the area north of Taku Point. Here, the face of Taku Glacier has advanced about  $1\frac{1}{4}$  miles southeastward with resultant changes in depth and the narrowing of the area covered by the basin which lies between the face of the Glacier and the mouth of Taku River. Where depths in the basin were formerly 20-25 fms., present depths of 6-8 fms. are found. The channel leading out of the basin and into the mouth of Taku River has moved northward about 0.3 mile. North of Taku Point, the 1-fm. curve outlines a submarine ridge which has extended itself about 0.3 mile into the basin in a northwesterly direction. South of Taku Point less radical changes in bottom configuration are noted. The bottom here has shoaled from 1-3 fms., except in the natural channel, where shoaling as much as 10 fms. is found, as for example, in lat.  $58^{\circ}23.87'$ , long.  $134^{\circ}01.48'$ , where a prior depth of 21 fms. falls in present depths of 11 fms. The present controlling depth in the natural channel between Flat Point and Taku Point is 9.2 fms. The channel is located in the same relative position it had in 1937 but it has lost as much as 150 meters in width between the 10-fm. curves.

The present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 8235 (Latest print date 11-9-53)

A. Hydrography

The charted hydrography originates with the present survey prior to verification and review. Except as indicated below only minor differences were noted between the survey and charted information;

The island charted in lat.  $58^{\circ}26.15'$ , long.  $133^{\circ}59.50'$ , from T-6577 (1937) is shown on the present survey as forming part of a sandspit which extends from the mainland.

The present survey supersedes the charted information within the common area.

B. Aids to Navigation

There are no aids to navigation within the area covered by the present survey.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions

9. Additional Field Work Required

This is an excellent basic survey and no additional field work is recommended.

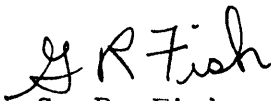
Examined and approved:



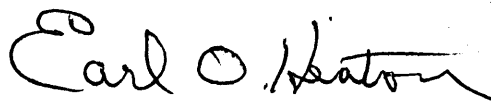
H. R. Edmonston  
Chief, Nautical Chart Branch



H. Arnold Karo  
Chief, Division of Charts



G. R. Fish  
Chief, Section of Hydrography



Earl O. Heaton  
Chief, Division of Coastal Surveys

RHC

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Survey~~

29 September 1953

Division of Charts: R. H. Carstens

Plane of reference approved in  
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8032

Locality Taku Inlet, Southeast Alaska

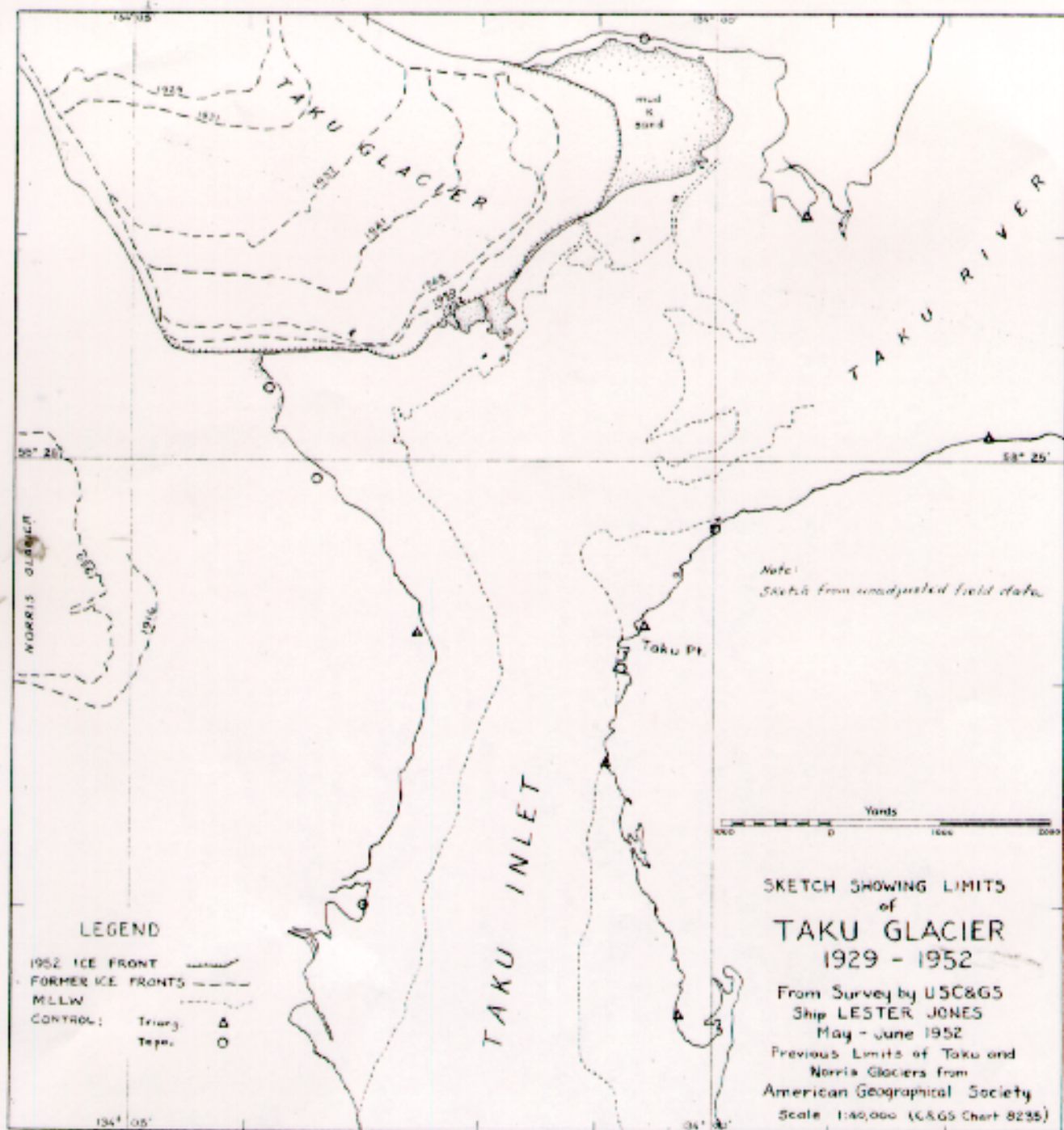
Chief of Party: R. A. Gilmore in 1952  
Plane of reference is mean lower low water, reading  
1.7 ft. on tide staff at Taku Point  
25.8 ft. below B. M. 1 (1937)

Height of mean high water above plane of reference is 15.7 feet.

Condition of records satisfactory except as noted below:

*E. C. McKay*  
Section of Tides

Chief, Division of Tides and Currents.



ING  
ANAL

FATHOMS  
LOW WATER

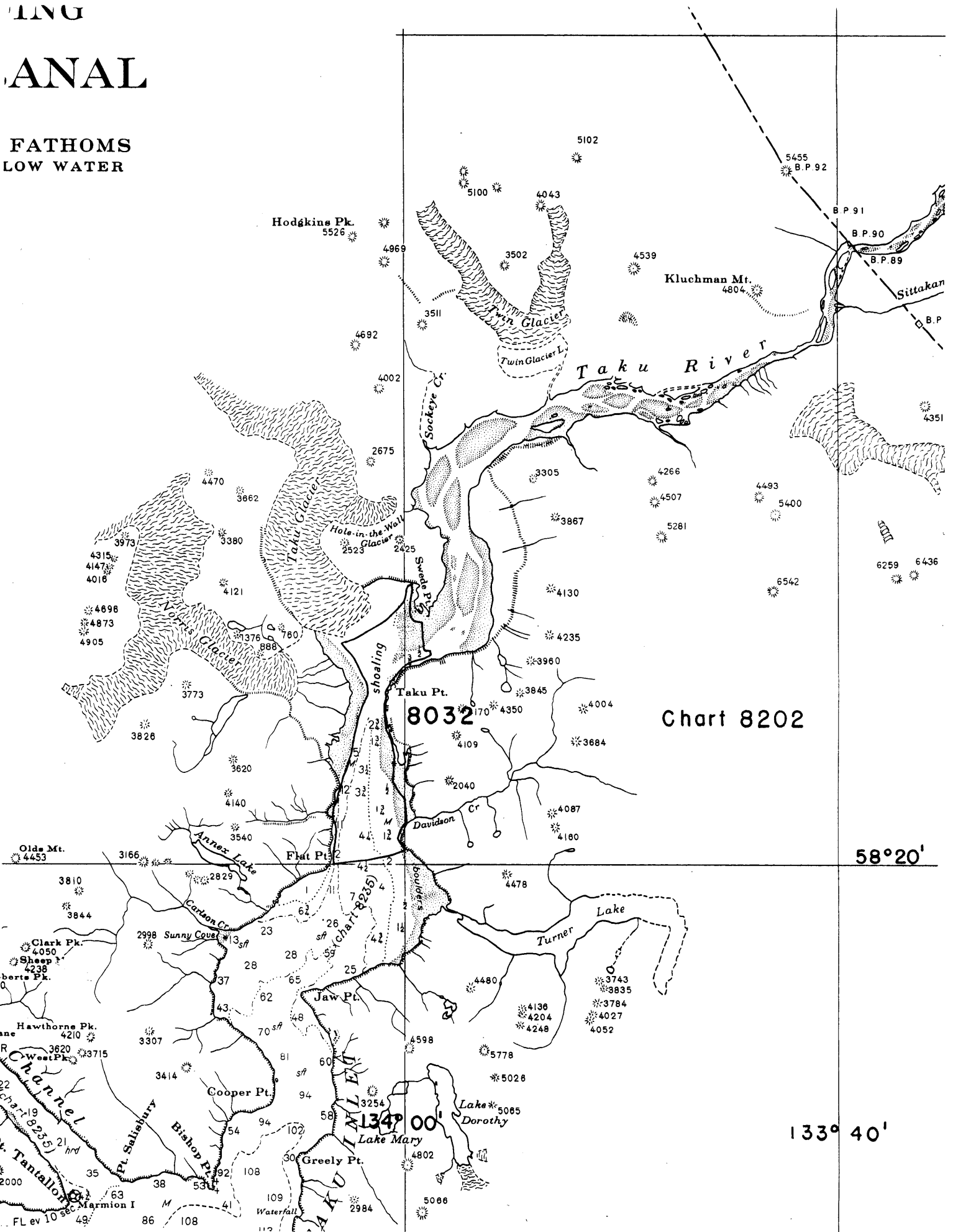


Chart 8202

58°20'

134°00'

133°40'

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8032.....

Records accompanying survey:

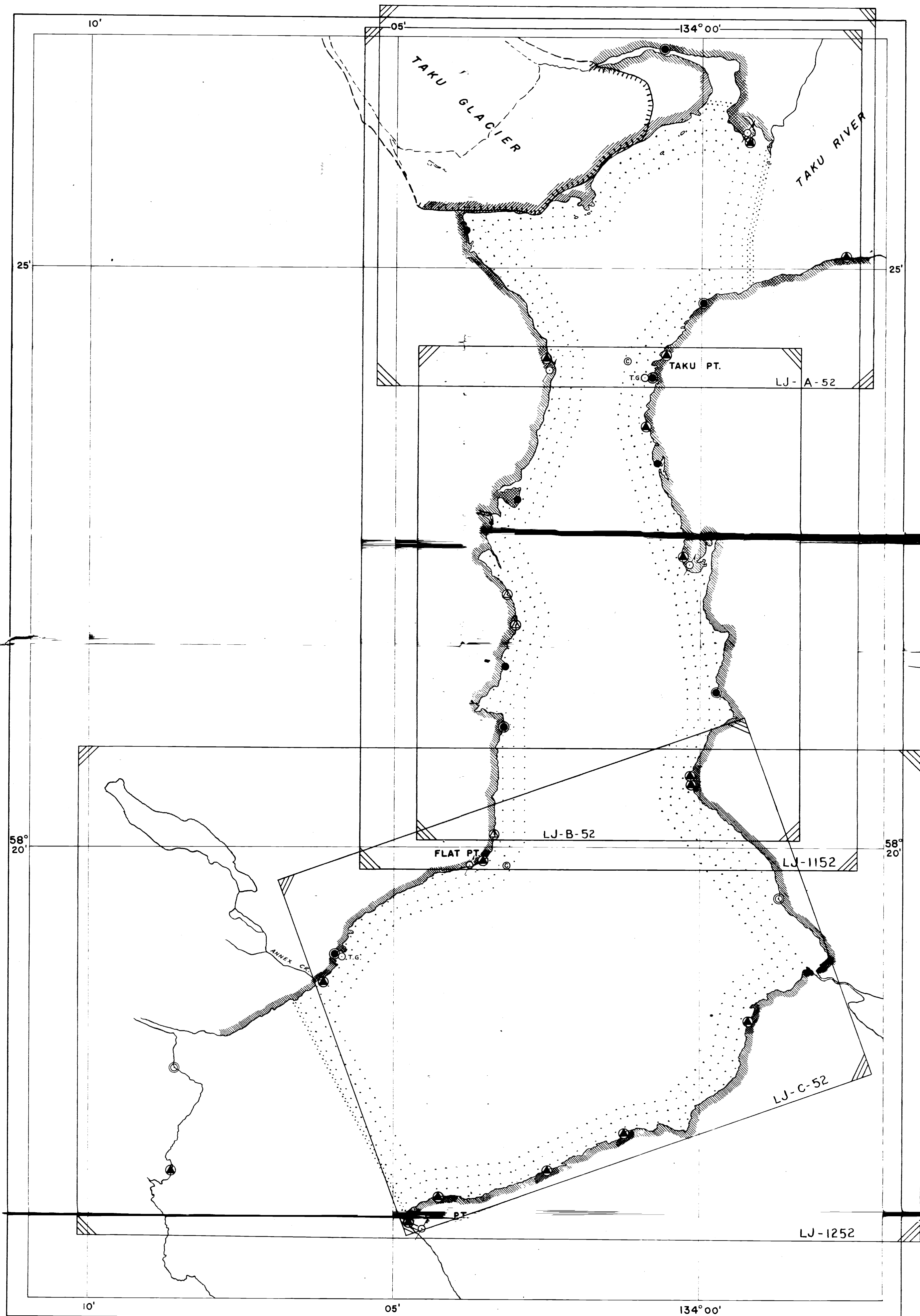
Boat sheets ...1; sounding vols. 12....; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls 7. Env.;  
 special reports, etc. 1. Smooth Sheet; 1. Descriptive Report; 1. Overlay Tracing.  
 .....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		2401.
Number of positions checked		194.
Number of positions revised		16.
Number of soundings revised (refers to depth only)		83.
Number of soundings erroneously spaced		27.
Number of signals erroneously plotted or transferred		0.
Topographic details	Time	16.
Junctions	Time	.....
Verification of soundings from graphic record	Time	20.

Verification by *C. B. Samuel* ..... Total time <sup>\$7</sup> 162. Date 4-7-52  
 3/16/54

Reviewed by *Lu Jaskewitz* ..... Time 31. Date 4-15-54



**LEGEND**

CURRENT STATION  
 MAGNETIC STATION  
 TIDE GAGE



TRIANGULATION:  
 RECOVERED STATIONS  
 NEW STATIONS



TOPOGRAPHIC STATIONS:  
 RECOVERED  
 NEW



AIR PHOTO IDENTIFICATION  
 TRIANGULATION STATIONS  
 TOPOGRAPHIC STATIONS



TOPOGRAPHY:  
 PLANETABLE  
 FIELD INSPECTION



HYDROGRAPHY:  
 AREAS SURVEYED



*H8032*  
**SEASON'S PROGRESS SKETCH**  
**COMBINED OPERATIONS**  
**S. E. ALASKA, TAKU INLET**

SCALE 1:40,000  
 PROJECT CS-346  
 DATES: MAY, JUNE, JULY 1952

USC&GS SHIP LESTER JONES  
 ROSS A. GILMORE, CHIEF OF PARTY



# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8032

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/19/53	8235	Goodrich	Before <del>After</del> Verification and Review <span style="float: right;">JTW</span>
1-20-55	8202	E. M. Bogoyev	<del>Before</del> After Verification and Review completely applied.
1-20-55			
3/27/59	8235	JHE & JTW	<del>Before</del> After Verification and Review Fully applied - no further correction necessary
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.