8033

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-1252 Office No. H-8033

LOCALITY

State S.E. Alaska

General locality Vicinity of Juneau

Locality Taku Inlet

194 52

CHIEF OF PARTY

Ross A. Gilmore

B-1870-1 (1)

8033

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 8033

Field No. LJ 1252

State ~~Southeast~~ Alaska

General locality Taku Inlet

Locality Flat Point to Jaw Point

Scale 1/ 10 000 Date of survey 3 July - 26 July 1952

Instructions dated 20 March 1952

Vessel Ship LESTER JONES and Launch 98

Chief of party Ross A. Gilmore

Surveyed by Junius T. Jarman

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

Fathograms scaled by H.G.Burney & L.W.Akerlund

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

Protracted by C.A.J.Pauw

Soundings penciled by C.A.J.Pauw

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW
and are based on a velocity of sound of 800 fms/sec

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 693019

DESCRIPTIVE REPORT 8033

TO ACCOMPANY HYDROGRAPHIC SURVEY NO. H_____, FIELD NO. LJ-1252

FLAT PT. TO JAW PT., TAKU INLET, S.E. ALASKA

PROJECT CS-346

SHIP LESTER JONES

Ross A. Gilmore, Chief of Party

Surveyed 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-8033

Hydrographic survey, Field No. LJ-1252, covers that part of Taku Inlet, S.E. Alaska, from Flat Pt. to Jaw Pt. It supersedes Hydrographic Survey No. H-6275 which was surveyed in 1937. New basic surveys were required in parts 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-8032

The present survey joins contemporary survey, Field No. LJ-1152 on the north. It also joins on the north, a 1937 original hydrographic survey, No. H-6267. Field work began on LJ-1252 on July 3, 1952 and ended on July 26, 1952.

C. VESSELS AND EQUIPMENT

Launch No. 98, a standard 30 foot, diesel powered motor launch operating from the Ship LESTER JONES was utilized for sounding in depths under 20 fathoms. The Ship LESTER JONES sounded all areas with depths over 20 fathoms. The turning radius of Launch No. 98 was approximately 25 meters, and the turning radius of the Ship LESTER JONES was 100 meters. Sounding speed on Launch No. 98 was maintained at approximately 6 knots; sounding speed on the Ship LESTER JONES was approximately 9 knots. The launch used lower case day letters with blue color, and the ship used upper case day letters with red for the color.

Portable depth recorders, 808-J type manufactured by the Submarine Signal Corporation, were used to obtain the soundings on both the launch and the ship.

D. TIDE AND CURRENT STATIONS

Portable automatic tide gages were maintained at Taku Pt. and Annex Creek throughout the period of the survey. Results from the Annex Creek gage were used to reduce all soundings on this sheet.

A current station of 100 hours was occupied off Flat Pt. before hydrographic operations began.

E. SMOOTH SHEET

Data for this sheet will be processed by the Seattle Processing Office, and it is assumed that remarks under this heading will be supplied by that office. *See Processing Office Notes*

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:

NAME	SHEET NO.	METHOD OF LOCATION
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	"

** to be destroyed*

This recovered control was supplemented by locating unmarked topographic stations on graphic control sheets. *Graphic control sheets, Field No. LJ-B-52 and LJ-C-52 are common to this sheet. Stations ROT, STOW, DYE, LAD, and POP only appear on sheet ~~LJ-1152~~ H-8012. Stations FAW, KEY, and RUS were located directly on the boat sheet by graphic methods prior to hydrography as they fell outside the limits of LJ-C-52.

G. SHORELINE AND TOPOGRAPHY *(See Processing Office Notes)*

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 Sheets 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 sheet was transferred from bromide prints of Hydrographic Surveys, Nos. H-6267 and H-6275.

While graphic control operations were in progress, a short length of planetable shoreline was obtained at each set-up. 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 maps can be obtained from them. See "Field Inspection Report, Taku Inlet" submitted under separate cover.

H. SOUNDINGS

Except for leadline soundings over shoals, all depths on this sheet were measured with 808-J portable, recording fathometers. Fathometer projector units were located in the bilge of the sounding launch. The ship transmitted with a unit located in a blister outside the hull, and received with a unit located in the bilge aft of the transmitting projector.

On the hydrographic 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 launch initial corrections is attached to this report. Values on the abstract represent variations from the correct position of the initial as determined from the bar checks.

The ship fathometer initial was set at 1 fathom. Each day, a series of simultaneous leadline and fathometer soundings were obtained in areas of relatively flat bottom. From the latter, an abstract of ship initial corrections was compiled. A copy of the abstract is attached to this report.

At this writing, the scanning of the fathograms for this sheet has not been completed. It is known that some speed correction will be necessary, but no computations have been made to-date. An abstract of the speed correction computations will be attached to this report at a later date.

The average correction to launch "B" scale soundings as obtained from "A" and "B" scale comparisons was -2.5 fathoms. The average correction to ship "B" scale soundings as obtained from "A" and "B" scale comparisons was +0.26 fathoms.

I. CONTROL OF HYDROGRAPHY

Standard methods were used throughout this survey, the position of both the launch and ship 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.

The magnetic compass used for steering aboard the launch has been

discussed under this same heading in the Descriptive Report to Accompany Sheet, Field No. LJ-1152. It was explained there why all recorded compass headings are exactly 180 degrees in error.

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J. ADEQUACY OF SURVEY

This survey is adequate and should supersede prior surveys. The junction with contemporary survey, Field No. LJ-1152 on the north is satisfactory. See Review, par. 4. H-8032

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. 6275, executed in 1937. At this writing, the boat sheet is the only plotting of the present survey available for making a comparison with the 1937 work, and the hydrographic records supporting it are only partially processed. Therefore, the resulting discussion will be general in nature, and further reference should be made to the completed smooth sheet.

Depth curves over the flat on the west shore between Annex Creek and Flat Pt. show little change except for minor variations. The one exception is the zero curve in the vicinity of Flat Pt. which outlines a narrow ridge of rocks and boulders extending southwesterly from Flat Pt. for a distance of 250 meters. This ridge does not appear on the 1937 survey. See graphic control sheet No. LJ-C-52 which includes* information concerning this area additional to that shown on the boat sheet. The depth curves, zero to 5 fathoms inclusive, on the flat off the mouth of Turner Creek appear to have shifted off-shore by varying amounts, the maximum shift being 300 meters with all curves shifting an approximate average of 75 meters. * information transferred to smooth sheet

ridge submerged on smooth sheet

The deep water channel which is outlined by the 10 fathom curves between latitude 58° 19.3' and latitude 58° 20.2' appears to have lost approximately 150 meters of its width. The remaining 10 fathom curves on the sheet and the curves defining the deeper areas agree favorably with the corresponding curves on the 1937 survey except for minor variations.

M. COMPARISON WITH CHART See Review, par. 6.

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 ridge which bares at MLLW and extends 250 meters southwesterly from Flat Pt. is not charted.

N. DANGERS AND SHOALS

No new dangers and shoals were discovered except for the shifting of some of the depth curves as discussed under paragraph L, this report, and the ridge which bares at MLLW for approximately 250 meters southwesterly of Flat Pt. The 1937 survey shows a ridge here with depths ranging from 2/6 fathoms to 1/2 fathoms.

O. COAST PILOT INFORMATION

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

P. AIDS TO NAVIGATION

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

Q. LANDMARKS FOR CHARTS

There is only 1 landmark within the limits of this sheet recommended for charting. This landmark is topographic station HOW and its description and location follows:

	Lat.	58° 19'	148 meters
CUPOLA, Powerhouse, Annex Creek-Long.		134° 05'	927 meters

Form 567 was submitted with Photogrammetric Data.

R. GEOGRAPHIC NAMES

No special report on geographic names is being submitted for project CS-346. All names 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. Notes

S. SILTED AREAS

No special effort was made to determine silted areas by a study of the fathograms. Most of the bottom in this area contains some glacial silt.

T. BY-PRODUCT INFORMATION.

None

U. MISCELLANEOUS

Since the Commanding Officer and the writer are being detached from the LESTER JONES on December 1, 1952, this report is based on an inspection of the boat sheet and field records which are only partially processed. To make the 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, Ship LESTER JONES, '52.
Season's Report, LESTER JONES, 1952.
Graphic Control Sheets LJ-A-52, LJ-B-52, LJ-C-52 and Reports.
Tide Report, Taku Inlet, S.E. Alaska, LESTER JONES, 1952.
Descriptive Report, Sheet No. LJ-1152. (H-8032, 1952)

J. T. Jarman
Commander, C&GS

Approved and forwarded:
12/4/52

Ross A. Gilmore
Ross A. Gilmore,
Commander, C&GS
Comdg., Ship LESTER JONES

HYDROGRAPHIC SIGNALS USED ON
SURVEY SHEET FIELD NO.
LJ-1252 H-8033

TRIANGULATION STATIONS:

BIN, 1893-1929
CASE, 1893-1929
DUKE, 1929
FLAT, 1929
FUB, 1893-1929
JAW, 1893-1929
KEEP, 1893-1929
LAG, 1893-1929
PIPE, 1937
RUT, 1937
TURNER, 1929

TOPOGRAPHIC STATIONS:

ADD	LJ-C-52	KID	LJ-B-52
BOB	"	LAKE	T-6579
BOX	"	MAN	LJ-C-52
CAN	LJ-B-52	MIS	"
COR	LJ-C-52	PIG	"
DED	LJ-B-52	PIL	"
DEW	LJ-C-52	RAT	"
DOG	"	REN	"
FALL	"	REP	"
FAW *		ROW	"
FIN	LJ-C-52	RUS *	
FOX	"	SET	LJ-C-52
HOW	T-6580	SON	"
IKE	LJ-C-52	TAF	"
JOE	"	TIDE	"
KEG	"	TRU	"
KER	"	WAY	"
KEY *			

* Located by planetable cuts on boat sheet (LJ-1252). Use boat sheet positions for these.

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SCALE CORRECTIONS: LAUNCH & SHIP LJ-1252

LAUNCH

Comparisons taken on d day, 11 July

A	B	Correction A-B
gain set at 9		
44.8	47.5	-2.7
44.3	46.8	-2.5
43.9	46.4	-2.5
42.8	45.5	-2.7
42.8	45.3	-2.5
42.7	45.3	-2.6
42.6	45.0	-2.4
42.7	45.3	-2.6
42.0	44.3	-2.3
41.7	44.4	-2.7
41.5	43.8	-2.3
41.0	43.7	-2.7
	Mean	-2.54

gain set at 8½		
40.0	42.4	-2.4
39.8	42.3	-2.5
39.9	42.3	-2.4
40.4	42.8	-2.4
39.7	42.0	-2.3
39.6	42.0	-2.4
39.6	42.2	-2.6
39.5	42.0	-2.5
39.5	42.1	-2.6
40.0	42.4	-2.4
38.9	41.5	-2.6
38.3	40.6	-2.3
38.5	40.9	-2.4
38.4	40.9	-2.5
38.3	40.9	-2.6
38.4	40.9	-2.5
	Mean	-2.46

SHIP

Comparisons taken on B day, 18 July

A	B	Correction A-B
43.0	42.5	+0.5
43.1	42.5	+0.6
43.2	42.7	+0.5
43.5	42.8	+0.7
43.5	43.0	+0.5
43.4	42.6	+0.8
43.2	42.5	+0.7
43.0	42.4	+0.6
43.0	42.5	+0.5
43.0	42.6	+0.4
	Mean	+0.58

Scale corrections to be applied when using "B" scale:

Launch	-2.5 fm.
Ship	+0.6 fm.

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DRAFT CORRECTION: SHIP LJ-1252

The initial was set at 1.0 fm. for all sounding done by the ship. The draft correction was determined from a series of simultaneous comparisons rather than by actual measurement. This method of determination also accounts for instrumental error which, therefore, will not be considered separately. The ship was used for such a short period that the draft is assumed to have remained constant.

Day	V.C.(fm.)	Fath.(fm.)	Init.	Draft Corr.(fm.)
A	5.9	5.8	1.0	+0.1
	9.8	9.5	1.0	+0.3
B	10.4	10.2	1.0	+0.2
	10.5	10.2	1.0	+0.3
	10.6	10.3	1.0	+0.3
	12.2	11.9	1.0	+0.3
	12.2	12.0	1.0	+0.2
	8.0	8.0	1.0	0.0
	8.0	8.0	1.0	0.0
	13.7	13.4	1.0	+0.3
	15.5	15.0	1.0	+0.5
C	6.4	6.5	1.0	-0.1
	6.4	6.4	1.0	0.0
	7.2	7.0	1.0	+0.2
	7.1	6.9	1.0	+0.2
			Mean	+0.187

Draft correction to be applied to all ship sounding - +0.2 fm.

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INDEX CORRECTIONS LAUNCH LJ-1252

Day	Pos.Nos.	Init.	Scale	Sum
a	1 - 11	-0.1	0.0	-0.1
b	1 - 9	0.0	0.0	0.0
	9 - 34	+0.1		+0.1
	34 - 54	0.0		0.0
	54 - 76	-0.1		-0.1
	77 - 80	0.0		0.0
	80 - 87	+0.1		+0.1
	88 -92	+0.2		+0.2
	92 - 97	+0.3		+0.3
	97 - 104	+0.4		+0.4
	105 - 144	0.0		0.0
	144 - 150	-0.1	0.0	-0.1
c	1 - 67	0.0	0.0	0.0
	68 - 82	+0.1	- .	+0.1
	83 - 130	0.0		0.0
	130 - 159	-0.1		-0.1
	159 - 173	0.0		0.0
	173 - 181	-0.1		-0.1
	181 - 245	0.0	0.0	0.0
d	1 - 26+30^s	0.0	0.0	0.0
	26+45^s - 28		-2.5	-2.5
	29 - 30+45^s		0.0	0.0
	30+1^m - 41+30^s		-2.5	-2.5
	41+45^s-46+15^s	0.0	0.0	0.0
	46+30^s - 48	-0.1		-0.1
	49 - 56+15^s	+0.1	0.0	+0.1
	56+30^s - 74+15^s		-2.5	-2.4
	74+30^s - 88+15^s		0.0	+0.1
	88+30^s - 92		-2.5	-2.4
	93 - - 94		0.0	+0.1
	94+15^s - 95	+0.1	-2.5	-2.4
	96 - 97-15^s	+0.1	0.0	+0.1
	97 - 98+1^m	+0.1	-2.5	-2.4
	98+1^{m}15^s-116 +45^s	+0.2	0.0	+0.2
	116+1^m-117+ +45^s	+0.2	-2.5	-2.3
	117+1^m-120+ 45^s	+0.1	0.0	+0.1
	120+1^m-121+1^m		-2.5	-2.4
	121+1^{m}15^s-135	+0.1	0.0	+0.1
	135 - 221	0.0	0.0	0.0

Day	Pos.Nos.	INit.	Scale	Sum
e	1 - 70+45^s	0.0	0.0	0.0
	70+1^m-75+15^s		-2.5	-2.5
	75+30^s - 86	0.0	0.0	0.0
	86 - 172	-0.1		-0.1
	172 - 206	-0.2	0.0	-0.2
f	1 - 70	0.0	0.0	0.0
	71 - 91	-0.1		-0.1
	91 - 97	-0.2		-0.2
	98 - 169	0.0		0.0
	170 - 181	-0.1		-0.1
	181 - 189	0.0		0.0
	190 - 207	+0.1		+0.1
	207 - 216	+0.2	0.0	+0.2
g	1 - 26	+0.1	0.0	+0.1
	26 - 46	0.0		0.0
	46 - 72	+0.1		+0.1
	73 - 77	+0.2		+0.2
	77 - 86	+0.1		+0.1
	86 - 131	0.0		0.0
	132 - 148	+0.1	0.0	+0.1
h	1 - 46	0.0	0.0	0.0
	47 - 76	-0.2	0.0	-0.2
j	4 - 24	0.0	0.0	0.0
	25 - 36	+0.1		+0.1
	39 - 68	+0.2		+0.2
	69 - 70	+0.1		+0.1
	71 - 89	0.0		0.0
	90 - 167	-0.1	0.0	-0.1
k	1 - 53+30^s	+0.1	0.0	+0.1
	53+45^s - 55	+0.1	-2.5	-2.4
	55+15^s - 59	+0.3	0.0	+0.3

Comp. BEG
✓ LWA

APPROVAL SHEET

(To Accompany Descriptive Report, Hydrographic Sheet Field No. ~~LW~~ H-8033-1252)

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
Ross A. Gilmore
Chief of Party, C&GS

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INDEX CORRECTIONS SHIP LJ-1252

Day	Pos. Nos.	Init.	Draft	Scale	Sum
A	1 - 3	-0.4	+0.2	+0.6	+0.4
	$3+15^s-18+45^s$			0.0	-0.2
	19 - 26	-0.4		+0.6	+0.4
	$26 - 34+30^s$	-0.3		+0.6	+0.5
	$34+45^s - 39$	-0.3		0.0	-0.1
	$39 - 45+45^s$	-0.4		0.0	-0.2
	$45+1^m - 55$	-0.4		+0.6	+0.4
	$55 - 63+1^m\ 15^s$	-0.3		+0.6	+0.5
	64 - 67	-0.3		0.0	-0.1
	$67 - 73+30^s$	-0.4		0.0	-0.2
	$73+45^s-86+45^s$			+0.6	+0.4
	$87 - 87+1^m$			0.0	-0.2
	$87+1^m15^s - 89+1^m$			+0.6	+0.4
	$89+1^m15^s - 91+15^s$	-0.4		0.0	-0.2
	$91+30^s - 110+30^s$	0.0		0.0	+0.2
	$110+45^s - 111+1^m15^s$			+0.6	+0.8
	112 - 119			0.0	+0.2
	$119+15^s-121+45^s$			+0.6	+0.8
	122 - 133	0.0	+0.2	0.0	+0.2
B	1 - 35	0.0	+0.2	0.0	+0.2
	35 - 67	-0.1			+0.1
	68 - 136	-0.3			-0.1
	137 - 162	0.0			+0.2
	162 - 172	-0.1			+0.1
	172 - 186	-0.2			0.0
	186 - 214	-0.3			-0.1
	215 - 250	0.0	+0.2	0.0	+0.2
C	1 - 15	-0.1	+0.2	0.0	+0.1
	16 - 61	-0.2			0.0
	$62 - 72+30^s$	+0.1		0.0	+0.3
	$72+45^s-80+1^m+15^s$			+0.6	+0.9
	81 - 94	+0.1		0.0	+0.3
	95	0.0	+0.2	0.0	+0.2
D	1	-0.2	+0.2	+0.6	+0.6
	2	0.0		0.0	+0.2
	3	-0.1		+0.6	+0.7
	4	-0.2		+0.6	+0.6
	5	-0.2		0.0	0.0
	6	-0.3		+0.6	+0.5
	7-8	-0.3	+0.2	0.0	-0.1

Comp. BEG
✓ LWA

Form 567
April 1945

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

[redacted] LANDMARKS FOR CHARTS

TO BE CHARTED
TO [redacted]
STRIKE OUT ONE

Seattle, Washington 10 November, 1952

I recommend that the following objects which have (~~[illegible]~~) been inspected from seaward to determine their value as landmarks be charted on (~~[illegible]~~) the charts indicated.

The positions given have been checked after listing by J. T. Jarman

Ross A. Gilmore, Comdr. *Chief of Party.*

STATE			POSITION					METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
			LATITUDE		LONGITUDE		DATUM						
CHARTING NAME	DESCRIPTION	SIGNAL NAME	° ′	D. M. METERS	° ′	D. P. METERS							
CUP	Cupola, Annex Creek Power Plant, sheet metal sided, 3 story bldg.	HOW	58 19	148	134 05	927	NA 1927	Plane-table	1937	x			8235

Submitted in Triplicate with Field Inspection Report

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating*

H-8033

FATHOMETER SPEED CORRECTIONS - LJ-1252

Pos. No. f day	Time (min.)	Theoretical paper travel (mm.)	Measured paper travel (mm.)	Correction
7-11	7.0	57.82	58.44	$\frac{-0.62 \times 100}{58.44} = -1.06\%$
98-101	4.5	37.17	36.62	$\frac{+0.55 \times 100}{36.62} = +1.50\%$
115-118	4.25	35.11	35.56	$\frac{-0.45 \times 100}{35.56} = -1.26\%$
124-127	4.75	39.24	39.58	$\frac{-0.34 \times 100}{39.58} = -0.86\%$
128-129	1.5	12.39	12.68	$\frac{-0.29 \times 100}{12.68} = -2.29\%$
133-134	1.5	12.39	12.72	$\frac{-0.33 \times 100}{12.72} = -2.60\%$
152-156	6.25	51.62	52.18	$\frac{-0.56 \times 100}{52.18} = -1.07\%$
g day 14-16	2.5	20.65	21.26	$\frac{-0.61 \times 100}{21.26} = -2.87\%$
C day 62-65	3.0	24.78	26.46	$\frac{-1.68 \times 100}{26.46} = -6.35\%$

max. depth here 28 fms.

H-8033

FATHOMETER SPEED CORRECTIONS - LJ-1252

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

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

Pos. No.	time (min.)	Theoretical paper travel (mm.)	Measured paper travel (mm.)	Correction
c day				
16-17	1.5	12.39	12.82	$\frac{-0.43 \times 100}{12.82} = -3.35\%$
216-218	3.0	24.78	25.24	$\frac{-0.46 \times 100}{25.24} = -1.82\%$
d day				
33-36	4.5	37.17	37.66	$\frac{-0.49 \times 100}{37.66} = -1.30\%$
96-101	7.5	61.95	65.18	$\frac{-3.23 \times 100}{65.18} = -4.95\%$
101-102	1.5	12.39	12.64	$\frac{-0.25 \times 100}{12.64} = -1.97\%$
e day				
51-53	3.0	24.78	24.30	$\frac{+0.48 \times 100}{24.30} = +1.97\%$
87-91	6.0	49.56	50.00	$\frac{-0.44 \times 100}{50.00} = -0.88\%$
97-101	6.0	49.56	50.00	$\frac{-0.44 \times 100}{50.00} = -0.88\%$
106-108	3.0	24.78	25.00	$\frac{-0.22 \times 100}{25.00} = -0.88\%$
163-164	2.0	16.52	16.82	$\frac{-0.30 \times 100}{16.82} = -1.78\%$
165-167	4.0	33.04	33.60	$\frac{-0.56 \times 100}{33.60} = -1.67\%$

2.9 fms. in 58-fm. depths (mean. corr. in depth)

H 8033
LJ 1252

Taku Inlet.

Processing Office Notes.

Smooth sheet. * unreviewed advance copies

The projection was made by hand on Whatman paper. The shore line is from*T 11098 and T 11099 which were compiled from inspected photographs. No shoreline appears on these sheets between λ 134 03 30 and λ 134 05 50 and between λ 134 06 20 and λ 134 07 20, and so there is no shoreline on H 8033 at those places. The shoreline which was transferred from the graphic control plate is indicated. This shoreline had already been inked before receipt of instructions to leave it in pencil. Review, par. 1

Geographic positions for triangulation are from pages 491,492 & 868 of the lithographed sheets of adjusted triangulation. Marked topo points LAKE and described station HOW are from T 6579 and T 6580. Three signals were located by planetable directly on the boatsheet. Other topographic signals are from graphic control plates LJ-B-52 & LJ-C-52. See Par.F Page 2. (marked for destruction subsequent to the review of the hydrographic surveys in this area)

Crossings.

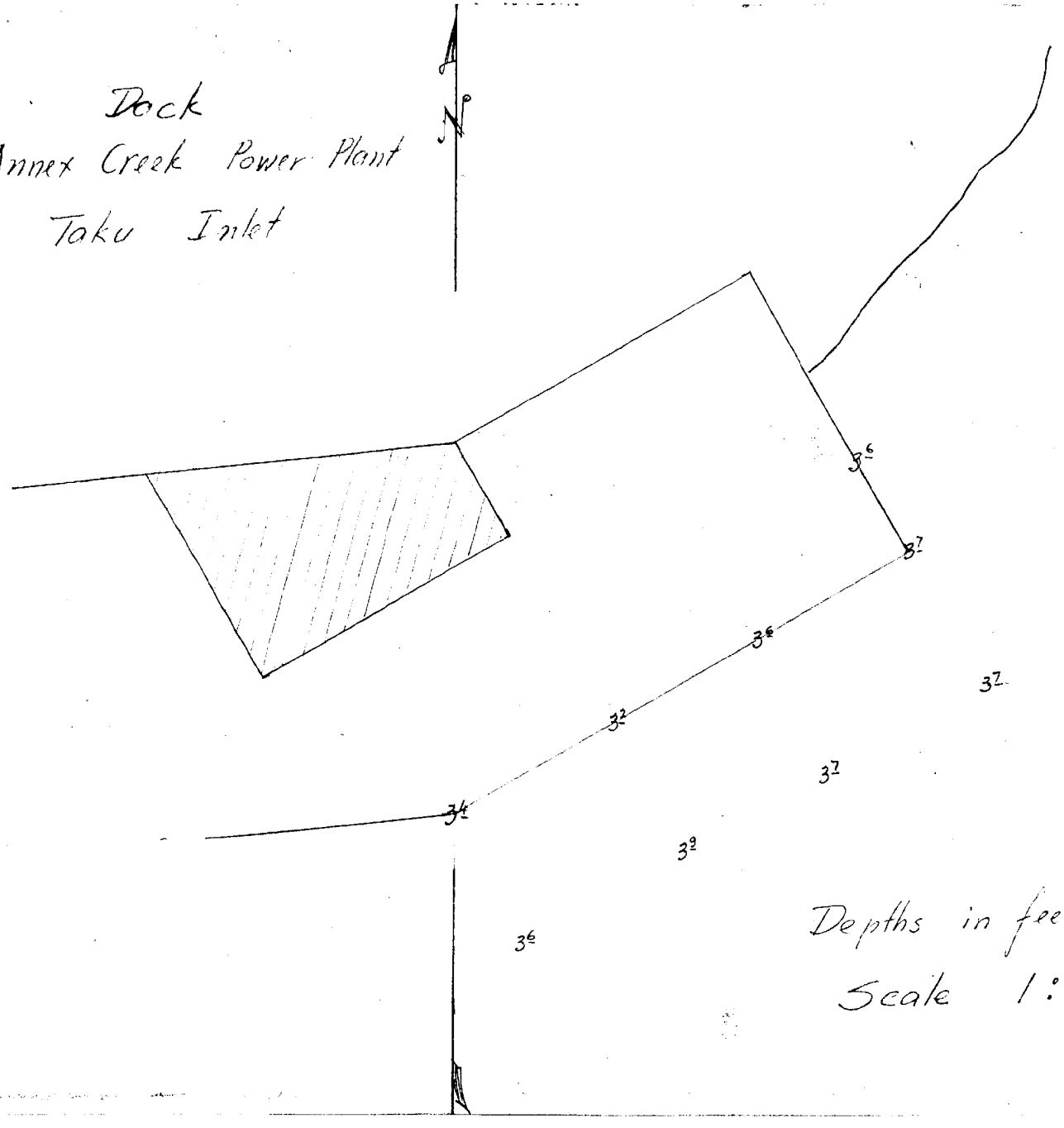
Good. Corrections for fathometer speed seem satisfactory.

Powerhouse wharf.

Soundings in feet along the wharf are shown in a sketch on the boatsheet and on Page 45 of Vol. 8. This shetch was shown on ~~the smooth sheet using the same orientation~~ sketch in this report as ~~in Vol. 8~~. The scale is 1/ ~~500~~ 100. See next page

Edgar E. Smith
Cart. Engr. 8/28/53

Dock
Annex Creek Power Plant
Taku Inlet



Depths in feet @ MLLW
Scale 1:100

STATISTICS

Hydrographic Survey H 8033, Field No. LJ-1252

Date	Vol. No.	Day Ltr.	Stat. Mi.	Pos.	H.L. Snd.
7/3	1	a	2.0	11	0
7/9	1	b	27.3	150	1
7/10	2	c	37.2	207	1
7/10	3	c	6.7	39	1
7/11	3	d	27.1	160	0
7/11	4	d	9.9	62	1
7/12	4	e	20.4	136	0
7/12	5	e	14.3	71	1
7/13	5	f	19.9	109	0
7/13	6	f	17.6	107	1
7/16	6	g	15.8	102	1
7/16	7	g	6.5	47	1
7/19	7	h	8.0	76	2
7/20	7	j	17.6	114	13
7/20	8	j	6.2	54	4
7/25	8	k	9.5	59	3
7/17	9	A	24.7	134	1
7/18	9	B	18.9	106	1
7/18	10	B	24.9	144	3
7/19	10	C	13.0	95	2
7/26	11	D	----	8	8
Totals	11		327.5	1991	45

Lower case day letters belong to Launch 98, color blue.
Upper case day letters belong to LESTER JONES, color red.

Area square statute miles 12.4

TIDAL NOTE

Sheet No. H 8033, Field No. LJ-1252

Data from the portable automatic tide gage at Annex Creek, Latitude 58° 19.12' N, Longitude 134° 05.8' W, was used to reduce all sounding on this sheet.

A reading of 3.5 feet on the staff of this gage corresponds to the plane of Mean Lower Low Water.

H 8033
LJ 1252

List of geographic names
penciled on smooth sheet.

Flat Point

Annex Creek

Sunny Cove

Carlson Creek

Jaw Point

Turner Creek

Davidson Point.

The last name is new. See descriptive report Page 5.
"in common use by the Bureau of Public Roads and the
Forestry Service."

GEOGRAPHIC NAMES

Survey No. H-8033

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	
Southeastern Alaska										1
Taku Inlet										2
Jaw Point										3
Turner Creek									B&N	4
Davidson Point										5
Flat Point										6
Annex Creek									B&N	7
Sunny Cove										8
Carlson Creek										9
										10
					Names underlined in red are approved					11
					10-6-53.			L. Heck		12
										13
										14
										15
										16
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										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8033

Records accompanying survey:

Boat sheets 1; sounding vols. 11; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 5 Env.;

special reports, etc. 1 Smooth Sheet; 1 Descriptive Report; .....

.....

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

Number of positions on sheet		1991
Number of positions checked		10 232
Number of positions revised		0 0
Number of soundings revised (refers to depth only)		4 0
Number of soundings erroneously spaced		0 4
Number of signals erroneously plotted or transferred		0 0
Topographic details	Time	0 0
Junctions	Time	0 0
Verification of soundings from graphic record	Time	2 ~~108~~

Prelim. Verification by: T.A. Dinsmore — 24 Nov. 1953

Verification by J.G. Chambers ..... Total time 108 Date 4-1-54

Reviewed by D.A. Dinsmore ..... Time 30 Date 24 Nov. 1953

Review Addendum — DAD — 6 — 14 Aug. 1956

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8033 FIELD NO. LJ-1252

Alaska, Taku Inlet, Flat Point to Jaw Point

Project No. CS-346

Surveyed - July 1952 Scale 1:10,000

Soundings:

808 Fathometer
Hand lead

Control:

Sextant fixes on shore signals

Chief of Party - R. A. Gilmore
Surveyed by - J. T. Jarman
Protracted by - C. A. J. Pauw
Soundings plotted by - C. A. J. Pauw
Preliminary Verification by - T. A. Dinsmore
Verified and inked by - J. C. Chambers
Reviewed by - T. A. Dinsmore 24 Nov. 1953
Inspected by - R. H. Carstens

1. Shoreline and Signals

The origin of the signals and inked shoreline is given in the Descriptive Report (Processing Office Notes). The penciled shoreline southwest of Flat Point and in the vicinity of Jaw Point is from T-6580 and T-6581 of 1937. In these areas, no contemporary shoreline is available at this time.

2. Sounding Line Crossings

Depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

The survey covers a portion of Taku Inlet. The natural channel leading to Taku River on the north is defined by the 10-fm. curves immediately east of Flat Point.

In the eastern part of the area, shoal flats extend about a mile from shore. Conversely, off Jaw Point on the south, depths of 50 fms. fall as close as 100 meters from the high-water line. The bottom is generally uneven.

4. Adjoining Surveys

The junction with H-8032 (1952) on the north will be considered in the review of that survey. At the limit of the project on the southwest, charted depths from H-6275 (1937) are in harmony with depths of the present survey.

5. Comparison with Prior Surveys

a. H-2055 (1890) 1:40,000

This early reconnaissance survey has been compared with and was superseded by H-6275 of 1937. No further consideration of this early survey is, therefore, deemed necessary in the present review.

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

The present survey falls within the area covered by this prior survey. A comparison of the prior and present depths reveals that changes in bottom have taken place in this area. The deep-water channel defined by the 10-fm. curves between lat. 58°19.3' and lat. 58°20.2' has lost from 100 to 150 meters of its width. In this channel, prior maximum depths of 12-13 fms. are now superseded by maximum depths of 11 fms. The depth curves in the eastern part of the survey have moved offshore from their prior positions in amounts ranging from 75 to 300 meters. Only minor differences are noted between prior and present depths elsewhere in the area.

Examples of differences between prior and present depths are given in the following comparison:

		Depths in Fathoms	
Latitude	Longitude	Prior	Present
58°19.84'	134°03.20'	13	11
19.87'	02.10'	6	5
19.12'	01.22'	7	6
18.09'	05.18	22	20

The general shoaling evidenced in this area is attributed to the deposition of silt from both Taku River and the advance of Taku Glacier immediately northward.

Several inshore rocks and ledge have been retained from the prior survey. With these additions, the present survey is adequate to supersede the prior survey within the common area.

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

A. Hydrography

Charted hydrography originates with the previously discussed survey supplemented by partial application of the present survey through a copy of the boat sheet (Bp. 49449). A few differences of 1 fm. are noted between the charted and smooth-sheet depths. Attention is also directed to the uncharted rocks lying south-southwest of Flat Point.

The rock awash charted in lat. 58°19.05', long. 134° 05.93', is erroneously symbolized. The "rock awash" actually originates with piling remains shown on T-6580 (1937). The present survey also indicates the remains of piling in the above locality. Inshore ledge is the only rock symbolization in the immediate vicinity.

The present survey entirely supersedes the charted information.

B. Aids to Navigation

No aids to navigation are charted in this area. No dangers to navigation are revealed by the survey.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive.

b. The preliminary inspection and verification of the survey indicates that the smooth plotting was accurately done.

c. The 808 Fathometer did not operate consistently at calibrated speed. On portions of several days' work the fathometer speed varied from 1 to 6 percent. The maximum error in depth was 3 fms. in depths of 58 fms. where a speed correction of -4.95% was applied. These discrepancies were detected and corrected by the field party.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

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

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

ADDENDUM TO REVIEW

H-8033 (1952)

Verified by - J. C. Chambers
Reviewed by - T. A. Dinsmore 14 August 1956
Inspected by - R. H. Carstens

Junctions with Contemporary Surveys

The junctional soundings have been transferred from H-8032 (1952) on the north to the present survey. Overlapping depths are in good agreement.

Comparison with Chart 8235 (Latest print date 11/9/53)

There is no change in the charted hydrography since the comparison in the review was made.

Condition of Survey

The soundings and depth curves are now inked. Except for the incomplete shoreline referred to in paragraph 1 of the review, the verification of this survey is now complete.

Approved:

Charles A. Schanck

Charles A. Schanck
Chief, Chart Division

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~ 13 October 1953

Division of Charts: R. H. Carstens

Plane of reference approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 8033

Locality Taku Inlet, Alaska

Chief of Party: R. A. Gilmore in 1952
Plane of reference is mean lower low water, reading
3.5 ft. on tide staff at Annex Creek
30.3 ft. below B. M. 1 (1937)

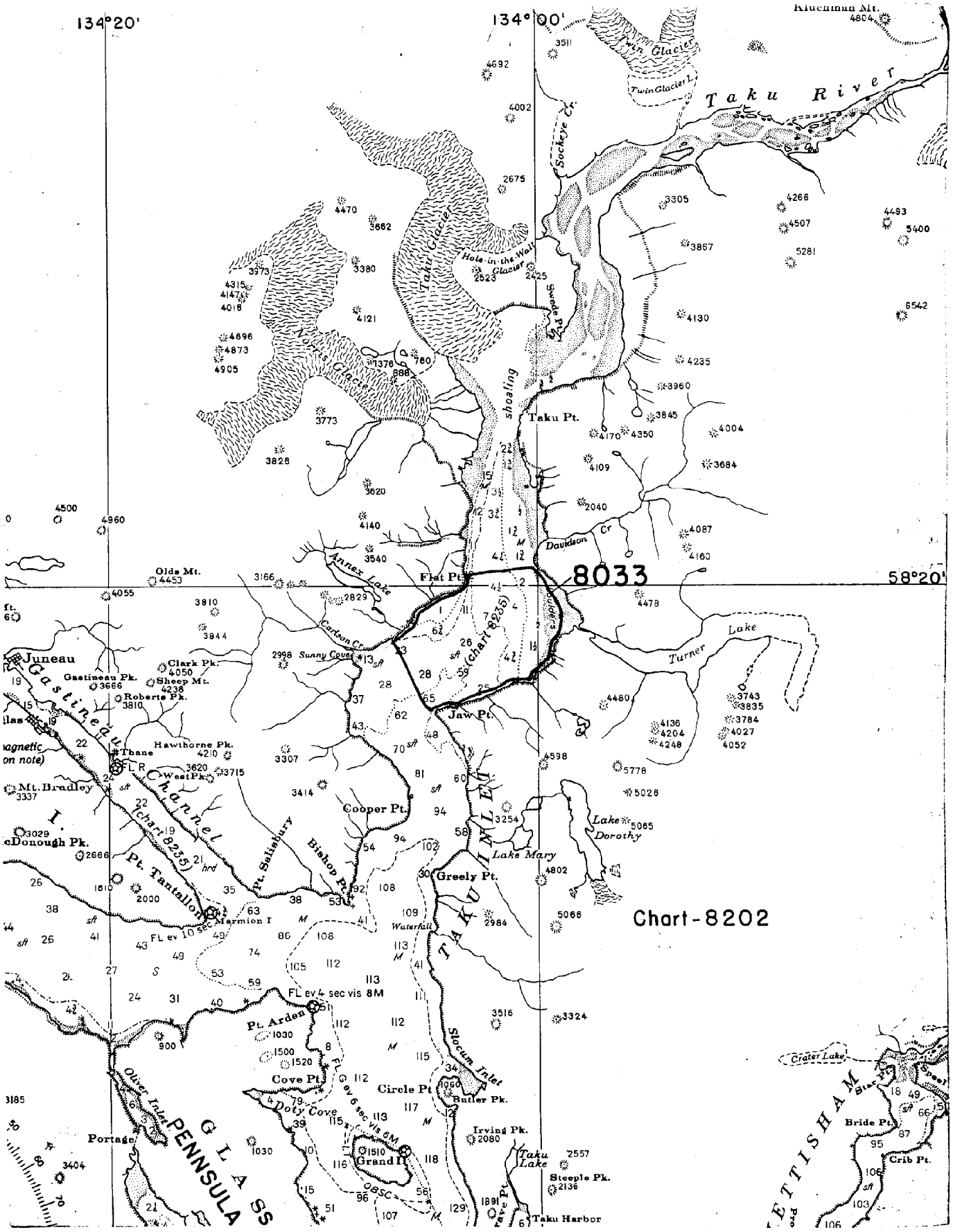
Height of mean high water above plane of reference is 15.2 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section of Tides

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 877933


134°20'
134°00'
58°20'
8033
Chart-8202
Taku River
Twin Glacier
Twin Glacier L.
Sockeye Cr.
Taku Glacier
Hole-in-the-Wall Glacier
Norris Glacier
Sweet Pt.
shoaling
Taku Pt.
Davidson Cr
Flat Pt.
Annex Lake
Carlson Cr.
Sunny Cove
(Chart 8235)
Jaw Pt.
Turner Lake
Olds Mt.
Juneau
Gastineau Pk.
Sheep Mt.
Roberts Pk.
Clark Pk.
Hawthorne Pk.
Thane
West Pk.
Mt. Bradley
Gastineau Channel
(Chart 8235)
I.
Pt. Salisbury
Bishop Pt.
Cooper Pt.
Greely Pt.
Lake Mary
Lake Dorothy
TAKU INLET
Pt. Tantallon
Marmion I
Waterfall
FL ev 10 sec
FL ev 4 sec vis 8M
Pt. Arden
Cove Pt.
Doty Cove
Circle Pt.
Butler Pk.
Irving Pk.
Taku Lake
Steeple Pk.
Grand Pt.
Taku Harbor
Slocum Inlet
Oliver Inlet
Portage
GLASS PENNSULA
Crater Lake
Star Pt.
Bride Pt.
Crib Pt.
ETTISHAM

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8033

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4-18-57	8235	R.K. de Lauder	~~Before~~ After Verification and Review
"	8202	" RKD	~~Before~~ After Verification and Review Thru Ch 8235
			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
			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.