

7961

Diag. Cht. No. 8202-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. LJ-05152 Office No. H-7961

LOCALITY

State S.E. Alaska

General locality Vicinity of Juneau

Locality Gastineau Channel

19 52

CHIEF OF PARTY

Ross A. Gilmore

LIBRARY & ARCHIVES

DATE FEB 23 1953

B-1870-1 (1)

7961

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.

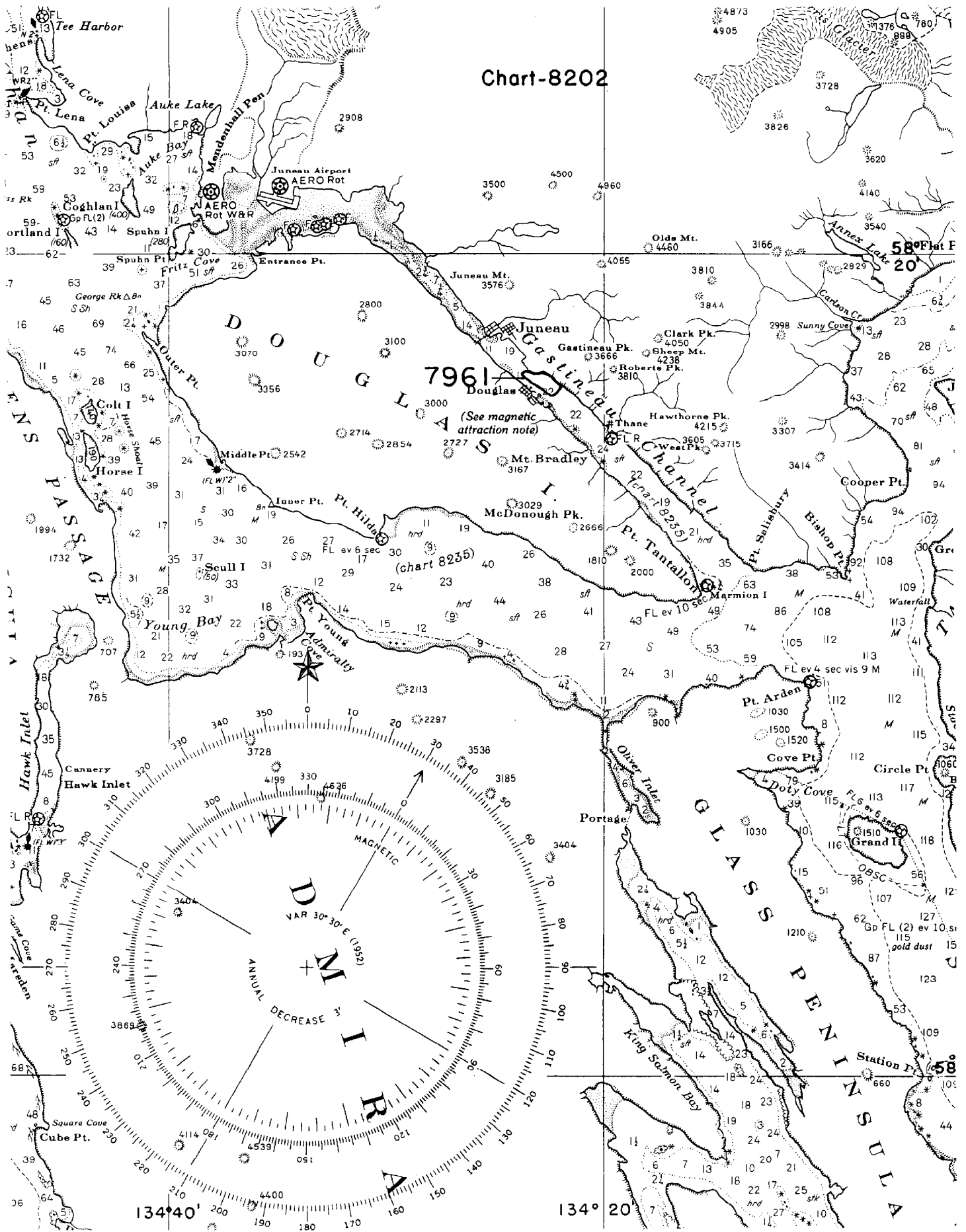
REGISTER No. H-7961 (1952)

Field No. LJ 05152

State Southeast Alaska ✓
General locality ~~Juneau~~ Gastineau Channel ✓
Locality ~~Gastineau Channel~~ Opposite ^{Douglas} ~~Juneau~~ Isle. ✓
Scale 1/5 000 ✓ Date of survey 28 July-30 July 1952 ✓
Instructions dated 20 May 1952 (Special Survey, Gastineau Channel)
Vessel Ship LESTER JONES (Launch 98)
Chief of party Ross A. Gilmore ✓
Surveyed by Ross A. Gilmore and Junius T. Jarman. ✓
Soundings taken by ~~YAKONIKY~~ graphic recorder, hand lead, ~~WYE~~
Fathograms scaled by H.G. Burney & L.W. Akerlund
Fathograms checked by H.G. Burney, L.W. Akerlund & E. Krause
Protracted by L.W. Eason
Soundings penciled by L.W. Eason
Soundings in fathoms ~~XPMX~~ at ~~MLLW~~ MLLW *and are based on a* ✓
velocity of sound of 800 fms./sec.
REMARKS: _____

782

Chart-8202



DESCRIPTIVE REPORT (1952)
TO ACCOMPANY HYDROGRAPHIC SURVEY H-7961, FIELD NO. LJ-05152
GASTINEAU CHANNEL OPPOSITE JUNEAU ISLE
SPECIAL SURVEY
SHIP LESTER JONES
Ross A. Gilmore, Chief of Party
Survey by Ross A. Gilmore
Scale 1:5,000

A. PROJECT

This survey was executed in accordance with Director's Instructions No. 22/MEK S-2-LJ dated 20 May 1952.

B. SURVEY LIMITS AND DATES

This is a special survey in Gastineau Channel opposite Juneau Isle in the vicinity of the new rock dump south of Juneau, Alaska. The ship SURVEYOR made a revision survey, H-7638, in the vicinity of the old rock dump just south of Juneau in 1950. This survey joins the latter on the north and extends far enough south to obtain a satisfactory agreement with Hydrographic Survey No. H-6177, (1936).

Field work began on 28 July 1952 and ended on 1 August 1952. Recovery of control, signal building, and graphic control operations were in progress from July 28th through July 30th. Hydrography was in progress on July 31st and on August 1st.

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 the launch was approximately 25 meters; sounding speed was maintained at approximately 5 knots.

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

D. TIDE AND CURRENT STATIONS

The primary tide station at Juneau, Alaska, was used for the reduction of the soundings. A copy of the applicable hourly heights as furnished by the Washington Office is attached to this report.

E. SMOOTH SHEET

Data for this sheet will be plotted 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 existing triangulation, no new triangulation was necessary. The latter control was supplemented by hydrographic stations located by graphic control. The boat sheet served as the graphic control sheet. All control stations transferred to smooth sheet

G. SHORELINE AND TOPOGRAPHY

The boat sheet which was prepared by the Washington Office served as a graphic control sheet. The shoreline shown in pencil is from existing topography. In areas where changes are known to have occurred, the shoreline was obtained from recent photographs.

Some planetable topography was obtained during the course of graphic control operations. All such topography is shown on the graphic control sheet with black ink.

Included with the data furnished for this survey were two single lens, 1:5,000 scale photographs. Since a large number of the objects located by graphic control were buildings or natural objects, those most easily recognized have been identified directly on the photographs. Most of the west shoreline of Gastineau Channel which appears on the photographs was photo inspected. It is believed that enough information was obtained so that a planimetric shoreline map can be compiled for the vicinity of this survey, if it is desired. Other than the foregoing information, no field inspection report is being submitted.

H. SOUNDINGS

Except for 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.

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. Compass readings appearing in the record are exactly 180 degrees in error. A discussion of the compass used appears under this same heading in the Descriptive Report, Sheet No. (Field) LJ-1152. *Not registered as of May 1953*

J. ADEQUACY OF SURVEY

This survey is adequate and should supersede prior surveys. The junction with H-7638 on the north is satisfactory. A satisfactory agreement with soundings on H-6177 is obtained at points sufficiently removed from the effects of water erosion on the underwater portions of the new rock dump.

K. CROSSLINES

A bare minimum of crosslines were obtained. The crossings are believed to be satisfactory.

L. COMPARISON WITH PRIOR SURVEYS

The purpose of this survey was to re-define the bottom in the vicinity of the new Juneau Rock Dump where wave action by erosion has been distributing silt from the dump to adjacent bottom areas. On the south and around the west perimeter of this survey, the agreement with H-6177(1436) is good. In the immediate vicinity of the rock dump, the depth curves have been pushed out from the east shoreline, and considerable shoaling is evident.

M. COMPARISON WITH CHART

The area under discussion is covered by chart No. 8235. The approximate high water line around the new rock dump is shown, but the underwater shoaling is not depicted. The chart should be corrected to agree with the present survey.

N. DANGERS AND SHOALS

There are no new dangers and shoals on this sheet other than the general shoaling in the immediate vicinity of the new rock dump. Two uncharted least depths of 9.6⁵ fathoms and 19 fathoms were uncovered by the survey, but neither is a menace to navigation.

$\phi 58^{\circ}16'47''$
 $\lambda 134^{\circ}22'33''$

20 fms smooth sheet
Disregard; not a
critical depth

O. COAST PILOT INFORMATION

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

P. AIDS TO NAVIGATION

No aids to navigation exist in the immediate vicinity of the hydrography. At the north edge of the control sheet one fixed light and two red num buoys were located by graphic methods as a check on the present charted positions. Positions obtained for the two red num buoys will be approximate since the cuts did not intersect in a point. ✓

Q. LANDMARKS FOR CHARTS

It is recommended that the Cupola shown on Chart No. 8235 at the south and east edge of the town of Douglas be removed from the chart. The survey party could not spot it, and it is believed to have been lost. The Flagpole on Juneau Isle is recommended for a landmark. See attached form 567 for its location. The radio tower on the spoil dump (Signal TOW) continues as a landmark and is listed on Form 567. ✓

R. GEOGRAPHIC NAMES


No new geographic names were obtained.

S. SILTED AREAS


No special effort was made to pick silted areas by a study of the bathograms. Most of the bottom area covered by this sheet has considerable silt over it.

TABULATION OF APPLICABLE DATA

Coast Pilot Report, LESTER JONES, 1952 Season
Season's Report, LESTER JONES, 1952


J. T. Jayman,
Commander, C&GS

Approved and forwarded:


Ross A. Gilmore, Comdr., C&GS
Commanding USC&GS LESTER JONES

LJ 05152

Gastineau Channel.

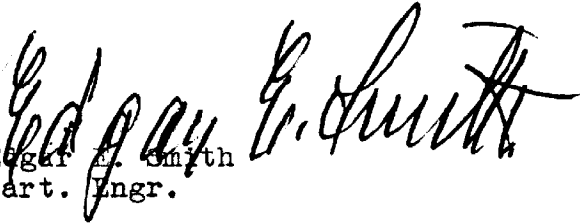
Processing Office Notes.

Smooth sheet.

The projection was made by hand on Whatman paper. Topographic signals were transferred from the boatsheet which was also used on the planetable as the graphic control sheet. The inked shoreline is from the same source.

Fathometer.

The 808 fathometer was adjusted for a sound ^{velocity} ~~speed~~ of 800 fathoms per second. No ~~speed~~ ^{velocity} corrections have been applied.


Edgar A. Smith
Cart. Ingr.

2/11/53

EXPLANATORY NOTE

Special Survey, Gastineau Channel, Juneau, Alaska,
Ship LESTER JONES, 1952

The field inspection on these two photographs (127VV and 155VV) was done from the launch during hydrography on Field Survey No. LJ-05152 to supplement topography executed on the boat sheet. Topographic stations shown were identified from the launch and were located by graphic control methods on the boat sheet prior to any other work. (see copy of DESCRIPTIVE REPORT, LJ-05152 attached). Form 524, Description of Recoverable Topographic Station, have been submitted for the most permanent stations located.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE DELETED~~

STRIKE OUT ONE

Seattle, Washington

26 November

19 52

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

The positions given have been checked after listing by

Bruce E. Greene

Ross A. Gilmore,

Chief of Party.

STATE S.F. Alaska

CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE		LONGITUDE		DATUM	METHOD OF LOCATION SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
			° ' "	D.M. METERS	° ' "	D.P. METERS							
Flagpole	White Flagpole, Juneau Ice	POLE	58 16	1056	134 22	931	NA1927	Plane-table	7/30/52	X			8235
FR Lt.	R.Tr. (KINY) Steel Tower, Radio Station KINY	TOW	58 17	674	134 23	624	NA1927	Plane-table	7/30/52	X			8235
	<u>NONFLOATING AIDS FOR CHARTS</u>												
FL evobsc	Lawson Creek Bar Light	-- --	58 17	544	134 24	318	NA1927	Plane-table	7/30/52	X			8235

*Note: Orig d 2
Submitted to Wash
Off. Reg. 12/4/54*

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

58°20'

141°25'

141°20'

Juneau Mt. 3576

Gold Creek

JUNEAU

Cable area

DOUGLAS

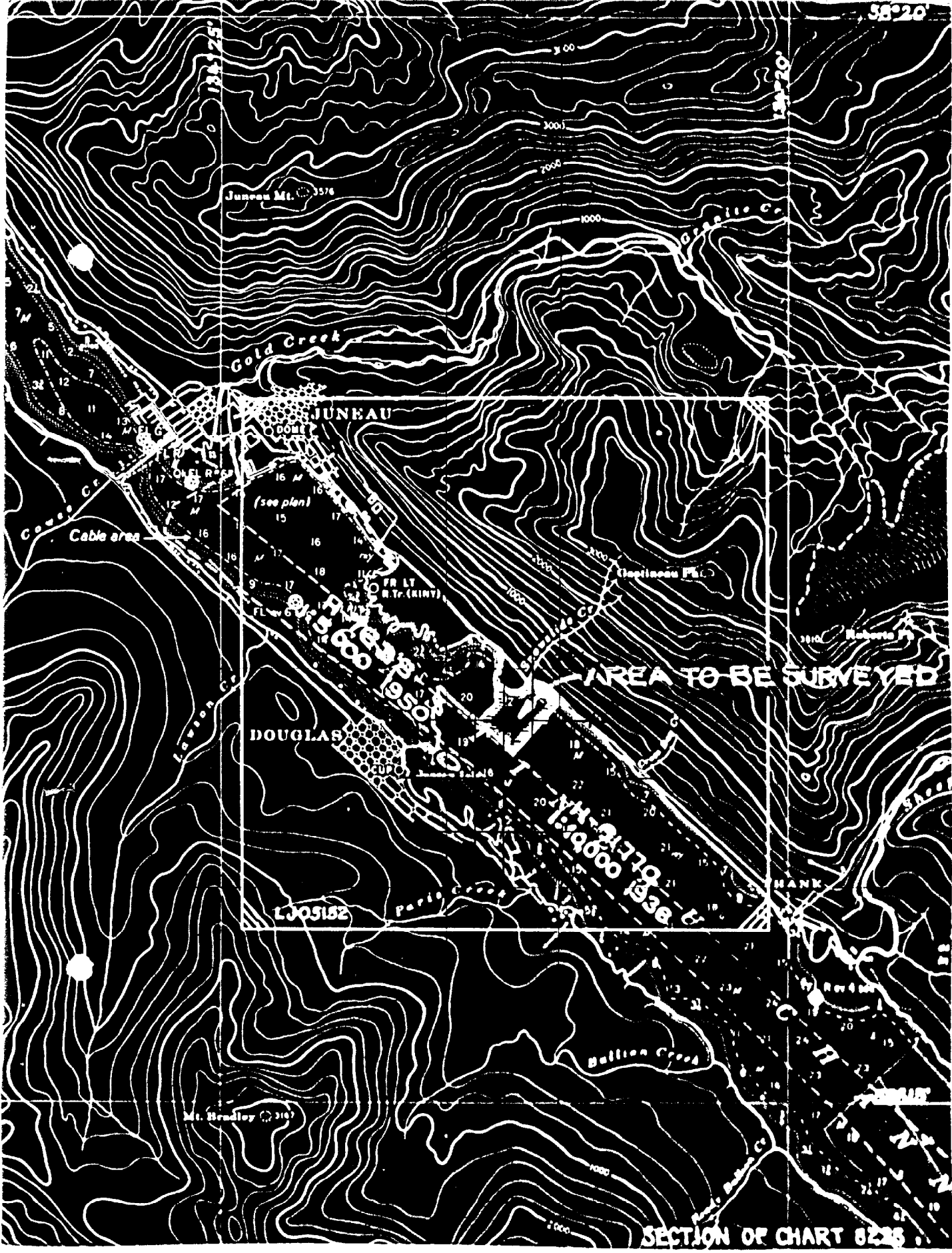
AREA TO BE SURVEYED

LJ05182

Mt. Bradley 3107

Bullion Creek

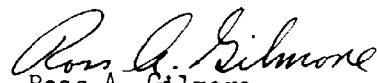
SECTION OF CHART 8235



APPROVAL SHEET

TO ACCOMPANY DESCRIPTIVE REPORT, HYDROGRAPHIC SHEET FIELD
NO. LJ-05152

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,
Commander, C&GS
Comdg., Ship LESTER JONES

HYDROGRAPHIC SIGNALS USED ON
SURVEY SHEET FIELD NO.
LJ-05152

TRIANGULATION STATIONS

BAY, 1921
FOUND, 1921
LAND, 1921
SNOW, 1921

TOPOGRAPHIC STATIONS

BAT	Hydro Sheet	LJ-05152
CAN	"	"
CHIM	"	"
DOT	"	"
DUB	"	"
GAB	"	"
KID	"	"
PIT	"	"
POP	"	"
RED	"	"
REP	"	"
SIX	"	"

STATISTICS

Sheet No.(Field) LJ-05152

Date	Day Ltr.	Vol. No.	Stat. Mi.	Pos.	H.L. Snd.
7/31	a	1	13.6	159	0
8/1	b	1	4.0	59	6
Totals		1	17.6	218	6

Area, square statute miles - - - - - 0.4

GEOGRAPHIC NAME LIST

SHEET NO. (FIELD) LJ-05152

DOUGLAS
JUNEAU ISLE
SNOWSLIDE CREEK

LJ 05152

Gastineau Channel, SE Alaska.

TIDAL NOTE

The standard tide station at Juneau, Alaska, Latitude $58^{\circ} 17.8'$, Longitude $134^{\circ} 24.8'$, was used to reduce all soundings on this sheet.

The plane of MLLW on the staff of this gage is 5.00 feet.

Hourly heights from the Juneau gage applicable to the periods when hydrography was in progress are tabulated and attached to this report. These hourly heights have been reduced to the plane of MLLW.

INDEX CORRECTIONS - HYDROGRAPHIC SURVEY FIELD NO. LJ-05152

<u>Day</u>	<u>Date</u>	<u>Pos.</u>	
a	7/31	1 - 11	0.0
		12 - 30	-0.1
		31 - 44	-0.2
		45 - 48	-0.1
		49 - 76	-0.2
		76 - 90	-0.1
		91 - 102	-0.2
		103 - 112	-0.1
		112 - 133	-0.2
		134 - 159	0.0
b	8/1	1 - 14	0.0
		15 - 38	-0.1
		39 - 59	-0.2

Comp BEG
✓ LWA

GEOGRAPHIC NAMES

Survey No. H-7961

Name on Survey												
	A	B	C	D	E	F	G	H	K			
<u>Southeastern Alaska</u>												1
<u>Juneau</u>												2
												3
<u>Gastineau Channel</u>												4
<u>Douglas</u>												5
<u>Juneau Isle</u>												6
<u>Snowslide Creek</u>												7
												8
												9
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												13
												14
												15
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												25
												26
												27

} for title

Names underlined in red are approved.

3-16-53
L. HECK

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7961..

Records accompanying survey:

Boat sheets ..1..; sounding vols. ...1..; wire drag vols.;
 bomb vols.; graphic recorder rolls 1 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	.....	218
Number of positions checked	.....	10
Number of positions revised	.....	0
Number of soundings revised (refers to depth only)	.....	4
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	.....0
Junctions	Time	.....4
Verification of soundings from graphic record	Time	.....2

Verification by... *J. A. Dinsmore* Total time 20 hrs. Date 1 May 1953

Reviewed by... *J. A. Dinsmore* Time 12 hrs. Date 5 May 1953

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7961

FIELD NO. LJ-05152

Southeast Alaska, Gastineau Channel, Opposite Douglas

Project - Special Instructions
Dated 20 May 1952

Surveyed in July 1952

Scale 1:5,000

Soundings:

808 Fathometer
Hand lead

Control:

Sextant fixes on shore signals

Chief of Party - R. A. Gilmore
Surveyed by - R. A. Gilmore and J. T. Jarman
Protracted by - L. W. Eason
Soundings plotted by - L. W. Eason
Verified and inked by - T. A. Dinsmore
Reviewed by - T. A. Dinsmore, 5 May 1953
Inspected by - R. H. Carstens

1. Shoreline and Signals

The inked sections of shoreline and topographic detail originate with the boat sheet of the present survey which also served as a planetable sheet. Completion of the shoreline is deferred until a contemporary air photo compilation is available in this area.

The signals also originate with the graphic control work done on the boat sheet of the present survey.

2. Sounding Line Crossings

Depths at sounding line crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

The bottom drops rapidly from the low-water line to depths of 10 fms. along the northeastern bank of the channel. Except for the 9.5-fm. shoal in lat. $58^{\circ} 16' 47''$, long. $134^{\circ} 22' 33''$, the bottom through the channel proper is fairly regular.

4. Adjoining Surveys

Butt junctions were made with H-6177a (1936) on the southeast and southwest and with H-7638 (1950) on the northwest because of minor differences of 1-2 fathoms in depths in the overlapping areas of the prior and present surveys. The differences in depths are due to bottom changes that have occurred in the area. The overlapping portion of H-7638 (1950) is superseded by the present survey. Differences in depths between H-6177a (1936) and the present survey are discussed in paragraph 5b.

5. Comparison with Prior Surveys

- a. H-2058 (1890) 1:20,000 H-3376 (1912) 1:10,000

These early surveys have been compared with and were superseded by H-6177a (1936). Further consideration of these early surveys is, therefore, deemed unnecessary in the present review.

- b. H-6177a (1936) 1:10,000

The present survey falls within the area covered by this prior survey. A comparison of the prior and present surveys reveals radical bottom changes south and westward from the entrance to Snowslide Creek. In this vicinity, an expanding mine dump has moved the low-water line as much as 250 meters offshore from its prior position. In lat. 50° 16' 52", long. 134° 22' 30", prior depths of 22 fms. are now superseded by an area uncovering at M.L.L.W. and in lat. 58° 16' 47", long. 134° 22' 33", depths of 21-22 fms. previously existed, where the present survey reveals a 9.5 fm. shoal. These areas of major shoaling have resulted from erosion of the mine rock dump together with distribution of silt from the dump to adjacent bottom areas. Through the channel proper, present depths are generally 1-2 fms. less than the prior depths.

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

- c. H-4201 (1921) W.D. 1:20,000

Because of the expansion of the mine rock dump and the offshore shoaling, a detailed comparison between the prior wire-drag survey and the present survey is considered of no value. The entire shoal extending off the mine rock dump together with some high ground was previously cleared by effective drag depths of 72-83 feet. The prior wire-drag survey is now considered to have little charting value within the limits of the present survey.

6. Comparison with Chart 8235 (Latest print date 8/18/52)

A. Hydrography

Charted hydrography originates with the previously discussed surveys which need no further consideration. The present survey supersedes the charted information.

B. Aids to Navigation

No aids to navigation are charted within the limits of the present survey. However, the buoys located in lat. $58^{\circ} 17' 10''$, long. $134^{\circ} 23' 48''$, and lat. $58^{\circ} 17' 03''$, long. $134^{\circ} 23' 34''$, on the present survey are charted 110 meters northeast and 100 meters northwest, respectively, from the survey positions. The survey positions more adequately mark the offlying shoals shown in this area on H-7838 (1950).

7. Condition of Survey

a. The sounding records are complete; the compass readings appearing in the records are exactly 180° in error as noted in paragraph I, of the Descriptive Report. The Descriptive Report covers all matters of importance.


b. The smooth plotting was accurately done.

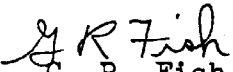
8. Compliance with Project Instructions


The survey adequately complies with the Project Instructions.

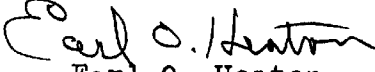
9. Additional Field Work

The survey is considered to be basic for the area covered and no additional field work is necessary.


H. R. Edmonston
Chief, Nautical Chart Branch


G. R. Fish
Chief, Section of Hydrography

Examined and approved:

H. Arnold Karo
Chief, Division of Charts


Earl O. Heaton
Chief, Division of Coastal Surveys

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

19 March 1953

Division of Charts: R. H. Carstens

Plane of reference approved in 1
volume of sounding records for

HYDROGRAPHIC SHEET 7961

Locality Gastineau Channel, Alaska

Chief of Party: R. A. Gilmore in 1952

Plane of reference is mean lower low water, reading

5.0 ft. on tide staff at Juneau

28.4 ft. below B. M. 2 (1911)

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

Condition of records satisfactory except as noted below:

E. C. McKay
Section of Tides

Chief, Division of Tides and Currents.

