

8623

Diag. Cht. No. 8102-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. LJ-10-3-61 Office No. H-8623

LOCALITY

State S. E. Alaska

General locality Clarence Strait

Locality West Side of Gravina Island

19 61

CHIEF OF PARTY

L. G. Taylor

LIBRARY & ARCHIVES

DATE March 21, 1963

USCOMM-DC 5087

8623

2266

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-8623

Field No. LJ-10-3-61

S. E.

State Alaska

General locality Clarence Strait

Locality West side of
Gravina Island

Scale 1 : 10,000

Date of survey September 1-13
1961

Instructions dated 2 Oct. 1956, 27 Oct. 1958, 15 Dec. 1960

Vessel USC&GS Ship LESTER JONES

Chief of party Lorne G. Taylor, CDR, C&GS

Surveyed by Bruce I. Williams,

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

Fathograms scaled by ship's personnel

Fathograms checked by ship's personnel

Protracted by V. F. Flor

Soundings penciled by V. F. Flor

Soundings in fathoms and tenths ~~feet~~ at ~~M-LW~~ MLLW

REMARKS:

GM

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8623

USC&GSS LESTER JONES

(LJ 10-3-61)

1961

L. G. TAYLOR, CDR, C&GS
COMMANDING OFFICER

SCALE 1:10,000

A. PROJECT - This survey was done in accordance with instructions ref. 22/MEK, s-2-LJ, dtd 27 October 1958 and Supplemental Instructions ref. 211/MMY, s-2-LJ, dtd 15 December 1960.

B. AREA SURVEYED - The area of this survey lies on the west side of Gravina Island in Clarence Strait. It is about eight nautical miles long and about one-half nautical mile wide and extends from just south of Nelson Cove on Gravina Island north. The coast of Gravina Island in this area is rugged and consists of bedrock. The area is bounded on the south by Lat. 55 11' 00" N, on the north by Lat. 55 18' 00" N, on the east by Gravina Island, and on the west by a line which runs approximately parallel to the beach and from 1/2 to 3/4 mile off shore.

H-8715 (1962-63) on the north
(This survey junctions with prior survey H-8442, 1:20,000, 1958, on the west, and with survey H-8622, 1:10,000, 1961, on the south. ~~Contemporary~~ ^{The prior} survey of the area is H-4198. Hydrography was begun on 1 September 1961 and completed 13 September 1961. *(1921)*)

C. SOUNDING VESSEL - All sounding with the exception of bottom samples was done with Launch No. 88. The color used to identify the work is blue.

D. SOUNDING EQUIPMENT - All soundings were obtained with 808 Fathometer No. 125-S. Phase comparisons were taken to determine phase corrections and bar checks were taken daily to determine initial corrections, Temperature and Salinity observations were made for use in determining velocity corrections below two fathoms.

E. SMOOTH SHEET - The smooth sheet projection was constructed in the Washington Office.

F. CONTROL - All horizontal control except triangulation was located by photogrammetric methods. Photogrammetric compilations used for transfer of signals are as follows: T-10619, T-10611, and T-10627.

G. SHORELINE - Shoreline was transferred from ^{incomplete} manuscripts listed in F and was verified. In some areas the low water line was not defined by soundings because of the steep beach and foul areas.

H. CROSSLINES - Amount of crosslines is between eight & ten percent and the crossings are in good agreement .

I. JUNCTIONS - Junctions are in good agreement and no adjustment is required.

J. COMPARISON WITH PRIOR SURVEYS - Item No. 7 on the preliminary review from H-4198(1921) was investigated and disproved. There are no piling in the area. Evidently in the period of 30 years between surveys the piling have disintegrated. Depths were in generally good agreement with prior surveys. *See Part. 6 Review*

K. COMPARISON WITH THE CHART - Chart ⁸¹⁰²~~8012~~ is the ~~only~~ chart of the area and is of such small scale that little comparison can be made. Chart 8089 also covers portion of survey area.

L. ADEQUACY OF SURVEY - The survey is complete and adequate for charting.

M. AIDS TO NAVIGATION - There were no aids to navigation in the area of the survey.

N. STATISTICS - Total number of positions was 850, nautical miles of sounding lines were 94.5, and the area in square nautical miles was 3.5. There were 13 bottom samples obtained.

Q. REFERENCES TO REPORTS -

1. Fathometer correction report forwarded 10 January 1962.
2. Tide Merigrams, Nahenta Bay 21 August - 13 September forwarded to 3-October 1961.
3. Form 275 - Soundings - 4 ea. forwarded to Seattle Processing Office.
4. Fathograms - 7 ea. forwarded to Seattle Processing Office.
5. Form 524 - Triangulation Recovery Note 6 March 1962.

TIDAL NOTE

PROJECT OPR-381

A portable automatic tide gage was established on the west side of Nehenta Bay, Gravina Island in Clarence Strait, Lat. 55 10'.0 N; Long. 131 47'.8 W. The gage was connected to three existing tidal bench marks and to one newly established tidal bench mark. The plane of reference (MLIW) corresponding to 6.5 feet on the tide staff, was furnished by the Washington Office. All tide reducers were computed using this value without time or height corrections. 120th Meridian time was used.

ABSTRACT OF CORRECTIONS TO ECHO SOUNDERS

The following echo sounder corrections were applied to all soundings on sheets (LJ-10-3-61) of Project OPR-381: H-8623 (1961)

To (fms.)	Correction (fms.)
2.3	0
8.8	+0.1
21.0	+0.2
35.0	+0.3
51.0	+0.4
70.0	+0.5
93.0	+0.6
109.0	+0.7
134.0	+0.8
162.0	+0.9

PHASE CORRECTIONS

	"A" Scale	"B" Scale	"C" Scale	"D" Scale
(fms.)	0.0	-0.7	-1.1	-1.1

LIST OF STATIONS ON H-8623 (LJ-10-3-61)

<u>NAME</u>	<u>ORIGIN</u>	
AGO	T-10611	}
ASK	T-10619	
BIB	T-10619	
BOX	T-10611	
CAB	T-10627	
CAT	T-10611	
COO	T-10619	
DAY	T-10627	
DIF	T-10611	
DOG	T-10627	
DOT	T-10619	
EAR	T-10619	
ELF	T-10627	
EVA	T-10611	
FEW	T-10619	
FIG	T-10627	
FIX	T-10611	
FOX	T-10627	
GAD	T-10611	
GUY	T-10619	
HAT	T-10619	
HEX	T-10611	
HOE	T-10619	
HOW	T-10619	
ION	T-10619	
JAY	T-10627	
JOY	T-10619	
KEY	T-10619	
LEO	T-10619	
LIZ	T-10627	
MAX	T-10619	
MEY	△ MEYER, 1921	
NIL	T-10619	
ODD	T-10627	
OLD	T-10619	
OUT	T-10611	
PLY	T-10611	
PUG	△ PUG, 1921	
RAM	T-10611	
RIG	T-10611	
SAD	T-10611	
SIR	T-10611	
TAX	T-10611	
VIM		

Photo-hydro

Photo-hydro

Photo-hydro

Vol. 1 Page 42-43 Hydrographic Location

Survey H-862⁽¹⁹⁶¹⁾ and accompanying records have been
examined by me and are approved. No additional
field work is recommended.

M. E. Natto
M. E. Natto, LCDR, C&GS
Comdg. Ship LESTER JONES

For L. G. Taylor, CDR, C&GS
Chief of Party

PROCESSING OFFICE NOTES H-8623

SMOOTH SHEET

The projection was machine ruled and checked in the Washington Office. The shoreline and control were applied and checked by personnel of the Seattle Hydrographic Processing Unit.

COMPARISON WITH CHART

This survey has been compared with Chart 8102, 6th Ed., Revised 12/18/61. Because of the ~~small~~ scale of the chart there are only nine soundings and two rocks awash charted in the area of the survey. The charted 64 fathom sounding at Latitude 55° 12' 50", Longitude 132° 58' 25" appears to be very close to the 40 fathom sounding shown on the smooth sheet at Latitude 55° 12' 52", Longitude 132° 50' 25" which probably should be charted instead of the 64.

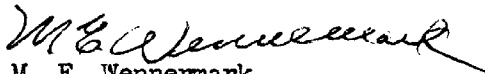
GENERAL

Other items covered in the field report are sufficiently covered to apply to the smooth sheet as well as the boat sheet.

Respectfully submitted


William M. Martin
Supervisory Cartographer

Approved and forwarded


M. E. Wennermark
Captain, C&GS
Seattle District Officer

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 20, 1963

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 8623

Locality Clarence Strait, Alaska

Chief of Party: L. G. Taylor 1961

Plane of reference is Mean lower low water, reading
6.5 ft. on tide staff at Nehent^a Bay, Gravina Island, Alaska
22.7 ft. below B. M. 1 (1958)

Height of mean high water above plane of reference is 13.8 feet.

Condition of records satisfactory except as noted below:


Chief, Tides and Currents Branch

GEOGRAPHIC NAMES
Survey No. H-8623

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
CLARENCE STRAIT ✓												1
GRAVINA ISLAND ✓												2
NELSON COVE		✓	✓									3
												4
												5
												6
												7
												8
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												27

✓ check by DEW as per Dr. Wright 6/14/65

George M. Ball
Geographic Names
15 April 1963

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8623...

Records accompanying survey: Smooth sheets .4...;
 boat sheets .1...; sounding vols. .4...; wire drag vols.;
 Descriptive Reports ..1...; graphic recorder envelopes ..1...;
 special reports, etc. 3-Bluelines & Blanklines each-T-10611, ..
 T-10619 & T-10627.

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

Number of positions on sheet	850
Number of positions checked	50
Number of positions revised	0
Number of soundings revised (refers to depth only)	0
Number of soundings erroneously spaced	13
Number of signals erroneously plotted or transferred	0
Topographic details	Time 25
Junctions	Time 28
Verification of soundings from graphic record	Time 4 1/2
Special adjustments	Time 0

Verification by *Frederick H. Scarsell* Total time 190 Date *Aug. 21, 1964*

Reviewed by *D.E. Westbrook* Time 35 hrs^(est) Date *6-14-65*

Car Imp D.J. Ronesburg 6-11-76 27 hrs.
- D.R. Engle 4-29-77 8 hrs

H-8623

Information for Future Presurvey Reviews

This area appears to be quite stable and little natural change can be expected on any future survey.

The present survey adequately covers the area and no further comment is considered necessary.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
551	1320	1	1	50 years
551	1315	1	1	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8623

FIELD NO. LJ-10-3-61

Southeast Alaska, Clarence Strait, West Side of Gravina Island

SURVEYED: September 1-13, 1961

SCALE: 1:10,000

PROJECT NO.: OPR-381

SOUNDINGS: 808 Depth Recorder

CONTROL: Sextant Fixes on
Shore Signals

Chief of Party	L. G. Taylor
Surveyed by	B. I. Williams
Protracted by	V. F. Flor
Soundings Plotted by	V. F. Flor
Verified and Inked by	F. R. Scarcella
Reviewed by	D. E. Westbrook
	Date: June 14, 1965
Cursory inspection made--survey	D. J. Romesburg
processing considered complete	June 11, 1976

1. Description of the Area

This survey, in Clarence Strait, covers a strip about 0.5 to 0.7 mile wide off the west shore of Gravina Island, from about 1 mile north of Nehenta Bay to approximate latitude $55^{\circ}18.35'$.

An almost continuous rocky ledge fringes the shoreline broken only occasionally by small gravel beaches.

Numerous detached reefs, rocks, and boulders were located by the present survey, most of which fall close inshore in the southern portion of the survey area.

The bottom drops off rapidly from the shore to depths of almost 100 fathoms in the short distance of 0.5 mile.

The bottom composition is primarily sand, pebbles, and broken shells.

2. Control and Shoreline

The control is adequately described in the Descriptive Report.

The shoreline originates with advance shoreline manuscript T-10611 and incomplete shoreline manuscripts T-10619 and T-10627, all compiled from 1956 photographs. T-10611 was classified "Advance" by the Washington Office in 1964. The shoreline has been transferred to the smooth sheet in ink from incomplete manuscripts T-10619 and 10627, contrary to normal practice, because no field edit is planned for these two manuscripts.

The bare rock shown on T-10619 in latitude $55^{\circ}12.70'$, longitude $131^{\circ}49.89'$ was changed by the hydrographer to a rock awash which bares 11 feet at MLLW.

Other minor changes were made in the ledge symbol, and one reef, not shown on T-10619, was added by the hydrographer in latitude $55^{\circ}12.32'$, longitude $131^{\circ}49.75'$.

3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated except close inshore where the steep, dangerous, and sometimes foul character of the bottom precluded a complete delineation.

C. The development of the bottom configuration and investigation of least depths are considered adequate.

4. Condition of the Survey

The field plotting, records, and reports are adequate and conform to the requirements of the Hydrographic Manual except that the statement in paragraph J of the Descriptive Report disproving the two piles (Presurvey Review Item No. 7) was not supported by either explanatory statements or times of investigation in the field records.

In addition, a considerable portion of the review time was spent in reassessing numerous spurious traces on the fathograms. Most of these traces were finally determined to be strays. Had a lower gain been used while sounding, the number of strays could probably have been reduced considerably.

5. Junctions

Adequate junctions were effected with H-8622 (1961) on the south, H-8715 (1962-63) on the north, and H-8442 (1958) on the west.

6. Comparison with Prior Surveys

H-4198 (1921) 1:20,000

This survey is the only prior survey which covers the present survey area.

A comparison between the two surveys reveals little or no change in the area. Minor differences exist between the two surveys, but it is believed that the larger scale, closer line spacing, and modern survey methods used on the present survey produced the more complete and accurate representation of the area.

Attention is directed to the following:

A. The rocks awash shown on H-4198 (1921) in latitude $55^{\circ}12.39'$, longitude $131^{\circ}49.72'$ and latitude $55^{\circ}16.32'$, longitude $131^{\circ}50.79'$ originate with T-3855 (1921) and have been carried forward to the present survey.

B. The two piles shown on H-4198 (1921) in latitude $55^{\circ}17.39'$, longitude $131^{\circ}51.80'$, and latitude $55^{\circ}17.12'$, longitude $131^{\circ}51.56'$ originate with T-3855 (1921). Depths at these locations indicate that the piles may have been closer inshore.

However, the hydrographer on the present survey states that the piles (Presurvey Review Item 7) were investigated and disproved, and that the piles have apparently disintegrated in the period of 30 years between surveys.

The reviewer concurs with the hydrographer that these two piles no longer exist.

C. The 10-fathom, 6 2/6-fathom, and 33-fathom soundings shown on H-4198 (1921) in the vicinity of $55^{\circ}17.5'$, $131^{\circ}51.8'$ should be disregarded. These soundings were located by a fix which included PILE as a signal. The position of this signal is suspect since the 10-fathom sounding falls in general depths of 27 fathoms on the present survey, and the water depth at PILE is thought too deep (21 fathoms) for a realistic location of the PILE.

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

7. Comparison with Chart 17436 (8083), 4th Edition, March 13, 1976
17420 (8102), 16th Edition, October 25, 1975

A. Hydrography

Most of the charted hydrography in this area originates with the verified and reviewed smooth sheet of the present survey.

The rock awash charted in latitude $55^{\circ}13.2'$, longitude $131^{\circ}50.06'$ on chart 8083 originates with U.S. Geological Survey Quadrangle Ketchikan (A-6), Alaska. No rock appears on T-10619, the incomplete shoreline manuscript for this area; however, present survey development is considered inadequate to prove or disprove the existence of this rock and it should be retained on the chart.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

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

C. Topography

There is some question as to the correct placement of the name ^{*}Nelson Cove. Identified as the cove at latitude $55^{\circ}11.8'$, longitude $131^{\circ}49.55'$ on the contemporary topographic manuscript T-10619, and the prior and ^{*}present hydrographic surveys; the U.S. Geological Survey Quadrangle Ketchikan (A-6), Alaska, and chart 17436 (8083) place the name at the cove in latitude $55^{\circ}12.2'$, longitude $131^{\circ}49.55'$. No revision to the chart or survey is recommended until the correct location of Nelson Cove can be ascertained and documented by the Staff Geographer.

** Name moved to charted position determined to be correct by C. Harrington, Staff Geographer 4-25-77*

8. Compliance with Instructions

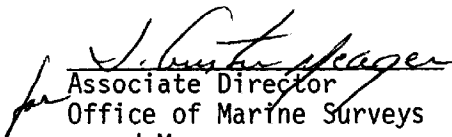
The present survey adequately complies with the Project Instructions.

9. Additional Field Work

This survey is considered to be a good basic survey and no additional field work is recommended.

Examined and Approved:


Chief
Marine Surveys Division


Associate Director
Office of Marine Surveys
and Maps

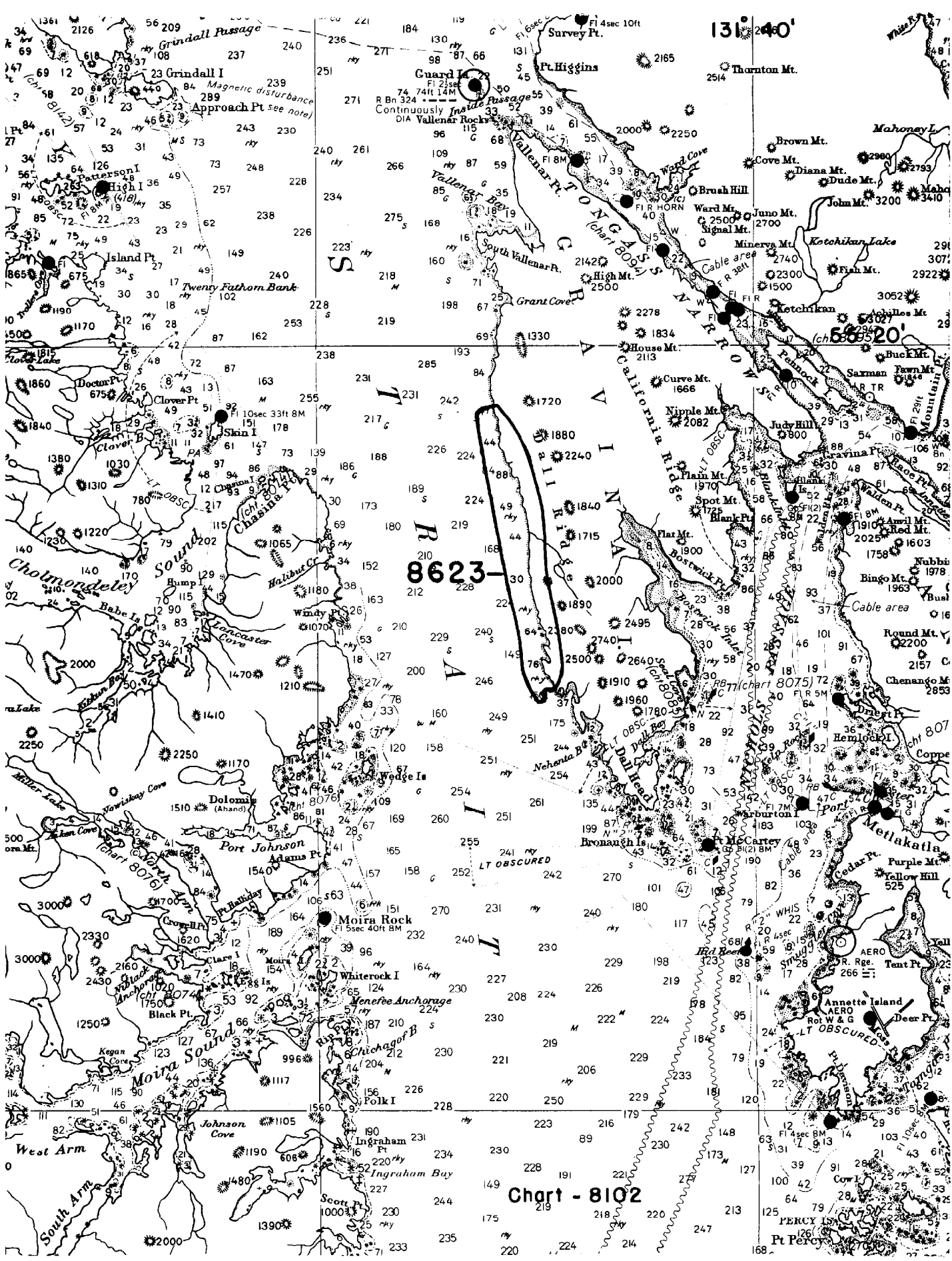


Chart - 8102

NAUTICAL CHARTS BRANCH

SURVEY NO. T-8623

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4/19/63	8102	h.j. Keeler	Before After Verification and Review, Part. applied.
10/27/64	8094	Josef J. Streifler	After " " before " "
			Before After Verification and Review
12/17/66	8083	J. M. Mc M	Before After Verification and Review before inspection
5/67	8080	Clarence Musfeldt	Before After Verification and Review-insp
4-21-71	8102	E. Frey	Before After Verification and Review before inspection Appd via cht 8083
12/16/71	8083	J. A. Mahon	Before After Verification and Review before & insp Dwg #3
6/21/73	8102	E. FREY	App'd additional misc. critical corrections only Before After Verification and Review before review & insp Added 2 sdgs via cht 8083 dwg #3
7/14/77	8083	M. D. Kamm	Before After Verification and Review + Inspection + Signature
1/22/80	17420 (8102)	Naitok	EXAM for N.M. only Dwg 5 Before After Verification and Review, Insp, Sign Dwg 30
9/18/80	17436 (8083)	R. S. Howe	Before After Verification and Review, Inspection & signature, Fully applied Dwg #5

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.