8666

Diag. Cht. No. 8102-3.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey: Hydrographic

Field No. LJ-20-1-62 Office No. H-8666

LOCALITY

State: Alaska

General locality: Clarence Strait

Locality: Off Kasaan Bay

1962

CHIEF OF PARTY

M. E. Natte

LIBRARY & ARCHIVES

DATE: Dec. 14, 1967

USCOMM-DC 37022-P66

8666

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-8666

Field No. LJ-20-1-62

State ALASKA

General locality ~~CLEVELAND PENINSULA~~ CLARENCE STRAIT

Locality ~~CLARENCE STRAIT~~ OFF KASAAN BAY

Scale 1:20,000 Date of survey 1962 May 5 to Sept 20

Instructions dated Oct. 2, 1956, January 31, 1962

Vessel USC&GSS LESTER JONES

Chief of party M. E. NATTO, LCDR, C&GS

Surveyed by M. E. NATTO, A. C. Holmes, R. K. Hanson, W. V. Hull B. I. Williams

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

Fathograms scaled by W. R. WHITE

Fathograms checked by SHIP'S OFFICERS

Protracted by G. R. Joseph

Soundings penciled by G. R. Joseph

Soundings in fathoms ~~feet~~ at ~~MMW~~ MLLW and are true depths

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 777082

J. J. G.

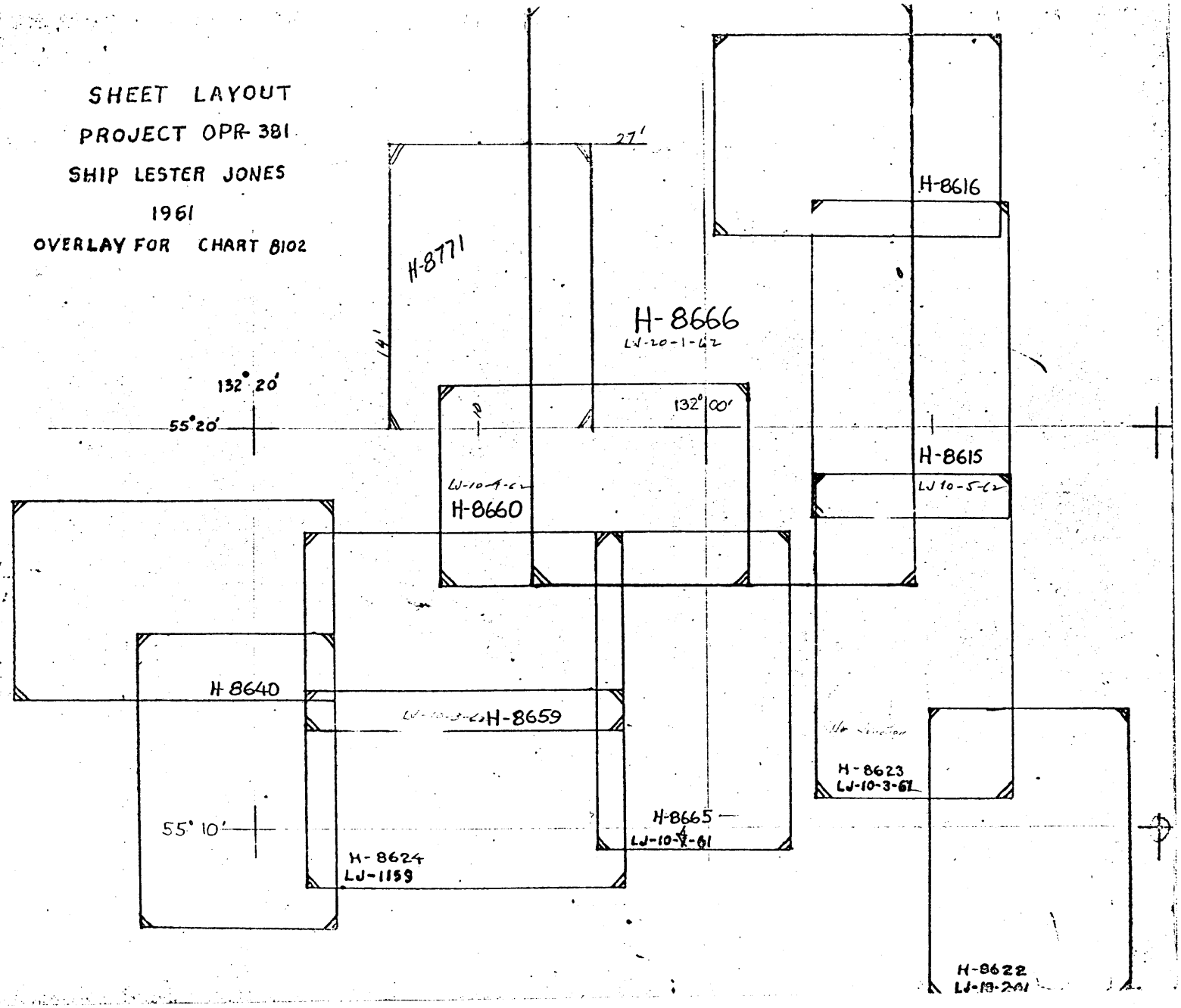
SHEET LAYOUT

PROJECT OPR-381

SHIP LESTER JONES

1961

OVERLAY FOR CHART 8102



DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8666

(LJ-20-1-62)
1962

USC&GSS LESTER JONES
S. E. ALASKA

M. E. NATTO, LCDR, C&GS
COMMANDING OFFICER

SCALE 1:20,000

A. PROJECT - Survey LJ-20-1-62 of OPR-381 was accomplished in accordance with original instructions dated October 2, 1956 and supplemental instructions dated January 31, 1962.

B. AREA SURVEYED - This survey covered the open water of Clarence Strait lying immediately south of Cleveland Peninsula in Southeast Alaska. Field work was done between May 5, 1962 and September 20, 1962. The area lies between latitudes 55° 16'W and 55° 29'N and between longitudes 131° 53'W and 132° 06'W. Coastlines in the area are rugged and the land areas consist of densely timbered mountains. Junctions are made with contemporary surveys H-8665 (LJ-10-4-61), H-8659 (LJ-10-3-62), H-8660 (LJ-10-4-62), H-8623 (LJ-10-3-62), and ~~the uncompleted~~ LJ-10-5-62. ~~Junctions~~ are made with prior surveys H-4197 (1:20,000, 1921), H-4199 (1:20,000, 1921), H-5060 (1:20,000, 1930), ~~H-8442 (1:20,000, 1958)~~, H-4196 (1:20,000, 1921), H-4198 (1:20,000, 1921), H-4190 (1:50,000, 1921).

H-8442 (1958)

H-8676

no junction

over 100

D. SOUNDING EQUIPMENT - Three types of echo-souding instruments were used: a model EDO-185 fathometer, No. 57-209; two model DE-723 Raytheon fathometers, Nos. 250 and 251; and a model 808 fathometer No. 125-S. In general, the EDO instrument was used for depths greater than 220 fathoms, while the 808 fathometer was used for depths less than 220 fathoms until July 13. After this date the model DE-723 instruments were used for depths less than 220 fathoms.

The initial was set at zero; thus the index correction was equal to 1.3 fathoms, the draft of the ship. There was no phase correction for work using the EDO-185 fathometer, while phase corrections for the 808 type instruments were found by the method outlined in section 5-112 of the Hydrographic Manual. Phase corrections for the DE-723 fathometers were found by the method outlined in the "Preliminary Operation and Maintenance Manual for the DE-723 Survey Fathometers". Velocity corrections were computed from temperature and salinity observations, taken as prescribed in section 5-114 of the Hydrographic Manual. The corrections were computed as outlined in section 5-118 of the Hydrographic Manual. Instrument error for the EDO-185 instrument was found by comparison of soundings with vertical casts taken from the ship and simultaneous 808 fathometer sounding values. Leadline soundings and vertical casts were used to determine instrument error for the model 808 fathometers, while DE-723 instrument error mentioned in the memorandum of October 1, 1962 was applied in depths less than 101 fathoms. The 723 instrument, when on the "G" scale, gave readings 2 to 3 fathoms too shallow, so the EDO fathometer was used in place of the "G" scale. This error probably was due to poor reflecting characteristics of the soft bottom, rather than to a fault in the instrument.

E. SMOOTH SHEET - The smooth sheet projection was made by the ruling machine in the Washington Office.

F. CONTROL - Visual horizontal control was used for all hydrography; signals were triangulation stations and topographic stations. Photogrammetric compilation No. T-11512 was used.

G. SHORELINE - Shoreline detail was transferred from bluelines of the following manuscripts: T-10702, T-10595, T-10603, and T-10611. T-11512 Shoreline detail has been verified; revisions are made on the 1:10,000 sheets of the area. All hydrography was done by the ship, so that the low water line was not verified. Shoreline for orientation only.

H. CROSSLINES - 10% crosslines were run, with satisfactory agreement being found.

I. JUNCTIONS - Satisfactory agreement was found at junctions with contemporary surveys.

J. COMPARISON WITH PRIOR SURVEYS - Satisfactory agreement was found at junctions with prior surveys except for the vicinity of Lat. 55° 19.5N, Long. 131° 54.5W, where soundings from H-8442 (1:20,000, 1958) were found to be in disagreement. When sounding lines from H-8666 (LJ-20-1-62) were extended further into H-8442, agreement was obtained. The discrepancy was probably due to faulty control on the 1958 sheet; thus the 1962 sheet should be used for soundings. Discrepancy about 1% of depth.

Chart 8083 (area out)

K. COMPARISON WITH THE CHART - The 6th edition of chart No. 8102, last revised and printed on December 18, 1961, is the only chart of the area. Because of the small scale of this chart, little comparison could be made with the present survey. However, general agreement was reached. No dangers to navigation were found.

L. ADEQUACY OF THE SURVEY - Soundings taken are adequate to supersede those of previous surveys. However, bottom samples were not taken in parts of the northern half of the survey. Bottom samples in northern half obtained in 1963.

M. AIDS TO NAVIGATION - All aids to navigation in the survey are shown on C&GS chart 8102 and are listed in the light list; characteristics given are correct.

N. STATISTICS -

Positions	1557
Nautical miles of sounding lines	473.8
Area of survey	67.0 square miles
Tide gages used	3
Bottom samples	55

P. RECOMMENDATIONS - Bottom sampling should be continued north of Lat. 55° 23'; the bottom snapper is adequate for this sampling within the area of the sheet. Also, a shoal area located at Lat. 55° 24.6N, Long. 132° 04.4W should be developed further when a 1:10,000 sheet of the area is made.

done in 1963

adjoining H-8771 (1963) did not develope this feature

Q. REFERENCES TO REPORTS:

Marigrams - sent to Washington Office during field season.
Fathograms DE-723 14 Fathograms
808 1 " To be forwarded
EDO-185 31 "
Sounding Records - 7 volumes + 1 vol. of bottom samples in 1963.
Fathometer correction report - To be forwarded
T. &. S. Observations - " " "

TIDE NOTE

Three tide gages were used in the survey; the 120th time meridian was used for all three. A standard tide gage at Ketchikan, Alaska was located at Lat. 55° 20.00'N, Long. 131° 37.52'W. The 6.3 foot mark on the staff corresponds to MLLW. All hourly heights were furnished by the Washington Office.

A portable automatic gage was located at Vallenar Point (Lat. 55° 25.58N, Long. 131° 50.78W). Preliminary determinations showed that MLLW is 4.7 feet above staff zero. Hourly heights were furnished by the Washington Office for the following days: May 7, 11, 14, 28; June 1; July 10, 13, 27; and September 19, 1962.

The third tide gage used was a portable automatic gage located at Lancaster Cove in Cholmondeley Sound (Lat. 55° 12.87'N, Long. 132° 05.71'W). MLLW is located 5.5 feet above staff zero. Hourly heights were furnished by the Washington Office for the following dates: May 11,25,28; June 4,8, 11,14,22; July 10,20,24,27; August 3; and September 11,12,13,19.

No corrections, other than for clock and stylus errors, were applied to the observed tides.

The Ketchikan tide gage was used for soundings over 100 fathoms thru August 17, 1962. Soundings under 100 fathoms on the eastern side of the sheet were reduced using the gage at Vallenar, while those on the west side of the sheet were reduced using the Lancaster Cove tide gage. After August 17, 1962, the Vallenar tide gage was used north of a line between SKIN, 1912 (Lat. 55° 18' 08", Long. 132° 04' 19") and SOUTH VALLENAR (Lat. 55° 22' 47", Long. 131° 52' 44"), and the Lancaster Cove gage was used south of this line.

PENCILED GEOGRAPHIC NAMES ON H-8666

CHASINA POINT

CLARENCE STRAIT

CLEVELAND PEN.

GRINDALL ISLAND

GUARD ISLAND

PRINCE OF WALES ISLAND

SKIN ISLAND

S. VALLENAR POINT

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

Following is a list showing days during which the various depth recorders were in use:

EDO-185	A-LA
808-125S	J
DE-723-251	BA
DE-723-250	S-LA

Tables of phase and velocity corrections follow on separate sheets. There was no phase correction for the EDO-185 instrument. Velocity corrections were applied to the nearest tenth in depths less than 100 fathoms and to the nearest five-tenths in depths greater than 100 fathoms. An instrument error correction of +0.5 fms was applied to all soundings obtained with the EDO fathometer. There was no instrument error with the 808 fathometer, but an instrument error correction of -0.2 fms was applied to soundings under 100 fms obtained by the DE-723 fathometers. All hydrography was done by the ship, and the initial was set at zero, making the index correction equal to the draft of the ship, 1.3 fms. A fathometer report, describing in detail echo sounding corrections for project OPR-381, will be submitted.

FATHOMETER PHASE COMPARISONS

MODEL DE-723

SCALE	NO. 251 To 31 July	NO. 251 1 Aug to end	NO. 250 Beg. to 4 Sept.	NO. 250 5 Sept to end
A	0 fms	0 fms	0 fms	0 fms
B	0	+0.1	0	+0.1
C	-0.1	0	0	-0.1
D	-0.1	+0.1	0	0
E	0	0	0	-0.1
F	-0.1	+0.1	0	0

Apply -0.2 fms correction to all soundings under 100 fms obtained by Ship with DE-723 type fathometers.

PHASE CORRECTIONS

FOR 808 TYPE FATHOMETERS TO BE USED ON SHEETS LJ-10-1-62, LJ-10-2-62, & LJ-10-3-62. (ALSO LJ-20-1-62)

FATHOMETER NO.	SCALE	"A"	"B"	"C"	"D"
		Correction (fms)			
148		0.0	-0.2	-0.5	-0.5
125-s "O"		0.0	-0.6	-0.8	-0.8
125-s "N"		0.0	-5.3	--	--
75 "O"		0.0	0.0	0.0	--
75 "N"		0.0	+0.3	-0.3	-0.3

/head

"O" refers to the old phasing arrangement, up to and including May 17.

"N" refers to the new arrangement in use from May 18 to May 24 inclusive.

After May 24 the phasing heads were reversed again and the "O" was used.

VELOCITY CORRECTIONS FOR 20-1-62

FROM T & S OBSERVATIONS ON JUNE 27, 1962

PERIOD MAY 5 THRU JULY 13

Correction (fms)	To Depth (fms)
0.0	3.5
+0.1	15.2
+0.2	36.0
+0.3	57.5
+0.4	79.0
+0.5	168.0
+0.6	278.0

VELOCITY CORRECTIONS 20-1-62

FROM T & S OBSERVATIONS ON AUGUST 15, 1962

PERIOD JULY 14 THRU AUGUST 31

Correction (fms)	To Depth (fms)
0.0	3.5
+0.1	12.0
+0.2	30.0
+0.3	48.0
+0.4	70.0
+0.5	92.0
+0.6	101.0
+0.5	165.0
+1.0	280.0

VELOCITY CORRECTIONS FOR 20-1-62

FROM T & S OBSERVATIONS ON SEPTEMBER 12, 1962

PERIOD SEPTEMBER 1 THRU SEPTEMBER 30

Correction (fms)	To Depth (fms)
0.0	5.0
+0.1	16.5
+0.2	31.0
+0.3	49.0
+0.4	69.0
+0.5	90.0
+0.6	101.0
10	
+0.8	161.0
+1.0	271.0
+1.5	---

LIST OF STATIONS ON H-8666 (LJ-20-1-62)

NAME USED IN HYDROGRAPHIC SURVEY	ORIGIN
APPROACH, 1915	△ APPROACH, 1915
BIG	T-11512
CAAMANO, 1912	△ CAAMANO, 1912
CLOVER, 1921	△ CLOVER, 1921
GRAVINA, 1912	△ GRAVINA, 1912
GRINDALL, 1912	△ GRINDALL, 1912
GUARD ISLAND LIGHTHOUSE, 1912	△ GUARD ISLAND LIGHTHHOUSE, 1912
IDA	T-11512
LIG	△ HIGH ISLAND LIGHT, 1962
MAC	T-11512
MAN2, 1929	△ MAN 2, 1929
NORTH CHASINA, 1912	△ NORTH CHASINA, 1912
PUG, 1921	△ PUG, 1921
SAL	T-11512
SKIN, 1912	△ SKIN, 1912
SOUTH VALLENAR, 1912	△ SOUTH VALLENAR, 1912
STREET, 1915	△ STREET, 1915
TIP	T-11512

Survey H-8666 and accompanying records have been examined by me and are approved. Additional bottom sampling is recommended.

M E Natto

M. E. Natto, LCDR, C&GS
Chief of Party
Ship LESTER JONES

AMMENDMENT TO DESCRIPTIVE REPORT
TO
ACCOMPANY HYDROGRAPHIC SURVEY H-8666

SCALE: 1:20,000
YEAR: 1963

VESSEL: Ship LESTER JONES
CHIEF OF PARTY: A. C. Holmes
LCDR, USC&GS

A. PROJECT

Bottom sampling on survey LJ 20-1-62 (H-8666) of OPR 381 was completed in accordnace with original instructions dated October 2, 1956 and supplemental instructions dated January 31, 1962, and March 1, 1963.

B. AREA SURVEYED

Bottom sampling was completed for survey H-8666 in Clarence Strait between latitudes 55° 23' N and 55° 28' N and between longitudes 131° 54' W and 132° 05' W. The additional work was done in 1963 between May 15 and June 13.

D. SOUNDING EQUIPMENT

Two types of echo sounders were used: a model EDO-185, no. 57-209 and a model DE-723, no. 548. The DE-723 instrument was used on MA and NA days, while the EDO recorder was used on the remaining days.

The initial was set at zero and the index correction was determined by scanning the fathogram and noting variation of the initial from zero.

Echo corrections consisted of three different corrections: index, phase, and velocity. In all cases, the index correction was + 1.3 fathoms, the draft of the ship. There were no phase corrections, and velocity corrections from T&S observations on April 24, 1963, being less than ½% of one percent of depth, were not applied.

L. ADEQUACY OF THE SURVEY

With the completion of bottom sampling, survey H-8666 is considered complete and adequate for charting.

N. STATISTICS

Positions	55
Tide gages used	2
Bottom samples	55

APPENDIX A

TIDAL NOTE

Ketchikan predicted tides were used to reduce soundings on RA day, with no corrections for time or height being applied.

All other soundings were reduced with tide corrections from the Portable gage at Vallenar Point (55° 25.58' N, 131° 50.78' W). Again no corrections for time or height was applied.

The reference plane was MLLW, which was 4.7 feet above staff zero at Vallenar Point.

120 meridian time was used.

APPENDIX B

Velocity Corrections
from T & S Observations on 24 April 1963
applied to all 1963 soundings on H-8666

Corrections (fms)	To Depth (fms)
+ 0.03	5.0
+ 0.05	10.0
+ 0.08	15.0
+ 0.10	25.0
+ 0.20	50.0
+ 0.3	70.0
+ 0.4	95.0
+ 0.5	120.0
+ 0.6	140.0
+ 0.7	160.0
+ 0.8	180.0
+ 0.9	200.0

APPENDIX D

APPROVAL SHEET

The work done in 1963 on survey H-8666 has been examined by me and is approved. The survey is considered complete and adequate for charting.

Alfred C. Holmes

Alfred C. Holmes
LCDR, USC&GS
Commanding Ship LESTER JONES

Addendum Notes H-8666

SMOOTH SHEET

The projection was machine ruled in Washington and subsequently checked and completed in Seattle. The smooth plotting and verification were done in Seattle.

COMPARISON WITH CHART

This survey has been compared with Charts 8083, 1st Ed. June 19, 1967, 8094, 12th Ed. March 1, 1965 and 8142, 5th Ed. Jan. 10, 1966.

The smooth sheet of this survey was used in the compilation of Chart 8083 and in the common area is in agreement. However, there is a 73 fm sounding from H-4190 (1921) at Lat. 55° 27.7 N., Long. 132° 04.5 W. which should be shown as the least depth in the area in addition to the charted 83 fm sounding near by. 73 retained

Chart 8094 shows a 121 fm sounding at Lat. 55° 23.23 N., Long. 131° 54.55 W. which comes from H-4190 (1921) and appears to be about 40 fms too shoal by H-8666. 121 fm probably displaced or recorded in error.

In addition to the 73 fm sounding mentioned above there is a charted sounding of 257 fms shown on Chart 8142 at Lat. 55° 24.08 N., Long. 132° 04.20 W. which comes from H-4190 (1921) and is about 20 fms too deep (Pos. 42L, H-4190) when compared with H-8666. There is a 258 sdg on H-8666 about 200 S.E of position given

Examined and Approved.

William M. Martin

William M. Martin
Supervisory Carto. Tech.

Approved and Forwarded.

John B. Watkins, Jr.

John B. Watkins, Jr. CDR USESSA
Chief, Processing Division, PMC

FORM C&GS-712
(4-62)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Seattle Regional Officer
~~Nautical Chart Division~~

March 31, 1964

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET H-8666

Locality Clarence Strait, Southeast Alaska

Chief of Party: M. E. Natto (1962)
A. C. Holmes (1963)

Plane of reference is mean lower low water reading

5.5 ft. on tide staff at Lancaster Cove

18.7 ft. below B. M. NO 3 (1959)

4.7 ft. on tide staff at Vallenar Point

18.1 ft. below B.M. 1 (1962)

Height of mean high water above plane of reference is:

Lancaster Cove 14.2 ft.

Vallenar Point 14.6 ft.

Condition of records satisfactory except as noted below:

J. M. Simmons
Chief, Tides and Currents Branch

USCOMM-DC 16543-P62

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8666

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Approach Point										1
Chasina Island										2
Chasina Point										3
Chalmondeley Sound										4
Clover Bay										5
Clover Point										6
Clarence Strait										7
Gravina Island										8
Grindall Island										9
Grindall Passage										10
Guard Islands										11
Kasaan Peninsula										12
Skin Island										13
South Vallenar Point										14
Streets Island										15
			Names approved							16
Kasaan Bay*	8102		Feb. 7, 1968							17
			Frank W. Packett							18
										19
										20
										21
										22
										23
										24
										25
										26
										27

* Added by RHC 5/26/69

FORM C&GS-946
(REV. 3-1-64)
(PRESC. BY HYDROGRAPHIC MANUAL 20-2, 6-94, 7-13)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
NAUTICAL CHART DIVISION

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO H-8666

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS	1
DESCRIPTIVE REPORT	1	OVERLAYS	

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	X					
CAHIERS						
VOLUMES	8					
BOXES						

T-SHEET PRINTS *(List)*

SPECIAL REPORTS *(List)*

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1612
POSITIONS CHECKED		358		
POSITIONS REVISED		35		
DEPTH SOUNDINGS REVISED and added		589		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		247		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		XX 7		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		144		
SPECIAL ADJUSTMENTS of crossings		16		
ALL OTHER WORK		88		
TOTALS		256	224	

	BEGINNING DATE	ENDING DATE
PRE-VERIFICATION BY		
VERIFICATION BY Clarence R. Lehman	9/22/64	10/5/64
REVIEW BY D H Benson	10/28/68	12/6/68

USCOMM-DC 6641-P64

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8666 FIELD NO. LJ-20-1-62

Southeast Alaska, Clarence Strait, Off Kasaan Bay

SURVEYED: May 5, 1962 through September 20, 1962

SCALE: 1:20,000 PROJECT NO.: OPR-381

SOUNDINGS: EDO-185 Depth Recorder, DE-723 Raytheon Depth Recorder, 808-J Fathometer

CONTROL: Sextant fixes on shore signals

Chief of Party	M. E. Natto
Surveyed by	M. E. Natto
	A. C. Holmes
	R. K. Hanson
	W. V. Hull
	B. I. Williams
Protracted by	G. R. Joseph
Soundings Plotted by	G. R. Joseph
Verified and Inked by	C. R. Lehman (Seattle)
Reviewed by	D. H. Benson
	Date: December 6, 1968
Inspected by	R. H. Carstens

1. Description of the Area

This survey is of a deep portion of Clarence Strait south of Cleveland Peninsula and west of the north half of Gravena Island. The depths range from 15 fathoms to 284 fathoms with the general depths being over 200 fathoms. Most of the bottom is soft mud, with a few areas that are hard or covered with stones.

The survey does not extend into shore at any point.

2. Control and Shoreline

The basic control is C. & G.S. triangulation. Most of the signals were built over triangulation stations, but five topographic stations located photogrammetricly on T-11512 in the entrance to Cholmondeley Sound were used. Visual observations on shore signals were used to control hydrography.

Some shoreline is shown on the survey for orientation purposes, although the hydrography on this survey is all offshore. The sources of the shoreline shown are T-10702, T-10595, T-10603, T-10698, and T-11512 of 1956-64.

3. Hydrography

The crosslines are in satisfactory agreement with the regular lines.

The depth curves for 50, 100, and 200 fathoms were adequately delineated over most of the survey. The feature at lat. 55°24.7', long. 132°04.5' was not sufficiently developed, as noted in paragraph "P" of the Descriptive Report, by ~~by~~ carrying forward soundings from H-4190 (1921) the 100 fathom curve was adequately shown. The feature is not a danger to navigation.

In the southwest area of the survey the north end of a shoal is adequately developed on adjoining survey H-8660 (1962).

4. Condition of the Survey

A. The field plotting is adequate and conforms to the requirements of the Hydrographic Manual.

B. The Descriptive Report is complete and comprehensive.

C. The sounding records are adequate, although numerous changes made both in the depths read and the correctors indicate that adjustments had to be made during the smooth plotting and verification.

D. An instrument correction of minus .2 fathoms was applied in the field to DE-723 soundings less than 101 fathoms, based on the memorandum of October 1, 1962,

from Chief, Instrument Division. This memorandum provides information regarding the initial setting of the DE-723 but it does not provide the instrument correction for installed equipment which should have been determined by vertical cast comparisons or bar checks.

E. As a matter of record in depths greater than about 200 fathoms, soundings from the EDO depth recorder were plotted. These were generally deeper by 1-3 fathoms than depths by the DE-723 and the 808 shoal water fathometers. It may be questionable which of the two types of instruments is correct. However, considering the depths involved, it was not deemed expedient to make an office adjustment to the data.

5. Junctions

Adequate junctions were made with contemporary surveys H-8442 (1958) on the southeast; H-8665 (1961), H-8659 (1962), and H-8660 (1962) on the southwest; H-8715 (1962-63) and H-8716 (1963) on the east; and H-8771 (1963) on the west. There is no contemporary survey to the north. Present depths here are in adequate agreement with charted depths at the limit of the project.

6. Comparison With Prior Surveys

A.

H-1622	(1883)	1:80,000
H-1649a	(1885)	1:80,000
H-1649b	(1885)	1:80,000
H-1650b	(1885)	1:5,000
H-1651a	(1885)	1:20,000

These early surveys are reconnaissance in nature and provide no information not adequately revealed by the present survey. The present survey supersedes these prior surveys in the common area.

B.

H-4190	(1921)	1:50,000
H-4196	(1921)	1:20,000
H-4199	(1921)	1:20,000
H-5060	(1930)	1:20,000

These surveys cover the area of the present survey. In depths over 100 fathoms, prior soundings are generally as much as 2-6 fathoms greater than present soundings in part as a result of the use of the wire sounding machine on the earlier surveys. Some differences are as great as 15 fathoms.

Bottom characteristics of rocky on H-4190 in the vicinity of lat. 55°27' in the northern portion of that survey are now superseded by soft green mud. The 73-fathom knoll in lat. 55°24.7', long. 132°04.5' on H-4190 was not developed on the present survey and several sounding have been carried forward.

No significant changes in depths less than 100 fms. are noted between the prior and present surveys.

With the indicated additions, the present survey is adequate to supersede the prior surveys in the common area.

C. H-3810 W.D. (1916)
H-3810a W.D. (1916)

Only a part of the area of H-8666 (1962) north of lat. 55°26' is covered by H-3810 W.D. (1916). There are no conflicts between present depths and the wire-drag effective depths in the common area as the wire-drag was set much shoaler than the depths on the present survey.

7. Comparison With Charts 8083, 2d. Ed., May 13, 1968, 1:40,000 8079, 2d. Ed., March 27, 1967, 1:80,000

A. Hydrography

The hydrography charted on 8083 originates with the present survey H-8666 which has been fully applied from the verified smooth sheet before review. Except for changes made during the review, there are no differences with the charted depths. Changes are listed below:

1. Soundings are carried forward from H-4190 to feature at lat. 55°24.7', long. 132°04.5'. A sounding of 73 fathoms being the shoalest on the feature should be added to the chart.

2. An 85-fathom sounding charted at lat. 55°27.48' long. 131°54.70' was corrected to 83 fathoms and is the shoalest point found on the feature.

3. A 227 fathom sounding charted at lat. 55°18.85', long. 131°55.88' was corrected during review to 230 fathoms and should be changed on the chart.

The hydrography charted on 8079 originates with surveys H-4190 (1921) and H-5060 (1930) supplemented by four soundings from a print of the boat sheet (Bp-63394) of H-8666.

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

B. Aids to Navigation

There are only two fixed aids to navigation in the area of the survey, Guard Island Light and Skin Island Light. The charted positions of these lights are in agreement with the present survey positions. There are no dangers to navigation in the area of the survey.

8. Compliance With Instructions

The survey adequately complies with Project Instructions, with the exception that three bottom features were not sufficiently developed after discovery by the regular lines. As these do not constitute dangers to surface navigation, there is no urgency for their development.

9. Additional Field Work

This is a very good basic survey. No additional field work is required.

Examined and Approved:

John O. Boyer
Chief
Marine Chart Division

Associate Director
Hydrography and Oceanography

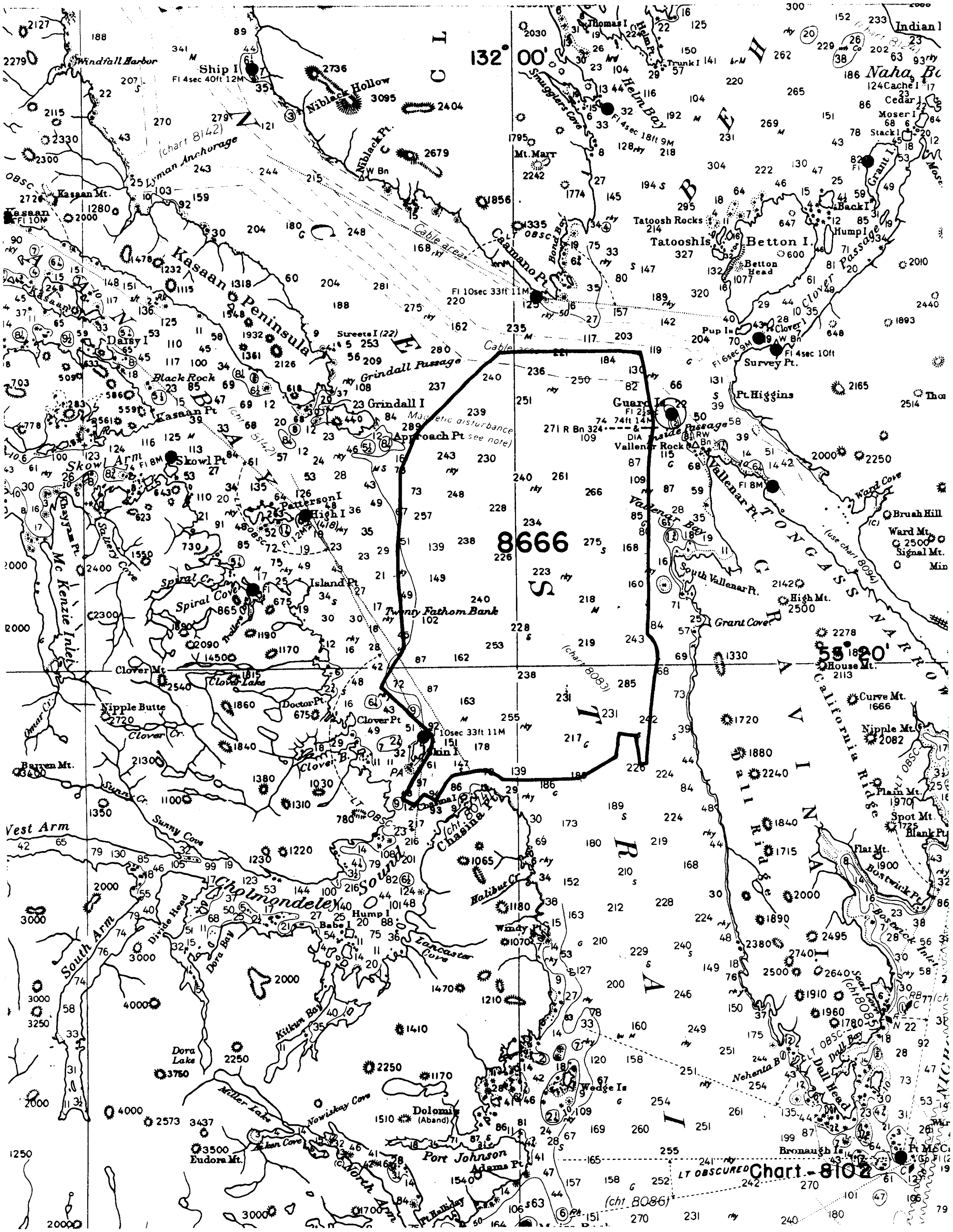
INFORMATION FOR FUTURE PRE-SURVEY REVIEW

Three bottom features which rise sharply from deeper depths have not been sufficiently developed on H-8666.

1. At lat. 55°24!7, long. 132°04!5 a feature rises from a depth of 284 fathoms to 73 fathoms in less than a mile. This feature is about 2 miles southeast of Grindall Island.

2. At lat. 55°26!15, long. 131°56!70 a 107 fathom feature rises from depths of over 200 fathoms less than half a mile westward. There has been no development of this feature.

3. At lat. 55°17!65, long. 132°00!30 a 105 fathom feature rises from depths of 145 fathoms inshore from it and has not been developed


132° 00'
8666
55° 20'
Chart - 8102
Ship I
Niblack Hollow
Windfall Harbor
Lyman Anchorage
Kasaan Mt.
Kasaan Peninsula
Grindall Passage
Grindall I
Approach Pt
Streets I
Magnetic disturbance (see note)
Cable area
Caamano Pt
Bond Bay
Smugglers Cove
Helm Bay
Mt. Marr
Tatoosh Rocks
Tatoosh Is.
Betton I.
Betton Head
Clover Passage
Pup Is
Survey Pt.
Pt. Higgins
Guard Is.
Inside Passage
Vallenar Rock
Vallenar Bay
Vallenar Pt.
South Vallenar Pt.
Grant Cove
Tongass Narrows
California Ridge
Gravina
Dall Ridge
House Mt.
Curve Mt.
Nipple Mt.
Flat Mt.
Plain Mt.
Spot Mt.
Bostwick Pt
Bostwick Inlet
Seal Cove
Ward Cove
Brush Hill
Ward Mt.
Signal Mt.
High Mt.
Dall Head
Nehenta B
Bronaugh Is.
Pt. McCartey
Naha Bay
Indian Pt
Cedar I
Moser I
Grant I.
Back I
Hump I
Daisy I
Black Rock
Kasaan Pt
Skowl Arm
Skowl Pt
Patterson I
High I
Twenty Fathom Bank
Island Pt
Spiral Cr.
Spiral Cove
McKenzie Inlet
Clover Mt.
Clover Lake
Clover Cr.
Clover Pt
Clover B.
Doctor Pt.
Nipple Butte
Barren Mt.
Sunny Cr.
Sunny Cove
Skin I
Chasina Pt
Cholmondeley Sound
West Arm
South Arm
Divide Head
Dora Bay
Dora Lake
Hump I
Babe I
Lancaster Cove
Halibut Cr.
Windy Pt
Kitkun Bay
Wedge Is
Miller Lake
Nowiskay Cove
Dolomi (Aband)
Eudora Mt.
Port Johnson
Adams Pt.
North Arm
Pt. Halliday
Clarence Strait
LT OBSCURED
(chart 8142)
(chart 8083)
(cht 8086)
(use chart 8094)

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8666

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
8083	4/2/68	J.S. McMillan	~~Full~~ Part ~~Before~~ After Verification before Review Inspection Signed Via Drawing No. #2 Minor revision to 1:0 for curve; several shoal depths added. Consider fully applied
8142	5/69	Clarence Misfeldt	~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via Drawing No. Revised crit. corrections or items indicated in ~~[illegible] 8083 5/68, 73 of H4190 [illegible]~~ review. ~~[illegible]~~ Part. Appl'd before Insp.
8083	12/10/69	J. McMillan	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 3 Fully Applied
8079	12/10/69	J. McMillan	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 8 Fully Applied
8142	1/6/70	J.S. McMillan	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 10 ~~adequate applied, consider full until reconstruction~~ Fully Applied D.K. Per B.J.
8102	4-16-71	E. Frey	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 21 Fully app'd via ch't 8083 #3
8080	1-19-72	C. S. Forbes	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. No correction - area off chart limits
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.