

9085

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. DA-10-7-69 Office No. H-9085

LOCALITY

State Alaska

General locality Clarence Strait

Locality Tolstoi Bay and Vicinity

19 69

CHIEF OF PARTY

R. E. Moses

LIBRARY & ARCHIVES

DATE 11-27-72

USCOMM-DC 37022-P66

9085

**HYDROGRAPHIC TITLE SHEET**

H-9085

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

FIELD NO.

DA-10-7-69

State Alaska

General locality Clarence Strait

Locality Tolstoi Bay and Vicinity

Scale 1 : 10,000 Date of survey 11 Oct - 28 Oct, 1969

Instructions dated 26 August, 1969 Project No. OPR-465

Vessel Ship DAVIDSON, Launch 1, Launch RA-4, 17' Whaler

Chief of party CDR Ray E. Moses

Surveyed by G.H. Endrud, B.W. Fisher, G.F. Tornberg, R.L. Baker, W.K. Taguchi, D.L. Suloff

Soundings taken by echo sounder, ~~Raytheon DE-723~~ Raytheon DE-723, Nos. 214, 553, 919, 1276, 1284, 1286

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Officers

Protracted by Ship's Officers Automated plot by PMC, Seattle

Soundings penciled by Ship's Officers

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

REMARKS:

*Apply to stds 12-3-69*  
*ms*

DESCRIPTIVE REPORT

To Accompany

Hydrographic Survey H-9085 DA-10-7-69

OPR-465 Alaska

Scale 1:10,000

USC&GSS DAVIDSON

Ray E. Moses  
CDR, USESSA

Commanding Officer

1969

DESCRIPTIVE REPORT

DA-10-7-69

A. PROJECT

This survey was accomplished according to Project Instructions: OPR-465, CLARENCE STRAIT, SOUTHEAST ALASKA, dated 26 August, 1969. ✓

B. AREA SURVEYED

The survey covered the areas of Tolstoi Bay, Windfall Harbor, and the shoreline of Clarence Strait between the two areas. The total area is included between latitudes: 55° 35' 30" and 55° 42' 30"; and longitudes: 132° 19' 30" and 132° 27' 30". ✓

Work was accomplished between 11 October and 28 October, 1969.

The survey makes a junction with the following sheets: ✓

DA-10-6-69	H-9084 (1969)	Contemporary survey
FA-20-3-69	H-9091 (1969)	Contemporary survey
FA-20-4-69	H-9092 (1969)	Contemporary survey

C. SOUNDING VESSEL

The following vessels were used to obtain soundings on this survey: ✓

<u>VESSEL</u>	<u>POSITION NUMBER</u>	<u>COLOR</u>
Launch 1		Red
Launch RA-4		Green
17' Whaler		Blue

Bottom samples taken by the Ship DAVIDSON are shown with orange position numbers. ✓

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers were used: ✓

Launch 1	# 919, 1276
Launch RA-4	# 214, 1286
17' Whaler	# 919, 553
Ship DAVIDSON	# 1284

Echo sounder corrections were determined from bar checks taken daily by the launches and vertical casts made by the Ship FAIRWEATHER. Launch and whaler fathometers were initialed at zero, requiring draft corrections for their soundings. This draft correction is included along with the velocity correction in the Modified Velocity Correction tape. ✓ The Ship's fathometer was initialed at the Ship's draft. Since the Ship was used only for bottom sampling, there are no corrections for the Ship's work. All soundings are in fathoms. Differences between actual and assumed initial values are compensated by initial corrections (TC/TT tape).

#### E. SMOOTH SHEET

The smooth sheet will be constructed and plotted by the Processing Division, Pacific Marine Center, Seattle, ✓ Washington.

#### F. CONTROL

Visual three-point fixes were used for control in this survey. There were three types of visual signals used: triangulation, photogrammetric, and hydrographic. ✓ The triangulation signals were machine plotted on the sheet. Photogrammetric signals were located by either direct or radial plots from the office photographs. Hydrographic signals were cut in with sextant and transit angles. An abstract of signals and manuscripts is included in the appendix.

#### G. SHORELINE

Shoreline and shoal area outlines were traced onto the boat sheet from the photo manuscripts (see appendix) ✓ by the Ship's officers. Verification of the shoreline was carried out by Ship's officers in the manuscript field edit covered by FIELD EDIT REPORTS, Thorne Bay-Tolstoi Bay, Alaska, OPR-465, October, 1969.

There is good agreement between the photogrammetric and hydrographic location of features on this survey. ✓ The low water line <sup>in some areas</sup> is defined by the soundings.

#### H. CROSSLINES

The percentage of crosslines run was 7.7% (18.0 miles). ✓ There is good agreement at crossings.

## I. JUNCTIONS

Junctions were made with the following sheets:

DA-10-6-69	H-9084 (1969)	Contemporary survey	✓
FA-20-3-69	H-9091 (1969)	Contemporary survey	
FA-20-4-69	H-9092 (1969)	Contemporary survey	

There is good agreement at the junctions.

## J. COMPARISON WITH PRIOR SURVEYS

There are three areas that were investigated from the pre-survey review: ✓

### 1. Area # 8 (Lat. 55° 37.9', Long. 132° 26.7')

The area was investigated and no sunken rock was found. a reduced sounding of ~~3.4~~ fms. was the least depth found. (3.7)

### 2. (Lat. 55° 40.3', Long. 132° 24.3')

This area pointed out in the pre-survey review, was developed on Overlay No. 1. A least depth of ~~5.4~~ fms. was found. (5.7)

### 3. (Lat. 55° 40.7', Long. 132° 25.1')

Soundings shoaler than the depth shown on the pre-survey review were found in this area. A least depth sounding of ~~21~~ fms. was found. (22)

Two other areas not noted in the pre-survey review were also investigated. ✓

The area in the vicinity of Tolstoi Island (Lat. 55° 41.6', Long. 132° 25.5') was developed to determine the extent of the shoal area. These reduced soundings are plotted on Development Overlay No. 2.

A reduced sounding of ~~0.9~~ fms. was found in the anchorage area in the south end of Tolstoi Bay at Lat. 55° 37.4~~2~~' and Long. 132° 26.9~~0~~'<sup>4</sup>. There is extensive kelp growth in this area.

The above depths were reduced using the actual tides. All soundings on the boat sheet and overlays were reduced using predicted tides for Lyman Anchorage, Alaska.

## K. COMPARISON WITH THE CHART

Comparison of soundings and depth curves with C&GS Chart 8124, 7th Edition, Sept 2, 1968 is relatively good considering the scale (1:40,000) and the fact that the location of the bay in regards to latitude is inaccurate. Many significant soundings are not included on this chart. Listed below are some of the more important significant soundings for Tolstoi Bay reduced using actual tides.

<u>Lat.</u>	<u>Long.</u>	<u>Least Depth</u>
55 40 38	132 26 34	16
55 40 27	132 25 41	18
55 40 20	132 24 43	9.3
55 40 22	132 24 20	5.4
55 37 51	132 26 47	8.0
55 37 27	132 26 54	0.9

L. ADEQUACY OF SURVEY

This survey is considered complete and adequate to supercede prior surveys. ✓

M. AIDS TO NAVIGATION

There are no aids to navigation on this boat sheet. There is however, a privately owned log mooring buoy located in Tolstoi Bay at Lat. 55° 38.85', Long. 132° 25.90'. (Position 1369, vol. 13, pg. 36) ✓

Refer also to the separate report on LANDMARKS OPR-465.

N. STATISTICS

	<u>Number of Positions</u>	<u>Nautical Miles Sounding lines</u>	<u>Bottom Samples</u>
Launch 1	1438	148.8	3
Launch RA-4	717	70.4	0 ✓
17' Whaler	286	14.8	0
Ship DAVIDSON	17	0	17
	<u>2458</u>		

The total area surveyed is 7.0 square nautical miles. There are fourteen (14) volumes with this survey.

The tide station used for this sheet is the THORNE Tide Gauge at Thorne Head on time meridian 105° W. The soundings on the sheet were reduced using predicted tides for Lyman Anchorage, Alaska. ✓

O. LOGGING

The HUL Logger (BCD Code)/ Friden Flexowriter logging system was used with this survey. A "dual indicator" format is used which combines both the sounding tape and position tape into one "position and sounding tape". An example and explanation of this format is included in the appendix. ✓

P. RECOMMENDATIONS

There are no recommendations for this boat sheet. ✓

Q. REFERENCES TO REPORTS

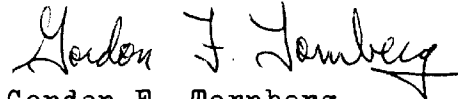
Corrections to Echo Soundings-OPR 465  
(forwarded with this report) ✓

Field Edit Report-OPR 465  
(forwarded to CFS 3, 19 Nov. 1969,  
transmittal letter No. DA-97-69)

Geographic Names Report-OPR 465  
(forwarded with this report)

Landmarks Report-OPR 465  
(forwarded with this report)

Respectfully submitted,



Gordon F. Tornberg  
LTJG, USESSA



APPROVAL SHEET

OPR-465

DA-10-7-69

H-9085

Tolstoi Bay

Southeast Alaska

The field work on this survey was accomplished under my supervision. Frequent inspections were made of the boat sheet and other records.



Ray E. Moses  
CDR, USESSA

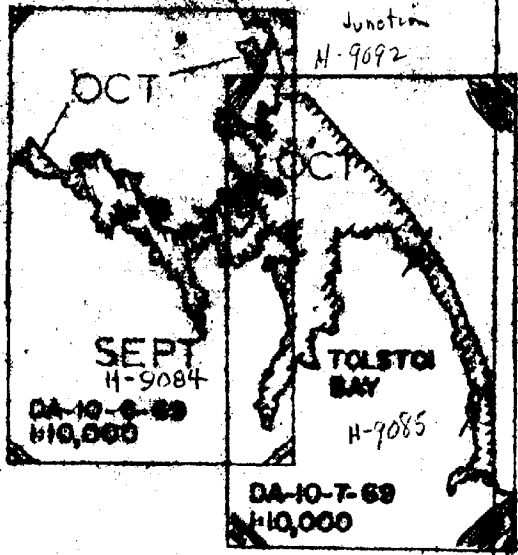
Commanding Officer  
USC&GSS DAVIDSON

APPENDIX

Tide Notes  
Geographic Name List  
Parameters for Digital Computing  
Triangulation Stations  
Boat Sheet Layout  
Abstract of Corrections to Echo Sounders  
Fathometer Initial Correction  
List of Obstructions  
List of Stations on DA-10-7-69  
List of Manuscripts  
~~Development Overlay No. 1~~  
~~Development Overlay No. 2~~  
Dual Indicator Position-Sounding Tape  
Abstract of Positions

WALKER IS.

THORNE BAY



JUNCTION  
H-9091

CLARENCE STRAIT

**PROGRESS SKETCH**  
**OPR-466**  
**CLARENCE STRAIT, ALASKA**  
**OCTOBER, 1969**

**USCGC DAVIDSON**  
**COM RAY E. MOSES, CO**

CHART 8102

ABSTRACT OF CORRECTIONS TO ECHO SOUNDERS

In all corrections, Table 1 refers to Launch 1, Table 2 refers to Launch RA-4, and Table 3 refers to the 17' Whaler. The combined position-sounding tape does not call for specific correction tables, so corrections dependent upon vessel must be entered with care. All position-sounding tapes were logged separately for each vessel used. No corrections were logged for the Ship DAVIDSON since it was used only for bottom sampling.

Modified\* Velocity Corrections (Fathoms)

Table 1		Table 2		Table 3	
<u>Depth</u>	<u>Corr'n</u>	<u>Depth</u>	<u>Corr'n</u>	<u>Depth</u>	<u>Corr'n</u>
4.2	0.2	2.8	0.2	0.9	0.2
8.7	0.3	5.3	0.3	3.6	0.3
21.0	0.4	7.7	0.4	6.0	0.4
38.0	0.5	11.0	0.5	8.0	0.5
56.0	0.6	28.0	0.6	10.0	0.6
74.0	0.7	46.0	0.7	27.0	0.7
90.0	0.8	63.0	0.8	44.0	0.8
104.0	0.9	80.0	0.9	61.0	0.9
118.0	1.0	95.0	1.0	78.0	1.0
132.0	1.1	106.0	1.1	91.0	1.1
146.0	1.2	122.0	1.2	105.0	1.2
160.0	1.3	136.0	1.3	119.0	1.3
174.0	1.4	150.0	1.4	133.0	1.4
188.0	1.5	164.0	1.5	146.0	1.5
202.0	1.6	178.0	1.6	160.0	1.6
400.0	1.7	192.0	1.7	174.0	1.7
		400.0	1.8	188.0	1.8
				202.0	1.9

"Depth" refers to the depth down to which the correction applies.

\* Includes draft correction--see Special Report on Velocity Corrections-OPR 465.

FATHOMETER INITIAL CORRECTION (FATHOMS)

Table 1			Table 2			Table 3		
<u>Day</u>	<u>Time</u>	<u>Corr</u>	<u>Day</u>	<u>Time</u>	<u>Corr</u>	<u>Day</u>	<u>Time</u>	<u>Corr</u>
284	080000	0.0	285	080000	0.0	286	080000	0.0
288	080000	0.0	287	080000	0.0	288	080000	0.0
289	080000	0.0		085000	0.2		090500	0.3
293	080000	0.0		090500	0.0		091500	0.0
294	080000	0.0		092700	0.2		092000	0.3
	145700	0.2	293	080000	0.0		111000	0.0
295	080000	0.0	294	080000	0.0	289	080000	0.0
	111000	0.2		093500	-0.1			
	143600	0.0		103000	0.0			
296	080000	0.0		135700	0.2			
	123000	0.1		154800	0.0			
	131300	0.2	296	080000	0.0			
	133500	0.0		100000	0.2			
300	080000	0.0		102700	0.0			
301	080000	0.0		111400	-0.2			
				114000	0.0			
				144600	-0.1			
				153500	0.0			

All times are 105° W.

Also refer to special report on Corrections to Echo Soundings-OPR 465.

LIST OF OBSTRUCTIONS

<u>Item</u>	<u>Pos.</u>	<u>Vol.</u>	<u>Page</u>	<u>Lat.</u>	<u>Long.</u>
Field Edit DP's	8001-8071	3	5-27	*	*
Log Mooring Buoy	1369	13	36	55 38.9	132 25.9

LIST OF STATIONS ON DA-10-7-69

<u>Signal No.</u>	<u>Origin of Station</u>
701	STAY, 1966
702	T-12380
703	T-12380
704	T-12380
705	Vol. 2, pg. 28
706	T-12380
707	T-12380
708	T-12380 Supplement
709	" "
710	" "
711	" "
712	" "
713	" "
714	" "
715	" "
716	" "
717	" "
718	Vol. 2, pg. 28; Vol. 3, pg. 30, 31
719	Vol. 3, pg. 29-31
720	T-12380
721	"
722	"
723	"
724	"
725	"
726	"
727	"
728	"
729	"
730	Vol. 2, pg. 28; Vol. 3, pg. 29-31
731	T-12380
732	"
733	"
734	"
735	"
736	"
737	"
738	Vol. 3, pg. 29, 30
739	T-12380
740	"
741	"
742	"
743	"
744	"
745	Vol. 3, pg. 17, 30

746	T-12376
747	"
748	Vol. 3, pg. 31
749	TOL, 1915
750	Vol. 3, pg. 17; Vol. 6, pg. 45, 46
751	Vol. 3, pg. 17; Vol. 6, pg. 45, 46
752	T-12376
753	"
754	"
755	Vol. 3, pg. 17
756	Vol. 3, pg. 17
757	Vol. 3, pg. 17
758	Vol. 9, pg. 72
759	T-12381
770	"
771	"
772	STOI 1915-1966
773	T-12381
774	"
775	"
776	"
777	"
778	WIND, 1922
779	T-10687
780	"
781	"
782	"
783	"
784	"
785	"
786	"
787	"
788	"
789	"
790	"
791	"
792	"
793	"
794	"
795	"
796	"
797	"



LIST OF MANUSCRIPTS

T-12380 Supplement  
T-10687  
T-12381  
T-12376  
T-12380

ABSTRACT OF POSITIONS

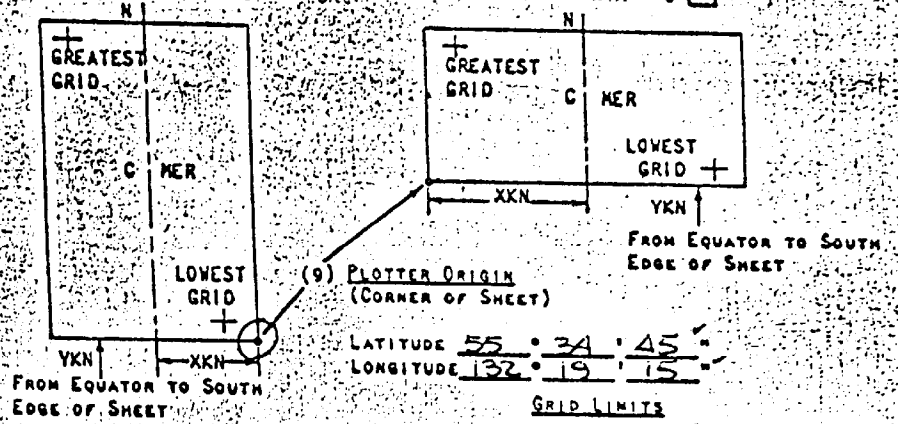
<u>Day</u>	<u>Launch 1</u>	<u>Launch RA-4</u>	<u>17' Whaler</u>	<u>DAVIDSON</u>
284	0001-0128			
285		3001-3109		
286			5001-5145	
287		3110-3318		
288	0138-0271		5146-5176	
289	0272-0391		5177-5258	
293	0392-0497	3319-3364		
294	0498-0756	3365-3496		
295	0757-0955	8038-8060		
296	0956-1167	8061-8071 3497-3690		
300	1168-1368 9018			9001-9017
301	1369-1442 9019-9020			

FOO COPY

79.

FORM # 1 FIG. 15  
**PARAMETERS FOR DIGITAL COMPUTING**  
**POLYCONIC PROJECTION**

- (1) PROJECT No. 465
- (2) H No. \_\_\_\_\_
- (3) FIELD No. S
- (4) REQUESTED BY E.A. TAYLOR
- (5) SHIP OR OFFICE PATFINDER
- (6) DATE REQUIRED 29 AUG 69
- (7) VISUAL  FATHOMS
- (8) ELECTRONIC  (FILL OUT FORM #3)
- (10) XKN (SP 5) DISTANCE FROM CHER TO EAST EDGE (NYX = 1) OR WEST EDGE (NYX = 0). 4,467.6 METERS
- (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE OF SHEET. 6,161,493.638 METERS
- (12) CENTRAL MERIDIAN 132° 23' 30"
- (13) SURVEY SCALE 1: 10,000
- (14) SIZE OF SHEET (CHECK ONE) 36x60  42x60  OTHER
- (15) NYX, ORIENTATION OF SHEET (CHECK ONE) NYX = 1  NYX = 0



LIST G.P. OF ALL STATIONS TO BE PLOTTED ON THIS PROJECTION ON THE BACK OF THIS FORM. (DEG., MIN., SEC.)  
 (OVER)

Computed: AKD  
 checked: JHD

TRIANGULATION STATIONS

JERK	55° 37'	32.913"	3
	132° 20'	41.877"	
KINK	55° 40'	49.580"	3
	132° 28'	01.251"	
STAY	55° 40'	05.226"	3
	132° 24'	59.052"	
TOL	55° 39'	40.214"	
	132° 22'	18.763"	
BUSH	55° 41'	45.13"	
	132° 25'	37.54"	

~~SUBG { 55° 43' 22.590" }  
~~{ 132° 26' 40.946" }~~~~

STOI

WIND

PET

MAIL

Comp. AKD  
checked: gcm

STOI { 55° 38' 36.688"  
       { 132° 21' 13.255"

WIND { 55° 36' 57.003"  
       { 132° 20' 53.013"

PET { 55° 35' 35.603"  
       { 132° 17' 31.995"

MAIL { 55° 35' 35.216"  
       { 132° 19' 32.052"

Comp: gcm  
checked:

DUAL INDICATOR  
POSITION-SOUNDING TAPE

<u>Time</u>	<u>Ind</u>	<u>Sndg</u>	<u>Pos</u> <u>Num</u>	<u>Day</u>	<u>Ft</u> <u>Fm</u>	<u>LA</u>	<u>RA</u>	<u>LO</u>	<u>CO</u>	<u>RO</u>
111230	01	0015	1878	101	1	046150	012580	0201	204	206
111245	01	0020								
111300	01	0016								
111315	01	0011								
111330	01	0010	1879	101	1	045400	014140	0201	204	206

Time	Hour, min., sec.
Ind	Indicator: 00 Soundings in whole units 01 Soundings in units and tenths
Sndg	Depth in feet or fathoms
Pos Num	Position number
Day	Julian day number
Ft/Fm	Indicator: 0 Feet 1 Fathoms
LA	Left Angle
RA	Right Angle
LO	Left object
CO	Center object
RO	Right Object



TIDE NOTES

The tide station used for this survey was THORNE at Thorne Head, Alaska.

Location	55° 40' 58"	132° 27' 38"
Plane of Reference	MLLW	
Time Meridian	105°W	
Type of gauge	Portable Bubbler	

The tide height data were corrected for differences in time and height. MLLW was 4.8 ft. on the staff during 17 September to 12 October, 1969, and -2.1 ft. on the staff thereafter. The staff was relocated on 12 October after the original was destroyed by floating debris.

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 27, 1970

~~Nautical Chart Division~~ Pacific Marine Center

Plane of reference approved in  
~~volume of soundings~~ for Tide tape printout

HYDROGRAPHIC SHEET 9085

Locality: <sup>Clarence</sup>  
~~Ketchikan~~ Strait, S.E. Alaska

~~Chief of Party~~ Year: 1969

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681):

Thorne, Thorne Bay, <sup>Clarence</sup>  
~~Ketchikan~~ Strait

Height of Mean High Water above Plane of Reference is as follows:

14.6 feet

Remarks

*J. M. Simmons*  
Chief, Tides and Currents Branch



**HYDROGRAPHIC SURVEY STATISTICS**

HYDROGRAPHIC SURVEY NO. H-9785

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		6	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES		14				
BOXES			1			
T-SHEET PRINTS (List)						
<del>T-12380, T-12381, T-12382, T-12383, T-12384, T-12385, T-12386, T-12387, T-12388, T-12389, T-12390, T-12391, T-12392, T-12393, T-12394, T-12395, T-12396, T-12397, T-12398, T-12399, T-12400</del> T-12380 Supp T-12380, T-12381, T-12376, T-12379						
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				2458
POSITIONS CHECKED		2458		
POSITIONS REVISED		32		
DEPTH SOUNDINGS REVISED		252		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		142		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		1		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		48	26	
JUNCTIONS		28	22	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		320	16	
SPECIAL ADJUSTMENTS		24	10	
ALL OTHER WORK		68	19	
<b>TOTALS</b>		<b>1488</b>	<b>93</b>	<b>1581</b>
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

Clarence R. Lehman

Gerge Meyer  
Insp. Carstens 14 hrs 2/14/74

11/29/71-12/21/71

5/1/72-6/23/72

Jan 2, 1974

11/8/72

Jan 23, 1974

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY BRANCH

REGISTRY NO. H-9085

FIELD NO. DA-10-7-69

Alaska, Clarence Strait, Tolstoi Bay and Vicinity

SURVEYED: October 11, 1969 to October 28, 1969

SCALE: 1:10,000

PROJECT NO.: OPR-465

SOUNDINGS: DE-723 Echo Sounders

CONTROL: Sextant fixes on  
shore signals

Chief of Party..... R. E. Moses  
Surveyed by..... G. N. Endrud  
..... B. W. Fisher  
..... G. F. Tornberg  
..... R. L. Baker  
..... W. K. Taguchi  
..... D. L. Suloff  
Protracted by..... Gerber Digital Plotter  
PMC  
Soundings plotted by..... Gerber Digital Plotter  
PMC  
Verified and inked by..... C. R. Lehman  
Reviewed by..... G. K. Myers  
..... Date: January 23, 1974  
Inspected by..... R. H. Carstens

1. Description of the Area

This survey covers Tolstoi Bay and adjacent inshore slope of the west side of Clarence Strait from Thorne Head south to Windfall Harbor.

The bottom in Clarence Strait is characterized by steep rugged slopes which extend to depths of over 100 fathoms. In Tolstoi Bay steep gradients extend from shore to depths of greater than 80 fathoms.

Many rocky shoals and reefs exist inshore and evidences of kelp were found in many areas of the present survey.

Predominant bottom characteristics in the area are mud, sand, and pebbles. Rocky ledges and reefs intersperse foul and gravel beaches along the shore.

## 2. Shoreline and Control

The source of control is adequately described in the Descriptive Report. The shoreline originates with advanced manuscripts T-12376, T-12380 and Supplement, and T-12381 all based on 1963 air photography and a 1969 field edit; and T-10687 (1956) a Class 1 Map. A conflict between the shoreline on T-10687 and T-12381 was resolved in the Coastal Mapping Division.

## 3. Hydrography

Depths at crossings are in good agreement considering the nature of the bottom. The usual depth curves are adequately delineated, except in foul areas or where ledge and reefs made passage dangerous. In some cases, brown and broken curves were drawn by the reviewer to emphasize lesser depths in areas of deeper soundings.

The delineation of bottom configuration was in general good. However, no hand lead verification of critical depths was accomplished. Depths through major channels in the approaches to Tolstoi Bay are deep and adequately developed to provide a safe passage. However, inshore development of the western side of Clarence Strait is sparse in some places and some off-lying shoals are inadequately delineated.

## 4. Condition of the Survey

The plotting, sounding records and various printouts are adequate and conform to the Hydrographic Manual supplemented by the Instruction Manual.- Automated Hydrographic Surveys. However, some closely spaced soundings in deep depths could have been excessed without harming the delineation of the bottom.

Ledges and reefs were sometimes erroneously delineated on the verified smooth sheet because hydrographic data was not always consulted. Boat sheet references and hydrographic notes in the sounding volumes should be utilized to properly delineate these features.

### 5. Junctions

Adequate junctions were effected with H-9084 (1969) on the northwest, H-9092 (1969) on the north and northeast, and H-9091 (1969) on the east and southeast.

### 6. Comparison with Prior Surveys

A.	H-1649b	(1885)	1:80,000
	<u>H-1653a</u>	<u>(1885)</u>	<u>1:20,000</u>

These early smaller scale reconnaissance surveys provide only general information of this area which precludes any detailed comparison with the present survey. However, it is evident that the general character of the bottom has remained the same. The present survey portrays the bottom configuration in much greater detail and is adequate to supersede the prior surveys in the common area.

B.	<u>H-3810 WD</u>	<u>(1915-1916)</u>	<u>1:40,000</u>
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The wire drag survey covers a portion of the present survey. Effective drag depths do not conflict with depths on the present survey.

### 7. Comparison with Chart 8124 (Latest print date, November 4, 1972) Chart 8142 (Latest print date, February 10, 1973)

#### A. Hydrography

The charted hydrography originates largely with depths from the boat sheet (BP-77734) and the verified smooth sheet of the present survey. Boat sheet depths are about 1 fm. shoaler than depths on the smooth sheet.

The present survey is adequate to supersede the charted information in the common area.

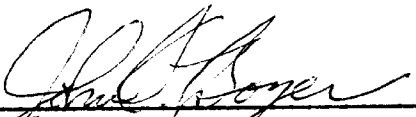
### 8. Compliance with Project Instructions

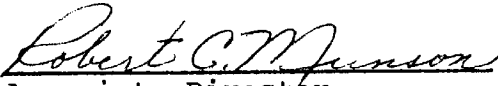
This survey adequately complies with the project instructions.

9. Additional Field Work

This is an excellent basic survey and no additional field work is required immediately. However, at an opportune time, determination of least depth on the 6.9 fm. shoal in lat.  $55^{\circ}38.5'$ , long.  $132^{\circ}21.06'$ , would be desirable.

Examined and Approved:

  
\_\_\_\_\_  
Chief  
Marine Chart Division

  
\_\_\_\_\_  
Associate Director  
Office of Marine Surveys and  
Maps

H-9085

Information for Future Pre-Survey Review

1. The inshore area on the east side of Kasaan Peninsula is sparsely sounded and should be developed in greater detail.
2. The 6.9 shoal in lat. 55°38.5', long. 132°21.06', has not been developed adequately for least depth.
3. The rock awash at MLLW charted at lat. 55°41.44', long. 132°26.78', from T-12376 (BP-87611) falling in about 3 fathoms of water was neither verified or disproved by the hydrographer.

This rock should be investigated at low tide, and if found, its elevation should be determined.

Position Lat.	Index Long.	Bottom Change Index	Use Change Index	Resurvey Cycle
553	1323	1	1	50 yrs.
554	1323	1	1	50 yrs.

Reg. No. H-9085

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey, the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:





