

9214

Diag. Cht. No. 8201-3

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-10-2-71 Office No. H-9214

LOCALITY

State Alaska

General locality Kekuk Strait

Locality Vicinity of Conclusion Island

1971

CHIEF OF PARTY

CDR. Ray E. Moses

LIBRARY & ARCHIVES

DATE 10-17-73

USCOMM-DC 87022-P66

9214

HYDROGRAPHIC TITLE SHEET

H-9214

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-10-2-71

State Alaska

General locality Keku Strait
~~Southeast Alaska~~

Locality Vicinity of Conclusion Island
~~Keku Strait, North and East of Conclusion Island~~

Scale 1:10,000 Date of survey 6 April - 7 May 1971

Instructions dated 2 February 1971 Project No. OPR-148

Vessel DA-1 (Launch 1), DA-2 (Launch 2), NOAA Ship DAVIDSON, 12' and 17' Skiffs

Chief of party CDR. Ray E. Moses

Surveyed by CST A. Luceno, Lt. (j.g.) W.K. Taguchi, Lt. (j.g.) G.L. Miller

Soundings taken by echo sounder, hand lead, pole Raytheon DE-723, Nos. 142, 553, 919, 1276 & 1284

Graphic record scaled by Ships's Personnel

Graphic record checked by Ship's Comissioned Officers

Positions verified by James L. Stringham Automated plot by Gerber Digital PGC-800 Branch Plotter

Soundings ~~penciled~~ verified by James L. Stringham

Soundings in fathoms ~~NEX~~ at ~~NLW~~ MLLW

REMARKS:

Applied to atlas 11/7/73.

elt
8201
8272

DESCRIPTIVE REPORT

DA-10-2-71

A. PROJECT

This survey was accomplished according to Project Instructions: OPR-448-DA-71, Keku Strait and Sumner Strait, Southeast Alaska, dated 2 February 1971. ✓

B. AREA SURVEYED

The survey covered the area of Keku Strait north, and west of Conclusion Island, between latitudes $56^{\circ} 28.75'N$ and $56^{\circ} 32.75'N$ and longitudes $133^{\circ} 46.0'W$ and $133^{\circ} 58.2'W$. Field work commenced on 6 April and was completed on 7th May 1971. ✓

C. SOUNDING VESSELS

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

<u>VESSEL</u>	<u>POSITION NUMBER</u>	<u>COLOR</u>
Launch 1		Blue ✓
Launch 2		Red ✓
17' Skiff		Violet ✓
NOAA Ship DAVIDSON		Brown ✓

Field edit positions and detached positions are shown in brown. A summary of each vessel's work by position number is attached. ✓

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers were used:

Launch 1	#553, 142 ✓
Launch 2	#919 ✓
17' Skiff	#1276 ✓
NOAA Ship DAVIDSON	#1284 ✓

Echo sounder corrections were determined from bar checks taken daily by the launches and skiff and from a Nansen cast taken by the NOAA Ship DAVIDSON. ✓

20m

Corrections to echo soundings can be found in a separate report titled, "Corrections To Echo Sounders OPR-448-1971." All soundings are in fathoms. Time meridian 105° W was used throughout the survey. TC/TI tape print-outs are attached. ✓

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. Three types of visual signals were used: Triangulation, photogrammetric and hydrographic. The triangulation signals were machine plotted at the Pacific Marine Center and checked by LT.jg. G.L. Miller. Photogrammetric signals were located by radial plots from the office photographs. Hydrographic signals were located from a three point fix with a check angle obtained by a sextant. The geographic position was computed on the Ship's Wang Calculator and plotted by the Ship's commissioned officers. A list of signals are included in the appendix. ✓

Electronic control, SEA-FIX, was attempted. Red and green arcs were constructed after intersection points were calculated. The red station operated properly but the green station failed to function. Visual fixes were used for positioning throughout the sheet. On part of the sheet the launch ran on the red arcs which provided an electronic range. ✓

G. SHORELINE

Shoreline and shoal areas were traced onto the boatsheet by the Ship's commissioned officers from the following incomplete manuscripts: T-12217, T-12218, T-12219, T-12221, T-12222, T-12223. ✓

Verification was carried out by the Ship's commissioned officers and Mr. Lowell O. Neterer, Photogrammetry Division, AMC. Field edit was completed and revisions to the manuscripts were suggested, see "Field Edit Reports, OPR-448 1971."

H. CROSSLINES

The percentage of crosslines to lines is 5.0% or 26.2 NM compared to 521.2 NM. Soundings agree at these crossings. ✓

I. JUNCTIONS

Junctions were made with contemporary surveys PA-10-3-65, DA-10-6-70 and DA-10-1-71. Soundings agree at these junctions.
(H-9160) (H-9213) (H-9101)

J. COMPARISON WITH PRIOR SURVEYS

Comparison with surveys H-2150, H-4763, H-4763a and Chart 8272. The following is a summary of the results of the investigation: ✓

	<u>Lat.</u>	<u>Long.</u>	<u>Prior Survey</u>	<u>Present Survey</u>	<u>Remarks</u>
	56°	133°	Fathoms	Fathoms	
1.	30.08'	51.00'	Rock		Pos. 440-443 ✓ 4763
2.	29.90'	54.26' ⁵	9.2'	3.3' ²	Shoal Area ✓ ✓
3.	30.36'	55.23' ¹	8.2' ✓	8.8' ⁶	
4.	30.48'	53.96'	7.2' ✓	23' ✓	Searched For, Not Found ✓ X
5.	31.57' ✓	51.00' ✓	0 ✓	0.3' ⁴ ✓	30m dia. rock ✓
6.	31.92'	51.70'	6.8' ✓	4.0' ⁶ ✓	Shoaler Depth ✓
7.	32.20'	50.89'	10' ✓	8.0' ⁵ ✓	Shoaler Depth ✓
8.	32.45'	51.38' ⁵⁰	9.8' ✓	7.8' ^{8.1} ✓	Shoaler Depth ✓
9.	32.75'	49.75'	5.8' ✓		See DA-10-1-71 ✓ (H-7213)
10.	31.47'	48.78'	2.2' ✓	1.8' ^{2.0}	Shoaler Depth ✓
11.	30.49'	48.86'	9.5' ✓	10.4' ⁸	
12.	30.16'	49.71'	12' ✓	11' ✓	
13.	29.94'	49.23' ⁰	9' ✓	8.2' ⁶ ✓	
14.	28.83'	46.88'	12' ✓	12' ✓	Shoal 220m East
15.	31.16'	46.58'	2.2' ✓	2.0' ¹ ✓	
16.	31.78'	47.62'	0.8' ✓	0.9' ✓	
17.	32.16'	47.19'	4.3' ✓	4.8' ✓	
18.	32.26'	47.06'	2.8' ✓	10' ✓	Searched For, Not Found ✓ X
19.	31.05'	46.32'	0.5' ✓	0.4' ³ ✓	
20.	31.31'	46.37'	2.3' ✓	2.3' ⁵ ✓	
21.	31.16'	46.08'	0.8' ✓	1.4' ✓	
22.	32.50'	46.07'	4' ✓		See DA-10-6-70 ✓

✓
0111

In all the above cases, the areas were adequately developed with the shoalest depth being shown. The present survey depths are reduced using the predicted tides for Monte Carlo Island, Alaska.

Listed below are developments of areas with shoal depths to delineate its extent and its least depth.

	<u>Lat.</u>	<u>Long.</u>	<u>Remarks</u>	
	56°	133°		
a.	30.01"	46.31"	Least Sounding	17 - ✓
b.	29.91"	47.81"	" "	10.4 ⁹ ✓
c.	30.61"	48.31"	" "	13 - ✓
d.	31.251"	49.01"	" "	4.3 - ✓
e.	31.71"	48.51"	" "	4.3 ⁷ ✓
f.	32.014	48.61"	" "	2.5 ⁷ - ✓
g.	31.51"	48.41"	" "	2.8 ⁹ ✓
h.	30.91"	49.61"	" "	8.0 ^{8.0} ✓
i.	31.31"	50.91"	" "	10.0 ^{9.5} ✓
j.	31.71"	50.91"	" "	4.5 ⁷ - ✓
k.	29.41"	52.41"	" "	12 - ✓
l.	30.01"	52.51"	" "	12 - ✓
m.	30.41"	52.91"	" "	8.6 - ✓
n.	30.71"	52.81"	" "	14 - ✓
o.	30.71"	52.41"	" "	13 - ✓
p.	30.21"	53.01"	" "	14 - ✓
q.	30.31"	53.41"	" "	12 - ✓
r.	30.31"	53.91"	" "	13 ¹³ - ✓
s.	29.81"	54.71"	" "	3.2 ⁶ - ✓
t.	27.9 ^{27.9} 30.01"	54.61"	" "	3.4 ² - ✓
u.	30.01"	56.21"	" "	5.8 ¹ - ✓

GLM

v. 30.6' 55.6' " " 1.2'

All developments are on the boatsheet. All soundings have been reduced using predicted tides for Monte Carlo Island, Alaska. ✓

K. COMPARISON OF SOUNDINGS WITH THE CHART

A comparison of soundings and depth curves was made with C&GS Chart #8201, 16th edition, 7 November 1970 and there is agreement. The present survey shows better delineation of shoal areas. ✓

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 survey. ✓

N. STATISTICS

<u>Vessel</u>	<u>Number of Positions</u>	<u>Nautical Miles Sounding Lines</u>	<u>B.S.</u>	<u>D.P.</u>	
Launch 1	3423	421.9	12	23	✓
Launch 2	636	62.6	5		
17' Skiff	382	36.7		2	
12' Skiff				17	
Ship DAVIDSON			44		

The total area surveyed is 22.1 square statute miles. There are twenty five (25) volumes with this survey. *Some are only raw data printouts*

The tide station used for this sheet is the Monte Carlo Island Tide Gage on time meridian 105° W. The soundings on the boatsheet were reduced using predicted tides for Monte Carlo Island, Keku Strait, Alaska.

O. LOGGING

In Launch 1 a Hydrographic Data Logger Model DL-101 by Milcon Engineering Corporation and in Launch 2 a Hydrographic Data Logger DL-10 by Climatronics Corporation with Friden Flexowriters were used to record the data on this survey. A single indicator format is used. An example and explanation of this format is included in the appendix. ✓

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GEOGRAPHIC NAME LIST

Refer to "Geographic Names Report, OPR-448, 1971."

TIDE NOTE

The tide station used for this survey was the Monte Carlo Island, Keku Strait, Alaska, a portable bubbler gauge. ✓

Location	Lat. 56° 32' ^{00"} 15" N ✓ Long. 133° 45' ^{00"} 00" W ✓
Plane of Reference	MLLW
Time Meridian	105° W
Type of Gauge	Portable Bubbler

The tide data were corrected for differences in time and height. The reference tide gauge for this sheet was the Standard Tide Gauge at Sitka, Alaska.

Hourly height tapes, printouts, copies of Form 362 and a field tide note were forwarded to PMC.

Tide station reports, leveling records, marigrams and Form 362 were transmitted to Chief, Tides Branch with cover letter requesting the following to be furnished to PMC: ✓

1. Verified copies of Form 362's with values entered in original record gaps.
2. Datum: Value of MLLW on the marigrams.
3. Form 712's for insertion in Descriptive Report
4. Time and height relationships between gages operated in the area surveyed.
5. Recommended zoning for tide correctors.

P. RECOMMENDATIONS FOR THIS BOATSHEET

It is recommended that this survey super~~s~~ede prior surveys. ✓

Q. REFERENCE TO REPORT

Correction To Echo Sounders - OPR-448-1971

Field Edit Report - OPR-448-1971 ✓

Tide Gage Report - OPR-448-1971

Respectfully submitted,

Gregory L. Miller
Gregory L. Miller
LTJG NOAA

Attachments:

Geographic Name List
Tide Notes
Fathometer Initial Correction
Boatsheet Layout ✓
Form No. 1 - Parameters For Digital Computing - Visual
Form No. 3 - Parameters For Digital Computing - Electronic
Position Sounding Tape
Abstract of Positions
List of Signals on DA-10-2-71

O.K. 2/28

TABLES OF CORRECTIONS TO ECHO SOUNDERS OPR 448 1971

TABLE 1 Velocity Correction for Temperature and Salinity

Depth

From	To	Corrn
8.6 fm	9.9fm	0.0fm
10.0	29.0	+0.1
29.1	46.0	+0.2
46.1	62.0	+0.3
62.1	78.0	+0.4
78.1	96.0	+0.5
96.1	125.0	+0.6
125.1	177.0	+0.7
177.1	356.0	+0.8

Survey DA 10-1-71 Corrections from Barchecks

Table 2 Fathometer #142

From	To	Corrn
0.0fm	2.0fm	+0.1fm
2.1	509.6	+0.2
5.7	300.0	+0.3

Table 3 Fathometer #919

From	To	Corrn
0.0fm	1.4fm	+0.1fm
1.5	300.0	+0.2

Table 4 Fathometer #1276

From	To	Corrn
0.0fm	300.0fm	0.0fm

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 Survey DA 10-2-71 Corrections from Barchecks.

Table 5 Fathometer #142

From	To	Corrn
0.0fm	1.5fm	+0.1fm
1.6	6.0	+0.2
6.1	300.0	+0.3

Table 6 Fathometer #553

From	To	Corrn
0.0fm	1.0fm	+0.1fm
1.1	5.2	+0.2
5.3	300.0	+0.3

Table 7 Fathometer #1276

From	To	Corrn
0.0fm	4.9fm	+0.1fm
5.0	300.0	+0.2

Table 8 Fathometer #919

From	To	Corrn
0.0fm	4.9fm	+0.1fm
5.0	300.0	+0.2

Survey DA 05-1-71

Table 9 Fathometer #919

From	To	Corrn
0.0fm	2.8fm	+0.0fm
2.9	6.4	+0.1
6.5	7.8	+0.2
7.9	300.0	+0.3

Table 10 Fathometer #1276

From	To	Corrn
0.0fm	300.0fm	+0.0fm

SINGLE INDICATOR

POSITION-SOUNDING TAPE

<u>Time</u>	<u>Ind</u>	<u>Sndg</u>	<u>Pos No.</u>	<u>Day</u>	<u>LA</u>	<u>RA</u>	<u>LO</u>	<u>CO</u>	<u>RO</u>
080030	3	0018	1313	101	078560	056780	0201	203	204
080045	3	0024							
080100	3	0048							
080115	3	0059							
080130	3	0208	1314	101	098540	059300	0202	203	204

Time Hour, min, sec.

Ind Indicator: 0=Ft. & whole units

1=Ft. & units & tenths

2=FM. & whole units

3=FM. & units & tenths

4=Meters & whole units

5=Meters & units & tenths

Sndg Depth in feet, fathoms or meters

Pos No. Position number

Day Julian day number

LA Left angle

RA Right angle

LO Left object

CO Center object

RO Right object

ABSTRACT OF POSITIONS

<u>DAY</u>	<u>POSITION NO.</u>	<u>VOLUME</u>	<u>VESSEL</u>	<u>FATHOMETER NO.</u>	<u>REMARKS</u>
098	0-35	1	Launch 1	553	
099	36-138	2	Launch 1	553	
099	139-154	3	Launch 1	553	
100	155-426	4	Launch 1	553	
101	427-640	5	Launch 1	553	
103	641-842	6	Launch 1	553	
103	7001-7007	3	Launch 1	553	D.P.
105	843-1014	7	Launch 1	553	
105	7008-7010	3	Launch 1	553	D.P.
111	1115-1211	8	Launch 1	142	
112	1212-1425	9	Launch 1	142	
113	1426-1597	10	Launch 1	142	
116	5001-5328	11	Launch 2	919	
116	7011-7027	3	12' Skiff	None	Field Edit
117	1598-1875	12	Launch 1	142	
118	1876-2183	13	Launch 1	553	
118	7028	3	Launch 1	553	D.P.
119	2184-2411	14	Launch 1	553	
120	2412-2622	15	Launch 1	553	
120	5329-5466	16	Launch 2	919	
123	2623-2832	17	Launch 1	553	
123	7029	3	Launch 1	553	D.P.
123	8001-8019	23	Ship DAVIDSON	1284	Bottom Samples
124	2833-3111	18	Launch 1	553	

ABSTRACT OF POSITIONS CON'T.

<u>DAY</u>	<u>POSITION NO.</u>	<u>VOLUME</u>	<u>VESSEL</u>	<u>FATHOMETER NO.</u>	<u>REMARKS</u>
124	9001-9161'	19	17' Skiff	1276'	
125	3112-3321'	20	Launch 1	553'	
125	7030-7034'	3	Launch 1	553'	D.P.
125	9162-9382'	19 & 21	17' Skiff	1276'	
127	3322-3428'	3	Launch 1	553'	
127	8050-8061'	22	Launch 1	553'	Bottom Samples
127	5467-5636'	24	Launch 2	919'	
127	8080-8084'	23	Launch 2	919'	Bottom Samples
127	8024-8044'	24	Ship DAVIDSON	1276'	Bottom Samples
131	7035-7036'	² / ₃₅	17' Skiff	None	D.P.

LIST OF SIGNALS ON DA-10-2-71

<u>Signal No.</u>	<u>Origin of Signal</u>	<u>Signal No.</u>	<u>Origin of Signal</u>
201	T-12223	225 ✓	Vol. 22, p.5
202	T-12223	226 ✓	Vol. 22, p.6
203	SEE, 1927	230	T-12218
204	T-12222	231	T-12218
205	WAS, 1929	232	T-12218
206	THEM, 1929	233	"
207	FIN, 1929	234	T-12217
208	BOAT, 1929	235	"
209	THIS, 1929	236	"
210	NEW, 1927	237	"
211	PORT, 1927	238	"
212	OFF, 1927	239	"
213	SMALL, 1927	240	"
214	EX, 1927	241	"
215	SECLUSION, 1929	242	"
216	T-12218	243	"
217 ✓	Vol. 22, p.5	244	"
218 ✓	Vol. 22, p.3	245	"
219 ✓	Vol. 22, p.7	246	"
220 ✓	Vol. 22, p.4	247	"
221	Vol. 22, p.5	248	"
222	T-12219	249	T-12221
223	Vol. 22, p.6	250	T-12217
224 ✓	Vol. 22, p.4	251	T-12221

LIST OF SIGNALS ON DA-10-2-71 CON'T

<u>Signal No.</u>	<u>Origin of Signal</u>	<u>Signal No.</u>	<u>Origin of Signal</u>
252	T-12221	272	T-12221
253	"	273	T-12222
254	"	274	"
255	"	275	"
256	"	276	T-12217
257	"	280	T-12218
258	"	281	"
259	"	282	"
260	"	283	"
261	"	284	"
262	"	285	"
263	"	286	"
264	"	287	"
265	"	288	"
266	"	289	"
267	"	290	"
268	"	291	"
269	"	292	T-12223
270	"	293	"
271	"		



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

*Rec'd. 3/19/73 and
returned with notes: ack*

Date : 14 March 1973

Reply to Attn. of: CPM3

To : CAM 2122
Chief, Coastal Mapping Division

From : CPM3 *[Signature]*
Chief, Processing Division

Subject: Errors on Advanced Manuscript T-12219

On hydrographic survey H-9214 (DA-10-2-71) we have encountered discrepancies in the shoreline as shown on T-Sheets and the boatsheet.

In particular, at Lat. $56^{\circ}31.84'$ Long $133^{\circ}46.85'$ ~~and Pos. 444~~, the boatsheet shows a reef bearing 2 ft at 1337, 29 April '71. When tide correctors are applied, this reduces to 3 ft above MLLW. The source of the above data is from notes on the boatsheet. (See xerox copy of part of the boatsheet attached.)

The Incomplete Manuscript T-12219 shows a reef of similar configuration as that which appears on the boatsheet. The Advanced Manuscript does not show a reef at this location. *Reef was erroneously removed because of green deletion marks by field editor. Will be added as an "incomplete".* There are also several rocks in the vicinity; the heights of these rocks vary one to two feet from that which the hydrographer reported.

The hydrographic sounding lines fit the configuration of the reef accurately. We, therefore, conclude that the Advanced Manuscript (field edit applied August 1971) is incomplete or in error.

The bare rocks mentioned by the hydrographer (see pos. 441, 442, and 443) attached copy) are also missing on the Advanced Manuscript.

It is requested that the compilation of Advanced Manuscript T-12219 be re-examined and a corrected copy be furnished this office as soon as possible.

H-9214 (DA 10-2-71)

HYDRO. Responsibility.
we do not get this
data.

NOTES:

- Pos. 440 - Rock 17th Bore 0852 4-11-71 (5)
- Pos. 441 - Rock 18th Bore 0857 4-11-71,
(same rock as Pos. 440) (6)
- Pos. 442 - Rock 12th Bore 0904 4-11-71 (2)
- Pos. 443 - Rock 10th Bore 0908 4-11-71
40 M. Dia. (10)
- Pos. 597 - 10M. West of ledge - 4th Bore
1956 4-11-71 (14)
- Pos. 609 - Rock 1st Covered 1433 4-11-71 (16)
- Pos. 939 - Duplicated.
- Pos. 943 - 2nd out, Rock 1st Bore 1846, (2)
4-15-71, Stbd.
- Pos. 1006 - 8 sec. after fix, hit bottom
1410, 4-15-71 ledge
- Pos. 641 - Duplicated.
- Rock - Lat. $56^{\circ} 30.23'$ Long. $133^{\circ} 55.82'$
2nd Covered 1500, 4-15-71 (3)

- Reef $\phi 56^{\circ} 31.84'$ $\lambda 133^{\circ} 46.65'$
(3) 2nd Bore 1337, 4-29-71
- Reef $\phi 56^{\circ} 31.96'$ $\lambda 133^{\circ} 46.95'$
(6) 2nd Bore 1431, 4-29-71
- Reef $\phi 56^{\circ} 31.38'$ $\lambda 133^{\circ} 46.70'$
(2) 2nd Bore 1029, 4-29-71
- Reef $\phi 56^{\circ} 30.9'$ $\lambda 133^{\circ} 46.5'$
(9) 3rd Bore 1026 4-29-71
- Reef $\phi 56^{\circ} 31.35'$ $\lambda 133^{\circ} 53.05'$
(13) 4th Bore, 0935, 5-3-71
- Reef $\phi 56^{\circ} 31.41'$ $\lambda 133^{\circ} 53.49'$
(14) 2nd above MHW

- Reef - 100M. N.E. of Signal 237
Awash 1404, 4-15-71 (9)
- Pos. 972 - Reef 10M. West, 2nd Bore, Rock
2nd Bore 1333, 4-15-71 (4)
- Rock - 30M S.W. from Signal # 239
1/2nd Bore 1010, 4-21-71 (11)
- Pos. 1202 - Reef 3M Port beam
1/2nd Bore 1324, 4-21-71 ledge
- Rock - 15M N.E. from Signal # 255
1/2nd Bore 1336, 4-21-71 (9)
- Position 1206 to Pos. 1207,
Boatsheet controls.
- No position 1015 to 1114 positions skipped
- Pos. 1306 - 3rd out, 30M to stbd. is on
islet 2nd above HW, 1 small tree.
- Rock $\phi 56^{\circ} 32.31'$ $\lambda 133^{\circ} 52.27'$ (6)
1st Ashore 1333, 4-29-71

APPROVAL SHEET

Hydrographic Survey
DA-10-2-71
OPR-448
Southeast Alaska

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

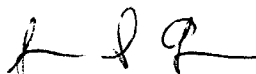
Donald C. Saladin for

Ray E. Moses
CDR. NOAA
Commanding Officer
NOAA Ship DAVIDSON

APPROVAL SHEET

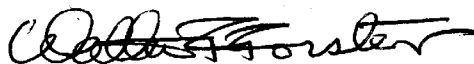
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,



James S. Green
Supervisory Cartographic Technician

Approved and forwarded,



Walter F. Forster, LCDR, NOAA
Chief, Processing Division
Pacific Marine Center

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY 8/16/72

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for tide tape printout for smooth tape

Tide Station Used (NOAA Form 77-12): Monte Carlo Island

Period: April 8 to May 11, 1971

HYDROGRAPHIC SHEET H9213 and H9214

OPR 448

Locality: Keku Strait, S.E. Alaska

Plane of reference (mean lower low water) on printout is 4.7 ft.
which is 4.7 feet on tide staff.

Height of Mean High Water above Plane of Reference is 11.7 ft.

Remarks: Missing hourly heights have been enclosed for April 9 ✓
and 10 and May 11

Received
9-19-72

Robert A. Cummings
Chief, Tides Branch

GEOGRAPHIC NAMES
 Survey No. H-9214

Name on Survey											
	A	B	C	D	E	F	G	H	K		
CONCLUSION ISLAND											1
KEKU STRAIT											2
KUIU ISLAND											3
MONTE CARLO ISLAND											4
NO NAME BAY											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Approved by:
Chas. E. Hamington
 Nov. 29, 1973

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9214

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PRO		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		6	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENCLOSURES			2			
CAHIERS	1					
VOLUMES	6					
Boxes			2			

T-SHEET PRINTS (List)
~~Advanced Manuscripts, Det 2217, Det 2218, Det 2219, Det 2221, Det 2222, Det 2223 and Det 2224~~

SPECIAL REPORTS (List)
One copy correction to Echo sounder report OPR-448, 1971.

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

PROCESSING ACTIVITY	AMOUNTS			TOTALS
	PRE-VERIFICATION	VERIFICATION	REVIEW	
POSITIONS ON SHEET				
POSITIONS CHECKED		1418	78	
POSITIONS REVISED		103	1	
DEPTH SOUNDINGS REVISED or added		330	132	
DEPTH SOUNDINGS ERRONEOUSLY SPACED			5	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED			0	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		40	60	
JUNCTIONS		16	20	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		180	75	
SPECIAL ADJUSTMENTS			45	
ALL OTHER WORK		400	133	
TOTALS		636	341	

PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE
VERIFICATION BY <i>James L. Stringham</i>	3/27/72	9/11/73
REVIEW BY <i>Robert W. Derkaganian</i>	12/11/74	3/14/75

Inspected G.K. Myers 4/15/75 RMC Jones 25 hr 3/16/75
U.S. G.P.O. 1972-769-562/435 REG.#6

Reg. No. H-9214

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:

Pro. 5217 - Change right angle to 046340

Reg. No. _____

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

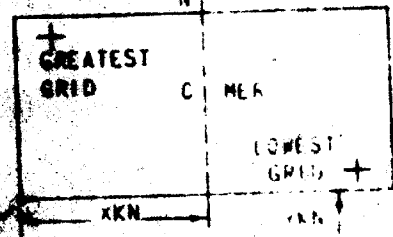
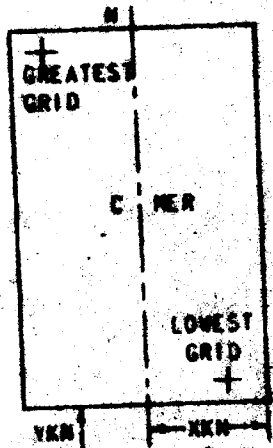
MAGNETIC TAPE CORRECTED

DATE _____ TIME REQ'D. _____ INITIALS _____

REMARKS:

**FIG. 18
MILITARY COORDINATE
SYSTEM PROJECTION**

- (1) PROJECT No. 44-114
- (2) H No. _____
- (3) FIELD No. Sheet D
- (7) VISUAL (FILL OUT FORM #3)
- (10) XKN (SP 5) DISTANCE FROM CMER TO EAST EDGE (NYX = 1) OR WEST EDGE (NYX = 0). 7549.941 METERS
- (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE OF SHEET. 6260.836991 METERS
- (12) CENTRAL MERIDIAN 133° 52' 00"
- (13) SURVEY SCALE 1:10,000
- (14) SIZE OF SHEET (CHECK ONE) 30x54 42x60 OTHER
- (15) NYX, ORIENTATION OF SHEET (CHECK ONE) NYX = 1 NYX = 0



(9) PLOTTED ORIGIN (CORNER OF SHEET)

LATITUDE 56° 28' 17"
LONGITUDE 133° 59' 21"

FROM EQUATOR TO SOUTH EDGE OF SHEET

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

- (16) GREATEST LATITUDE 56° 33' 00"
- (17) LOWEST LATITUDE 56° 28' 50"
- (18) DIFFERENCE 0° 4' 30"
- (21) GREATEST LONGITUDE 133° 59' 00"
- (22) LOWEST LONGITUDE 133° 45' 00"
- (23) DIFFERENCE 14° 00"

40.

For conning vessel

FORM # 3 FIG. 7
COMPUTER PARAMETERS FOR ELECTRONICALLY CONTROLLED SURVEYS

(RANGE - RANGE)

(1) PROJECT No. 448 (2) H- No. 921 (3) FIELD No. DA-10-2-71

(4) TYPE OF CONTROL: SHORAN, RAYDIST, SEA-FIX, RADAR
FREQUENCY (FOR CONVERSION OF RAYDIST OR HI-FIX LANES TO METERS) 1619.64K

(5) RANGE ONE (R1) STATION NAME WITZ, 1971 LATITUDE 56° 33' 29.314"
LONGITUDE 133° 47' 28.549"

(6) RANGE TWO (R2) STATION NAME BRENK, 1971 LATITUDE 56° 31' 08.700"
LONGITUDE 133° 41' 04.007"

(7) AZIMUTH FROM R1 TO R2 303° 27' 09.96"

(8) BASELINE LENGTH IN METERS 7,880.8 M.

(9) LOCATION OF SURVEY WITH RESPECT TO ELECTRONIC BASELINE: CHECK ONE
(TO DETERMINE: IMAGINE AN OBSERVER STANDING AT R1 AND LOOKING DIRECTLY
AT R2 --- IF THE SURVEY AREA IS TO THE OBSERVER'S LEFT THEN A IS
NEGATIVE; IF THE SURVEY AREA IS TO THE OBSERVER'S RIGHT THEN A IS
POSITIVE.)

 -A (MINUS) +A (PLUS)

(10) IF SHORAN CORRECTIONS ARE APPLIED BY THE EQUATION, $K(X) + C = D$,
WHERE X IS SHORAN DISTANCE AND D IS TRUE DISTANCE, ENTER THE CONSTANT
COEFFICIENTS OF THE EQUATIONS HERE:

K(R1) , C(R1) , K(R2) , C(R2)

(11) NUMBER OF VELOCITY TABLES TO BE USED:
 NONE, ONE, MORE THAN ONE.

(12) THIS FORM IS SUBMITTED ONLY AS AN AID IN PREPARING A BOAT
SHEET PROJECTION.

 THIS FORM APPLIES TO ALL DATA ON THIS SURVEY.

 THIS FORM APPLIES TO PART OF THE DATA ON THIS SURVEY -

TIME AND DATE LIMITATIONS: FROM TO

POSITION NUMBER LIMITATIONS: FROM TO

THIS IS FORM #3 SHEET # 1 OF 1 SHEETS FOR THIS SURVEY.

(13) OTHER REMARKS:

See Volume 22 of 25, for computations.

6/11

2. Shoreline and Control

The origin of control is adequately discussed in Paragraph F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-12217, T-12218, T-12219, T-12221, T-12222, and T-12223 of 1961-71.

Several foreshore characteristics shown as "Rocky" or "Rky" on several of the above manuscripts are described by the more appropriate "Boulders" on the smooth sheet of the present survey.

3. Hydrography

A. Depths at crossings are in good agreement considering the nature of the bottom.

B. The usual depth curves are adequately delineated except in foul inshore areas or where ledge made passage dangerous. Several brown and dashed curves have been drawn by the reviewer to emphasize lesser depths in areas of deeper soundings.

C. The development of the bottom configuration and the investigation of least depths are considered adequate. However, additional development for least depth and verification by handlead would have been desirable on the features listed below.

<u>Depth</u> (fms.)	<u>Latitude</u>	<u>Longitude</u>
3.4	56°31.52'	133°46.94'
1.1	56°31.32'	133°46.77'
5.8	56°31.02'	133°52.73'
4.7	56°31.71'	133°50.88'
4.6	56°31.25'	133°49.00'

4. Condition of the Survey

The field work, sounding records, smooth plotting, sounding printout and descriptive report are adequate and conform to

the requirements of the Hydrographic Manual supplemented by the Instruction Manual Automated Hydrographic Surveys except for the following:

- A. No descriptive information was furnished for signals on the survey.
- B. Geographic coordinates of the reference triangulation station SEE, 1927 were shown in error on the smooth sheet.
- C. Some lines following the shoreline were not plotted in a normal path.

5. Junctions

Adequate junctions were effected with H-9213 (1971) on the north, H-9160 (1970) on the east, and H-9101 (1965-70) on the south.

6. Comparison with Prior Surveys

A. H-2150 (1892) 1:40,000

This sparsely sounded survey which covers the entire area of the present survey provides only general information. No significant differences are noted between prior and present depths. Several soundings have been carried forward to supplement present depths.

Some conflicts with prior depths are considered to be due to errors in prior handlead and wire readings or faulty position determination. The following prior soundings are discredited by the present development and should be disregarded:

<u>Depth</u> (fms.)	<u>Latitude</u>	<u>Longitude</u>
9.2	56°29.89'	133°54.17'
6.2	56°29.72'	133°54.28'
7.2	56°30.48'	133°53.96'

The present survey reveals the delineation of the bottom in greater detail and with the addition mentioned above is adequate to supersede the prior survey in the common area.

- B. H-4763 (1927) 1:20,000
H-4763a (1929) 1:20,000

These earlier surveys cover only the inshore area of Conclusion Island, the waters surrounding Monte Carlo Island and several scattered shoals within the common area of the present survey. A comparison between prior and present depths reveals minor differences due to the natural shifting of sediments and differences in survey methods, leadline and wire on the prior work versus depth recorder soundings on the present.

Two rocks awash and several soundings have been brought forward to supplement the present survey. With these additions the present survey is adequate to supersede the prior surveys in the common area.

7. Comparison with Charts

Chart 8201 (latest print date March 2, 1974)

Chart 17373 (8272) (latest print date November 9, 1974)

A. Hydrography

The charted hydrography on both charts originates largely with the previously discussed surveys which require no further consideration. The remaining hydrography originates with the boat sheet soundings of the present survey (Bp. 81813).

B. Topography

The rock awash located on chart 8201 in lat. $56^{\circ}30.05'$, long. $133^{\circ}56.96'$ originates with the incomplete manuscript of T-12217. It was subsequently removed at the time of final review of the topographic survey. This rock should be deleted from the chart.

*Done; Checked up
 by 86457 (T-12217)
 Added islet - 86457
 86457 11/11*

Several rocks awash on chart 8201 should be changed to islets as shown on the present survey smooth sheet. *Done*

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

C. Aids to Navigation

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

8. Compliance with Project Instructions

This survey adequately complies with the project instructions.

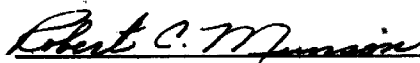
9. Additional Field Work

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

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys
and Maps

H-9214

Items for Future Presurvey Review

The bottom has remained basically unchanged since the prior surveys of 1892-1929 and is considered adequately developed on the present survey, but future surveys should include determination of least depth on the following feature:

<u>Depth</u> (fms.)	<u>Latitude</u>	<u>Longitude</u>
0.8	56°31.78'	133°47.62'

<u>Position</u>	<u>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>
563	1335	2	1	50 years
563	1340	2	1	50 years
562	1335	2	1	50 years
562	1334	2	1	50 years
