

9040

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-10-4-68 Office No. R-9040

LOCALITY

State Alaska

General locality Keku Strait

Locality Vicinity of Keku Islands

1968

CHIEF OF PARTY

K. W. Jeffers

LIBRARY & ARCHIVES

DATE 3-21-72

USCOMM-DC 37022-P66

9040

HYDROGRAPHIC TITLE SHEET

H-9040

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-10-4-68

State Alaska

General locality Keku Strait
Southeast Alaska

Locality Vicinity of Keku Islands
Keku Strait

Scale 1:10,000

Date of survey 26 June to 20 October 1968

Instructions dated 30 April 1968

Project No. OPR - 448

Vessel Ship DAVIDSON, Launch DA-I, Launch DA-II

Chief of party LCDR K. William Jeffers

C.W. Hayes, K.A. Domoto, D.L. Graves

Surveyed by G.H. Endrud, B.W. Fisher, D. McCall

Soundings taken by echo sounder, ~~hand lead, pole~~ Raytheon DE-723, Ser. Nos. 1284, 1276

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel

Positions Verified by

A.E. Eichelberger

Automated plot by

PMC

Soundings ~~checked~~ ^{Verified} by

A.E. Eichelberger

Soundings in fathoms ~~xxx~~ at MLW MLLW

REMARKS:

*Applied to stds 3/24/72
CAB*

DESCRIPTIVE REPORT

To Accompany

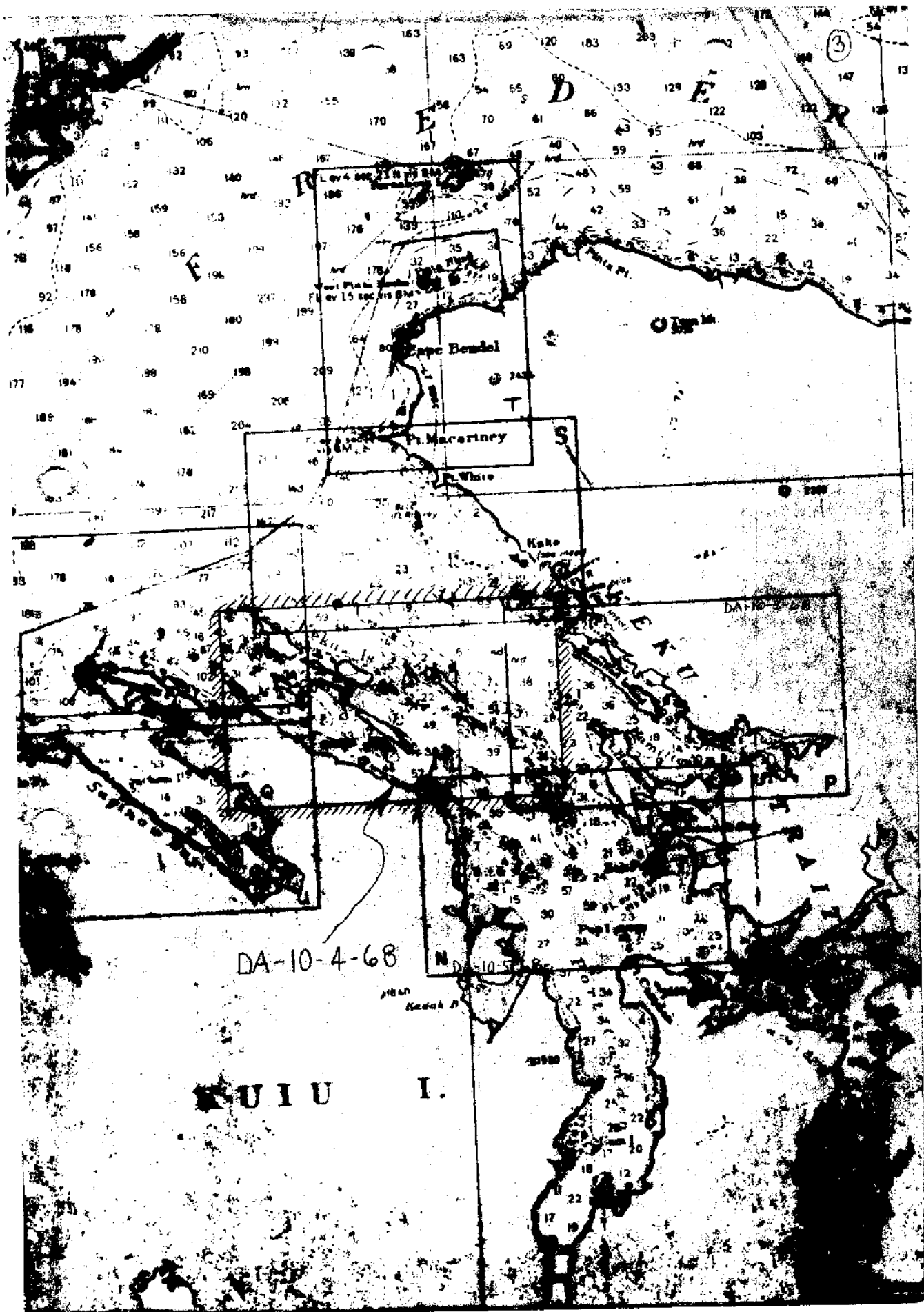
Hydrographic Survey DA-10-~~8~~⁴-68

OPR-448, Southeast Alaska

USC&GS Ship DAVIDSON

K. William Jeffers
LCDR, USESSA
Commanding Officer

1968



Level 400 21 15 15 15 15

Foot Plane
Elev 15 acros 8M

Cape Bondel

Pt. Macartney

Pt. White

Kaho

DA-10-5-68

DA-10-4-68

DA-10-5-68

KUIU I.

A. PROJECT

This survey was accomplished according to Project Instructions, OPR-448, Keku Straits, Alaska, dated 30 April 1968 and Change No. 1; Amendment to Instructions dated 13 June 1968.

B. AREA SURVEYED

The survey covered an area, centered 4.7 miles southwest of Kake, Alaska, between the Latitudes: 56°53'N and 56°57'30"N and Longitudes: 133°56'W and 134°08'W. Kuiu Island borders the survey to the southwest. The survey area has an irregular bottom.

Work was accomplished between June 26 and October 20, 1968.

This survey makes junctions with sheets:

DA-10-3-68	H-9039 (1965) Contemporary survey
DA-10-5-68	H-9041 (1968) Contemporary survey
PA-10-3-66	H-9000 (1966-70) Prior survey (Contemporary)
HO-05-1-62	H-8658 (1962-68) Prior survey "
PA-10-2-67	H-8961 (1967-70) Prior survey "

C. SOUNDING VESSEL

Launch DA-I, denoted by red ink, was used to obtain most soundings. Launch DA-II, green, was used the last day of the survey.

Ship DAVIDSON, blue, was used to obtain bottom samples.

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers, serial numbers 1284 and 1276, were used in Launch DA-I and Launch DA-II, respectively. Echo sounder corrections were determined from bar checks taken twice a day by the launches and sounding machine comparisons performed by the ship.

Depths ranged between 0.3 and ⁵⁰79 fathoms.

Some difficulty was encountered in obtaining a trace with the Raytheon fathometers in areas of rapid bottom changes, resulting in a number of "misses" in these areas. Reducing launch speed in these areas did help somewhat.

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 signals, photogrammetric signals, and hydrographic signals. Triangulation signals were machine plotted on the boat sheet; Photogrammetric signals were transferred from incomplete manuscripts to the boat sheet; Hydrographic signals were cut in with sextant 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 ship's officers. All manuscript field editing was done by Mr. Lyle Riggers, C&GS, Pacific Marine Center. His original work is on the field photos and indexed on ozalid prints.

The definition of the low-water line was prevented by the rocky, *ledges along the* irregular shoreline which caused such heavy launch damage and subsequently lengthy repairs as to make further shoreline operation impractical.

With the exception of a number of offshore rocks agreement between the photogrammetric and hydrographic location of features was very good. A number of rocks shown on the photos were unverified, however, it is recommended that these rocks be retained on the boat sheet.

H. CROSSLINES

The percentage of crosslines run was 4.8. Agreement at crossings was good.

I. JUNCTIONS

Junctions were made with sheets:

DA-10-3-68	H-9039	Contemporary survey
DA-10-5-68	H-9041	Contemporary survey
PA-10-3-66	H-9000	Prior survey (Contemporary)
HO-05-1-62	H-8658	Prior survey
PA-10-2-67	H-8961	Prior survey

Junctional Survey dates - See item B of Report

Agreement at the junctions was good.

J. COMPARISON WITH PRIOR SURVEYS

In the pre-survey review rocks had to be verified at the following locations (these locations are only approximate because of the small scale of the pre-survey review thus limiting an evaluation). *Information from the present survey should be charted*

(a) 56°54.8'N, 134°02.8'W

No rocks were found. This area with a least depth of 5 ⁵ fathoms is the SE end of a NW-SE shoal about 1000 meters long. Development was not run. *50 to 60 m. crestlines were run*

(b) 56°54.9'N, 134°02.0'W

No rocks were found. The average depth in this area was thirty (30) fathoms. No development was run. There is a small islet slightly north of this location at 56°55.1'N, 134°02.0'W. *The rock charted from G.S. Quad Fort Alexander falls in no depth over 20 fms and is considered nonexistent. Present delineation adequate for charting*

(c) 56°54.3'N, 133°59.5'W

On the pre-survey review there are two rocks on a NW-SE line. The NW rock was found with a -0.2 fathom sounding; the SE rock was shown on a field photo, but was not verified. No sounding lines were run over its plotted position. Development lines were not run. *Topo position adequate*

(d) 56°54.2'N, 133°59.0'W

No rocks were found. The least depth was ^{11.4} 3 ~~5~~ fathoms. Kelp is indicated on the fathograms. Development lines were not run. *Items added from G.S. Quad and may be shown in erroneous position. Present survey in agreement with Quad.*

(e) 56°54.6'N, 133°59.0'W

Photos show a rock 100 meters SW and an islet 300 meters south of this position. Also several rocks and a shoal area were found at: 56°54.6'N, 133°59.3'W. The area is fouled with kelp (Volume VI, page 48). *Items shown from G.S. Quad may be out of position. Rock awash at 56°54.7*

(f) 56°54.1'N, 134°04.2'W

A rock, five ~~(#)~~ feet above MLLW, was verified at this location (position #4720, Volume XXI, page 33). Kelp is indicated on the fathograms of this area. *2 183 59.00 not disproved.*

(g) 56°54.4'N, 134°06.3'W

A small islet with signal #258 on it is located at this position. There is also an unverified rock shown on the photos which is 200 meters NW of the islet. The area is fouled with kelp. This entire area is part of a 500-meter shoal running NW from an island SE of signal #258.

(h) 56°55.3'N, 134°06.3'W

This area is part of a 800-meter shoal running SE of signal #264. One negative sounding of -0.4 fathoms was recorded. Traces of kelp are on the fathograms. Since no sounding lines were run over this location and the photos indicate

①

shoals at this location, it is highly probable that there are rocks here.

- (i) $56^{\circ}55.75'N$, $134^{\circ}06.2'W$ *rock awash*
A shoal area with ~~several least soundings of 1.1 fathoms~~ was found 160 meters NW of this position. There is kelp in the area. Development lines were not run.
- (j) $56^{\circ}56.1'N$, $134^{\circ}05.9'W$
This position falls inside the shoreline on the boat sheet. There is an unverified rock taken from photos 120 meters north of this position. Development lines were not run, but the presence of this rock is doubtful since the bottom is regular at 18 fathoms. ✓
- (k) $56^{\circ}56.5'N$, $134^{\circ}03.8'W$
A rock was found 130 meters NE of this position. This location is part of a 500-meter shoal running NW-SE with a least depth of -0.3 fathoms. The area is fouled with kelp. ✓
- (l) $56^{\circ}57.2'N$, $134^{\circ}04.1'W$
Junction soundings taken from sheet PA-10-3-66 indicate that this location is part of a large NW-SE shoal which includes signal #204. Development lines were not run. ✓

In the pre-survey review the following shoal areas were to be investigated: *present information should supersede pre-survey review items* ✓

- (a) $56^{\circ}56.6'N$, $134^{\circ}02.6'W$ (4 fathoms)
A number of soundings less than 4 fathoms were taken including ~~a negative sounding of -0.3 fathoms~~. The area is fouled with kelp. Development lines were run.
- (b) $56^{\circ}56.5'N$, $134^{\circ}00.7'W$ (12-3/4 fathoms)
The least depth in this area is ~~16.5~~ fathoms. Development lines were not run. ✓
- (c) $56^{\circ}56.5'N$, $134^{\circ}02.1'W$ ($4\frac{1}{2}$ fathoms)
This area is part of a major shoal area running NW-SE between signals #204 and #208. The shoal area is about 450 meters wide with a least sounding in the area of this position of 1.2^2 fathoms. The area is fouled with kelp. ✓
- (d) $56^{\circ}56.0'N$, $134^{\circ}01.5'W$ (2-3/4 fathoms)
This location is part of the shoal mentioned in (c) with a least sounding of ~~2.1~~ fathoms in this area. ✓
- (e) $56^{\circ}56.5'N$, $133^{\circ}57.4'W$ ($17\frac{1}{2}$ fathoms)
The least depth at this location is 40 fathoms. The nearest shoal area is 450 meters to the north with a least depth of ~~1~~ fathoms. Development lines were not run. ✓

(4)

$17\frac{1}{2}$ considered out of position

K. COMPARISON WITH THE CHART

Comparison with C&GS chart 8201, 13th Edition, 4 December 1967 is generally good, but the small scale does not provide a detailed comparison. *Comparison, also, made with chart 8214 at time of Review.*

L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys. Additional development and verification may be required on some of the pre-survey review items discussed in (J) and shoreline areas since launches had to abandon near-shore operations as discussed in (G). *See item 3 of Review for additional development requirements.*

M. AIDS TO NAVIGATION

There are no aids to navigation in the area of this survey.

N. STATISTICS

	<u>No. Positions</u> <i>(Approximate)</i>	<u>Nautical Miles</u> <u>Sounding Line</u>	<u>Bottom Samples</u>
Launch DA-I	5310	594.9	10
Launch DA-II	25	-1.4	20
Ship DAVIDSON	29	1.0	25
	<u>5364</u>	<u>595.3</u>	<u>35</u>

The total area surveyed is 22 square nautical miles. One magnetic station, from triangulation station LOW 1927 to ALTO 1927, was observed. There are twenty-six(26) volumes with this survey.

P. RECOMMENDATIONS

Inshore hydro to delineate the zero fathom curve was not run and is not considered necessary for verification of shoreline because of the rapid dropoff and sharp delineation of the shoreline in the photos.

Unverified rocks which were transferred from photo manuscripts to the boat ~~sheet~~ should be retained. The extra expense and time that would be required to verify these rocks does not seem warranted since they are located in already known or verified shoal areas.

Removed many rocks at time of Review, based on photogrammetric reinterpretation of T-sheets at request of MCD.
(6)

REFERENCES TO REPORTS

Geographic Names - OPR-448
Corrections to Echo Soundings - OPR#448

Respectfully submitted,

Bruce W. Fisher

Bruce W. Fisher
ENS, USESSA

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APPROVAL SHEET

OPR-448

DA-10-4-68

Keku Strait, Alaska

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

K. William Jeffers

K. William Jeffers
LCDR, USESSA
Commanding Officer
USCGS Ship DAVIDSON

TIDE NOTE

Tide Station: Kake, Keku Strait, Alaska
 Lat. $56^{\circ}57.9'N$, Long $133^{\circ}55.5'W$

Plane of reference: MLLW

Time meridian: $120^{\circ}W$

Tide gage is a Portable Bubble Gage installed on the end of the Kake Canning Company pier, Kake, Alaska.

UNITED STATES GOVERNMENT

Memorandum

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

TO : Processing Division
Pacific Marine Center

DATE: 04-24-69

THRU : C. O. Ship DAVIDSON *RMM*

In reply refer to:

FROM : Field Works Officer

CFS231-13/DA-69-68

SUBJECT: Corrections to OPR-448 Keku Straits, Alaska 1969

SHEET CORRECTION

HO-05-1-62 The Time Meridian of the Tide Gage is 105 W.

PA-10-3-66 The Time Meridian of the Tide Gage is 105 W.

DA-10-3-68 The Time Meridian of the Tide Gage is 105 W.

DA-10-4-68
and

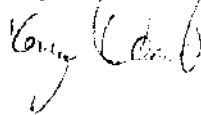
DA-10-5-68 The Time Meridian of the Tide Gage is 105 W.,
from 26 June to 30 September, and 120 W. from
1 October to 20 October.

The Time Meridian for the Sounding Volumes is
105 W. from 26 June to 19 September and 120 W.
from 20 September to 20 October. The Tide Tape
has been adjusted to agree with the Sounding
Volumes.

Velocity corrections for all vessels are incorrect from zero to
10 fathoms. (The Range of the Bar Checks). The draft of the
vessels was not added to the Bar Check Readings, consequently
the correction used is the sum of the draft and velocity
corrections. The draft of the launches is 0.3 fathoms.

*not required
correctors applied
appear to be
confirmed by
bar checks*

Kanezo A. Domoto,
LT, USN



TIDE NOTE FOR HYDROGRAPHIC SHEET

May 22, 1969

~~United States Coast and Geodetic Survey~~ Pacific Marine Center

Plane of reference approved ~~to~~
~~for use of the Coast and Geodetic Survey~~ for

HYDROGRAPHIC SHEET 8658, 9000, 9039 & 9040

Locality: Keku Straits, Alaska

~~Charted by~~ Year: 1968

Plane of reference is mean lower low water

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

Kake, Keku Strait, Alaska

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

13.1 feet

Remarks

J. M. Simmons
Chief, Tides and Currents Branch

H-9040

GEOGRAPHIC NAMES

BURNT ISLAND

HOUND ISLAND

KEKU ISLAND

KEKU STRAIT

KOUSK ISLAND

KUIU IS.

PINNACLE ROCK

List of Stations on DA-10-4-68

Name used in Hydrographic Survey	Origin of Station
201	T-12186
202	BETH, 1927 Triangulation
203	KNOB, 1927 Triangulation
204	T-12185
205	ALTO, 1927 Triangulation
206	T-12191
207	T-12191
208	Volume XV, page 24
209	T-12191
210	T-12192
211	T-12191
212	GLOOM 1927, Triangulation
213	T-12192
214	T-12192
215	T-12191
216	T-12191
217	T-12191
218	T-12191
219	T-12191
220	T-12191
221	Volume XIII, page 29
222	T-12191
223	T-12191
224	THUM 1927, Triangulation
225	T-12191
226	T-12191
227	T-12191
228	T-12191
229	T-12191
230	T-12191
231	T-12191
232	T-12191
233	Volume XVI, page 3
234	T-12191
235	T-12191
236	T-12191
237	TACK 1927, Triangulation

239	T-12191
241	T-12191
242	T-12191
243	T-12191
244	HOW 1927, Triangulation
245	T-12191
246	T-12191
247	T-12191
248	T-12191
249	Volume 9, page 49
250	KEKU 1927, Triangulation
252	T-12190
253	Volume XVII, Page 53
254	T-12190
255	T-12190
256	T-12190
258	T-12190
259	T-12190
261	T-12190
262	T-12190
263	T-12190
264	T-12190
268	T-12190
269	T-12190
270	T-12190
271	T-12190
272	T-12190
273	T-12190
274	T-12190
275	T-12190
276	T-12191
277	T-12190
278	T-12190

SIGNAL PLOTTER CARDS

H-NO.-		LATITUDE	LONGITUDE	X	Y	X
31108	201 -	68 56565842	133564419	14406	09112	201
31108	202 -	68 56564154	133553714	15597	08566	202
31108	203 -	68 56545140	133553765	15595	04989	203
31108	204 -	68 56570055	134033609	07096	09176	204
31108	205 -	68 56554936	134020544	08705	06864	205
31108	206 -	68 56555360	134011815	09545	07002	206
31108	207 -	68 56554839	134010668	09749	06833	207
31108	208 -	68 56554917	134005380	09977	06858	208
31108	209 -	68 56553605	134002536	10483	06432	209
31108	210 -	✓ 68 56545166	133592937	11478	04990	210
31108	211 -	68 56552800	134005752	09912	06170	211
31108	212 -	68 56540721	133580006	13067	03550	212
31108	213 -	68 56532631	133565640	14200	02223	213
31108	214 -	68 56530155	133561677	14905	01421	214
31108	215 -	68 56553236	134011697	09566	06312	215
31108	216 -	68 56554316	134005954	09876	06662	216
31108	217 -	68 56545922	133595390	11042	05236	217
31108	218 -	68 56545172	134004214	10186	04992	218
31108	219 -	68 56544587	134001767	10620	04802	219
31108	220 -	✓ 68 56543815	133593581	11364	04551	220
31108	221 -	68 56543133	133591684	11701	04330	221
31108	222 -	68 56542169	133585991	12002	04017	222
31108	223 -	68 56533630	134004371	10159	02543	223
31108	224 -	68 56534794	134015370	08915	02921	224
31108	225 -	68 56542159	134024355	08029	04014	225
31108	226 -	68 56545050	134041407	06421	04952	226
31108	227 -	68 56542014	134030609	07628	03967	227
31108	230 -	✓ 68 56551358	134031655	07442	05702	230
31108	231 -	68 56553621	134040420	06596	06437	231
31108	232 -	68 56555570	134050733	05476	07070	232
31108	233 -	68 56561474	134053743	04941	07689	233
31108	234 -	68 56560281	134043081	06124	07301	234
31108	235 -	68 56560327	134054796	04754	07316	235
31108	236 -	68 56553275	134045362	05719	06325	236
31108	237 -	68 56551720	134043026	06133	05819	237
31108	239 -	68 56550753	134041738	06362	05506	239
31108	241 -	✓ 68 56540682	134044242	05917	03534	241
31108	242 -	68 56535053	134035334	06788	03005	242
31108	243 -	68 56535205	134031577	07456	03054	243
31108	244 -	68 56525677	134012173	09484	01259	244
31108	245 -	68 56525192	134021435	08548	01101	245
31108	246 -	68 56530841	134031228	07518	01637	246
31108	247 -	68 56532192	134041778	06354	02076	247
31108	248 -	68 56534235	134050520	05511	02739	248
31108	249 -	68 56562214	134062094	04169	07929	249
31108	250 -	68 56572683	134084373	01637	10034	250

low height

31108	252	68	56535531	134055695	04592	03160	252
31108	253	68	56541173	134064998	03650	03694	253
31108	254	68	56543760	134075177	02553	04536	254
31108	255	68	56545202	134083345	01813	05006	255
31108	256	68	56550779	134091005	01164	05519	256
31108	258	68	56542124	134061637	04247	04002	258
31108	259	68	56540385	134052334	05189	03437	259
31108	261	68	56552075	134080893	02250	05939	261
31108	262	68	56552622	134074327	02706	06115	262
31108	263	68	56552373	134071431	03220	06034	263
31108	264	68	56552793	134063919	03844	06168	264
31108	268	68	56561342	134071189	03265	07648	268
31108	269	68	56561248	134064423	03755	07615	269
31108	270	68	56555554	134060361	04476	07065	270
31108	271	68	56554361	134050964	05434	06677	271
31108	272	68	56553899	134060881	04384	06527	272
31108	273	68	56552496	134055084	04702	06071	273
31108	274	68	56552919	134052642	05136	06209	274
31108	275	68	56551025	134064132	03805	05594	275
31108	276	68	56534131	134043727	06008	02706	276
31108	277	68	56555437	134063991	03832	07027	277
31108	278	68	56554228	134053855	04921	06634	278
31108	228	68	56551303	134023334	08210	05684	228
31108	229	68	56554377	134031904	07398	06683	229

00000

ABSTRACT OF CORRECTIONS TO

ECHO SOUNDINGS

DA-10-4-68 H-9040

LAUNCH DA-1

Table 1

CORRECTION fathoms	TO DEPTH fathoms
-0.1	5.2
0.0	7.3
0.1	10.5
0.0	13.0
-0.1	28.9
0.0	33.8
0.2	39.0
0.4	44.2
0.6	49.6
0.8	56.3
1.0	66.7
1.2	89.5

ABSTRACT OF CORRECTIONS TO

ECHO SOUNDINGS

DA-10-4-68 H-9040

LAUNCH DA-11

Table 11

CORRECTION fathoms	TO DEPTH fathoms
-0.1	7.7
0.0	13.0
-0.1	28.9
0.0	33.8
+0.2	39.0
+0.4	44.2
+0.6	49.6
+0.8	56.3
+1.0	66.7

TWO (2) fathoms added to all correctors on paper punch tape.

Note: Correctors for launch 2, taken from H-9041

TRANSDUCER/VELOCITY INDICATOR TAPE

LAUNCH 1
 USC&GSS DAVIDSON
 DA-10-4-68

TIME	CORRECTOR	DAY					
000000	00	0003	0001	178	0	000000	000000
000000	00	0003	0001	192	0	000000	000000
000000	00	0003	0001	193	0	000000	000000
000000	00	0003	0001	199	0	000000	000000
105100	00	0004					
152800	00	0003					
000000	00	0003	0001	200	0	000000	000000
000000	00	0003	0001	201	0	000000	000000
123200	00	0004					
150200	00	0005					
000000	00	0003	0001	202	0	000000	000000
083900	00	0004					
091000	00	0005					
000000	00	0003	0001	203	0	000000	000000
000000	00	0003	0001	204	0	000000	000000
000000	00	0003	0001	205	0	000000	000000
000000	00	0003	0001	207	0	000000	000000
140000	00	0004					
145700	00	0003					
000000	00	0003	0001	208	0	000000	000000
000000	00	0003	0001	209	0	000000	000000
143630	00	0002					
144200	00	0003					
000000	00	0003	0001	210	0	000000	000000
092900	00	0002					
102000	00	0003					
121500	00	0004					
142830	00	0005					
000000	00	0003	0001	211	0	000000	000000
143700	00	0004					
151100	00	0003					
000000	00	0003	0001	212	0	000000	000000
000000	00	0003	0001	214	0	000000	000000
093200	00	0004					
095000	00	0003					
105500	00	0004					
000000	00	0003	0001	218	0	000000	000000

TIME CORRECTOR DAY

100700 00 0002
 102300 00 0003
 103700 00 0002
 110300 00 0003
 122900 00 1002
 000000 00 0003 0001 219 0 000000 000000
 105300 00 0004
 111600 00 0003
 124400 00 0004
 125800 00 0003
 133200 00 0004
 135300 00 0003
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 085200 00 0002
 091500 00 0003
 111100 00 0004
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 090000 00 0003
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 103000 00 0003
 131400 00 0004
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 105200 00 0003
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 000000 00 0003 0001 263 0 000000 000000
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 103600 00 0003
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 094500 00 0002

(3)

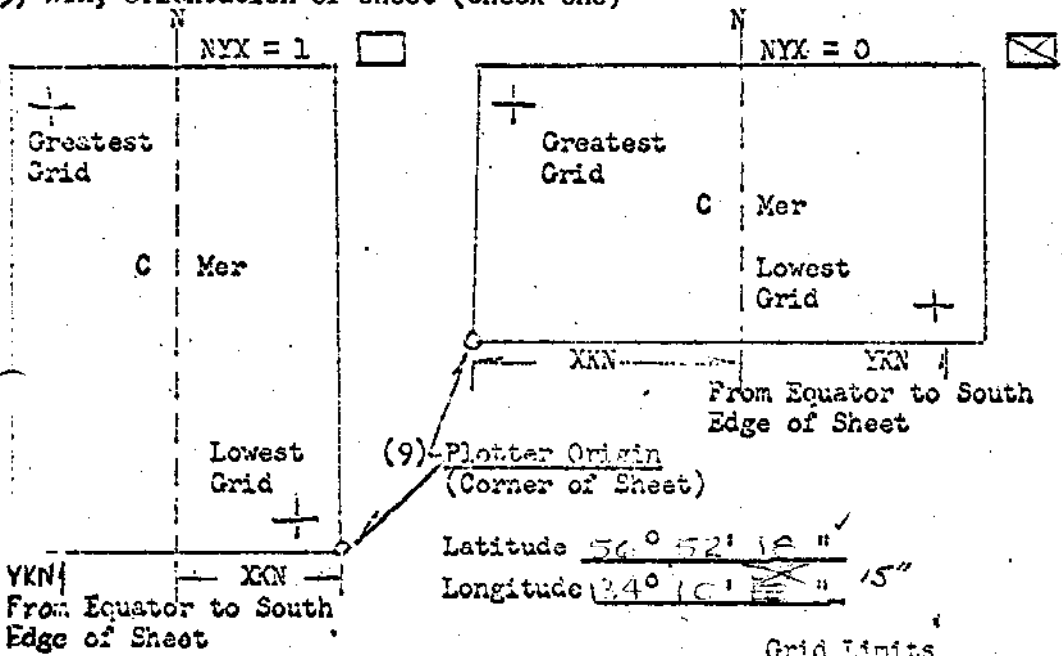
TIME	CORRECTOR	DAY					
112630	00	0004					
122730	00	0003					
000000	00	0003	0001	266	0	000000	000000
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110215	00	0002					
112800	00	0003					
000000	00	0003	0001	269	0	000000	000000
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103145	00	0002					
000000	00	0003	0001	277	0	000000	000000
110630	00	0004					
125900	00	0003					
133500	00	0004					
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085445	00	0001					
090900	00	0002					
091600	00	0003					
091815	00	0002					
100700	00	0003					
101200	00	0004					
104100	00	0003					
104400	00	0002					
110430	00	0003					
110830	00	0004					
113630	00	0003					
120300	00	0004					
132700	00	0003					
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140030	00	0003					
151130	00	0004					
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105600	00	0002					
110800	00	0003					
000000	00	0003	0001	294	0	000000	000000
150700	00	0002					
153000	00	0003					
000000	00	0003	0001	295	0	000000	000000

PARAMETERS FOR DIGITAL COMPASS
PNEUMATIC PROJECTION

Revised 10/1/67

97

- (1) Project No. SRP 445 (0) (4) Requested by _____
- (2) H No. 9040 (5) Ship or Office DAVIDSON
- (3) Field No. DA 10-4-68 (31108) (6) Date Required _____
- (7) Visual Ft.(0) or Fathoms (1) (8) Electronic (fill out form #3)
- (10) XKN (SP 5) Distance from CMER to East Edge (NYX = 1) 7368.9
or West Edge (NYX = 0). ~~12228.7~~ Meters
- (11) YKN (SP 241) Distance from Equator to South Edge of Sheet. 6305410.7 Meters
- (12) Central Meridian 134° 03' 00"
- (13) Survey Scale 1: 10000
- (14) Size of Sheet (Check one) 36x60 42x60
- (15) NYX, Orientation of sheet (Check one)



(9) Plotter Origin
(Corner of Sheet)
Latitude 56° 52' 15"
Longitude 134° 10' 15"

Grid Limits

- (16) Greatest Latitude 56° 58' 00" (Projection Line)
- (17) Lowest Latitude 56° 52' 30" Interval Page 4
- (18) Difference 0° 05' 30" (19) 130" Hydro Manual
- (20) 11 YSN
- (21) Greatest Longitude 134 10 00"
- (22) Lowest Longitude 133 45 30" (24) 130"
- (23) Difference 0 14 30" (25) 29 XSN

Comp/Ch
MAN

GEOGRAPHIC NAMES

Survey No. H-9040

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Alaska											1
Burnt Island											2
Hound Island											3
Keku Islands											4
Keku Strait											5
Kousk Island											6
Kuiu Island											7
Pinnacle Rock*											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
* SOURCE T-12191 GPH											22
Approved by ANW.											23
Noted in Geo. Names Report OPE-448.											24
											25
											26
											27

Names prepared:
F. W. Pickett 8-1-72

Names approved:
A. J. Wraight 8-1-72

FORM C&GS-946
(REV. 11-65)
(PREP. BY
HYDROGRAPHIC
MANUAL 20-2,
6-64, 7-19)

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

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9040

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		4 XXX	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			XXXX			
CAHIERS	1 8					
VOLUMES	26					
BOXES			2			
T-SHEET PRINTS (List)						
SPECIAL REPORTS (List)						

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

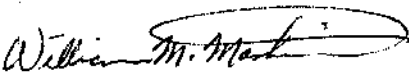
PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				5061
POSITIONS CHECKED		5061		
POSITIONS REVISED		364		
DEPTH SOUNDINGS REVISED		1457		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		66	50	116
JUNCTIONS		6	75	81
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		48	69	117
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		1040	80	1120
TOTALS		1160	274	1434

PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE
VERIFICATION BY	BEGINNING DATE	ENDING DATE
REVIEW BY	BEGINNING DATE	ENDING DATE
<i>A.E. Eichelberger</i>	<i>10/23/70</i>	<i>3/3/72</i>
<i>G. K. Myrland</i>	<i>May 15, 1972</i>	<i>May 10, 1973</i>
<i>Insp. Carstens</i>	<i>42 hrs 7/14/73</i>	

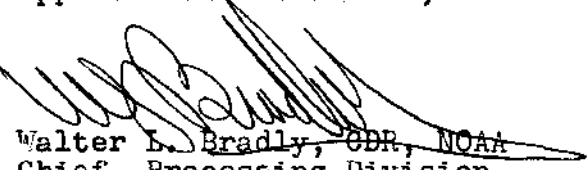
APPROVAL SHEET

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,


William M. Martin
Supervisory Carto. Tech.

Approved and Forwarded,


Walter L. Bradley, ODR, NOAA
Chief, Processing Division
Pacific Marine Center

H-9040

Items for Future Presurvey Review

This survey covers an area in the northern part of Keku Straits in the vicinity of Keku Islands. There are no significant changes to the bottom since the only prior survey of 1892 in this area. Least depths on numerous features have not been obtained. Some are listed in item 3 of the review.

Position Index	Bottom Change Index	Use Change Index	Resurvey Cycle
Lat. 565, Long. 1340	1	1	50 yrs.
" 565, " 1341	1	1	50 yrs.

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9040

FIELD NO. DA-10-4-68

Alaska, Keku Strait, Vicinity of Keku Islands

SURVEYED: June 26, 1968 - October 20, 1968

SCALE: 1:10,000

PROJECT NO.: OPR-448

SOUNDINGS: DE 723 Echo Sounders
Sounding Machine

CONTROL: Sextant fixes on
shore signals

Chief of Party	K. W. Jeffers
Surveyed by	G. W. Hayes
.....	K. A. Domoto
.....	D. L. Graves
.....	G. H. Endrud
.....	B. W. Fisher
.....	D. McCall
Protracted by	Gerber Digital Plotter
Soundings plotted by	Gerber Digital Plotter
Verified and inked by	A. E. Eichelberger
Reviewed by	G. K. Myers, Jr.
.....	Date: May 10, 1973
Inspected by	R. H. Carstens

1. Description of the Area

This survey covers an area in the northern part of Keku Straits. The survey extends from Hound Island to Keku Islands. Here the bottom is rugged with many islands and reefs aligned in the trend of the strait. Deepest depths in the area are about 80 fathoms.

Predominant bottom characteristics are sand, shells, rocky, and pebbles. Many ledges extend intermittently alongshore, between sections of sand and gravel beaches.

2. Shoreline and Control

The source of control is adequately described in Part F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-12184 (1961-1967, 1968), T-12185 (1961, 1965-1968), T-12186 (1962, 1965-1968), T-12190 (1961, 1962, 1965-1967), T-12191 (1961, 1965-1968), and T-12192 (1961, 1962-1968).

3. Hydrography

A. Depths at crossings are in good agreement. The usual depth curves are adequately delineated except along steep slopes in close proximity to the shore. Dashed and brown depth curves have been added to emphasize important bottom features.

B. The delineation of bottom configuration and investigation of least depths are not considered adequate on many features in this irregular bottom area. Seldom were indications of features investigated by other than 50 to 100-meter sounding lines. Depths through the major channels are deep and adequately developed to provide a safe passage. However, least depths over reefs near islands or trending off the ends of islands are not well determined. Typical features inadequately developed are listed below.

<u>Sdgs.</u> <u>(fms.)</u>	<u>Lat.</u>	<u>Long.</u>	<u>Sdgs.</u> <u>(fms.)</u>	<u>Lat.</u>	<u>Long.</u>
1.2	56°56.57'	134°02.27'	2.7	56°56.67'	134°02.63'
1.9	56°57.12'	134°03.46'	2.8	56°56.61'	134°04.16'
3.5	56°56.37'	134°01.78'	2.2	56°55.96'	134°00.59'
4.9	56°55.60'	133°59.15'	2.2	56°55.46'	134°02.60'
3.0	56°55.50'	134°04.65'	1.4	56°55.25'	134°06.00'
5.3	56°54.93'	134°02.97'	3.6	56°54.22'	133°59.40'
4.4	56°54.76'	133°57.60'	4.2	56°54.70'	133°57.33'
4.6	56°53.63'	134°00.10'	1.6	56°53.99'	133°58.25'
1.4	56°54.28'	133°58.80'	1.7	56°54.37'	134°06.52'
3.4	56°53.26'	134°00.74'	3.8	56°53.18'	133°59.36'
4.5	56°53.12'	133°59.00'	2.7	56°54.24'	134°04.44'
3.8	56°54.11'	133°58.91'			

4. Condition of the Survey

The plotting, sounding records, Descriptive Report, and various sounding printouts are adequate and conform to the requirements of the Hydrographic Manual supplemented by the Instruction Manual - Automated Hydrographic Surveys.

5. Junctions

Adequate junctions were effected with H-9041 (1968) on the south, H-8961 (1967-1970) on the west, H-9000 (1966-1970) on the north, H-8658 (1962-1968) on the northeast, and H-9030 (1968) on the east.

6. Comparison with Prior Survey

H-2150 (1892) 1:40,000

The reconnaissance nature of this prior smaller scale survey provides only general information of this area. A comparison between prior and present depths reveals the general character of the bottom remains the same. However, the more detailed development on the present survey revealed numerous lesser depths over features which were not found on the prior survey.

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

7. Comparison with Chart 8201 (latest print date March 17, 1973) Chart 8214 (latest print date March 10, 1973)

A. Hydrography

The charted hydrography originates with the previously discussed survey which requires no further consideration supplemented by depths from the boat sheet (Bp 73580) and the verified smooth sheet of the present survey.

The following positions for rocks charted from the boat sheet and unreviewed photogrammetric manuscripts for the present survey are superseded by the final smooth sheet and photogrammetric surveys and should be deleted from the charts.

<u>Lat.</u>	<u>Long.</u>
56°54.86'	133°58.40'
56°54.77'	133°58.49'
56°54.86'	133°59.00'
56°54.74'	133°58.96'
56°56.10'	134°01.23'
56°53.72'	134°04.86'
56°54.22'	134°05.57'
56°56.21'	134°06.98'
56°55.84'	134°06.37'

The 1/4-fm. sounding charted at lat. $56^{\circ}55.32$, long. $134^{\circ}05.73'$ from the boat sheet (Bp 73580) was scanned incorrectly on the fathogram and should be deleted.

The rock awash located at lat. $56^{\circ}54.04'$, long. $134^{\circ}05.04'$ on the present survey should be charted.

Many of the soundings charted from the boat sheet are about 1-fathom shoaler than the final smooth sheet values.

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

B. Aids to Navigation

There are no aids to navigation in the area of the present survey.


8. Compliance with Project Instructions

This survey adequately complies with the Project Instructions except as noted in item 3 of this review and Part J of the Descriptive Report.

9. Additional Field Work

The survey is generally adequate for charting the area. However, because of the extremely irregular bottom and sparse development of shoals, it is not considered that least depths were generally obtained on most offlying features. Because traffic is limited by numerous hazards in the area, additional development of the shoals is not considered warranted at the present time.

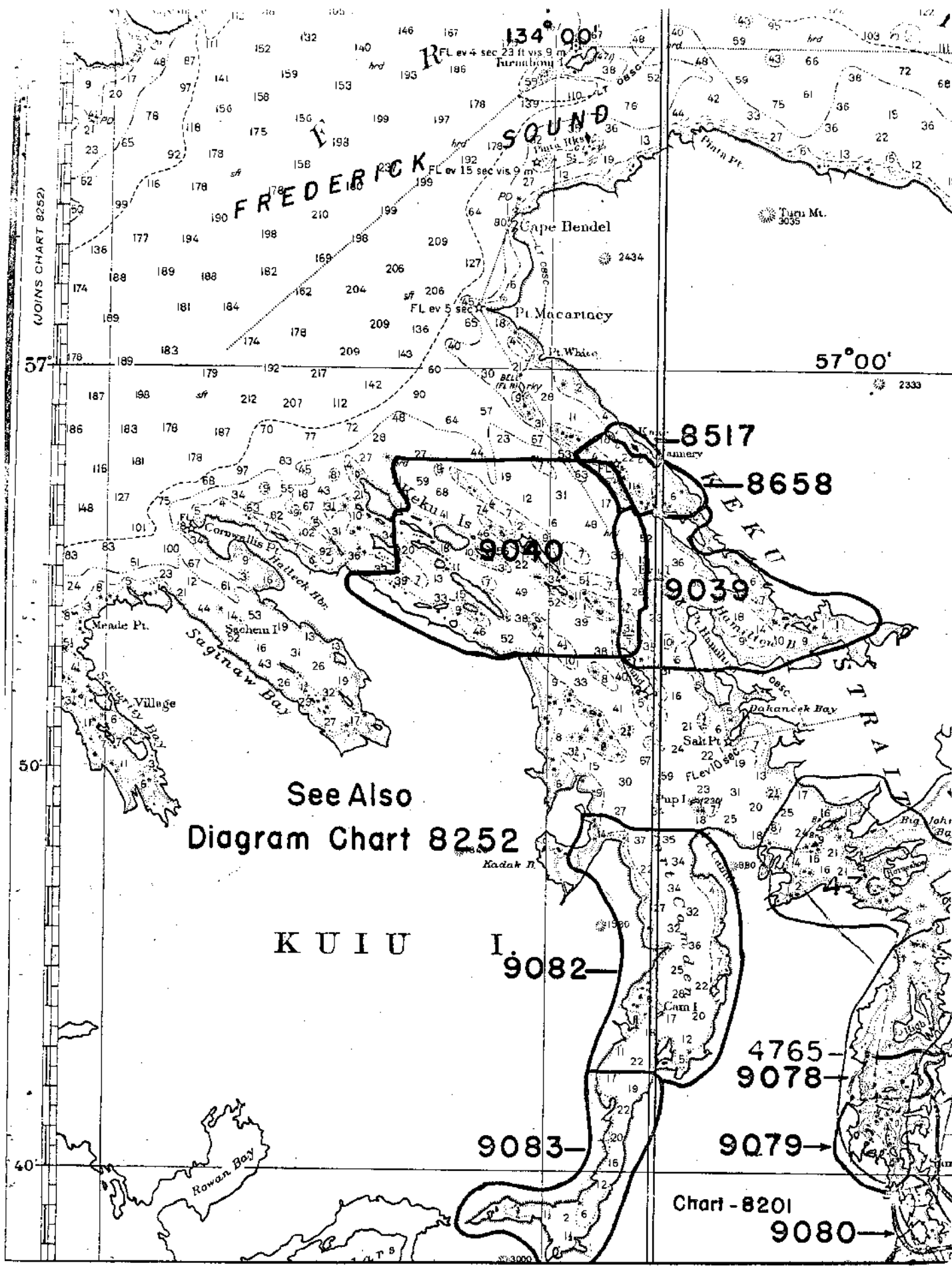
Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys and Maps



JOINS CHART 8252

57°

50°

40°

134° 00'

57° 00'

FREDERICK SOUND

9040

8517

8658

9039

See Also
Diagram Chart 8252

KUIU I
9082

9083

4765
9078

9079

Chart - 8201
9080

Rowan Bay

Menade Pt.
Sagunaw Bay

Kadak I.

Dakaneck Bay

Big John Bay

Camden I.

3000

Taru Mt.
3035

2333

2434

Pt. White

Pt. Macartney

Cape Hendel

FL ev 4 sec 23 ft vis 9 m
Kuramboni

FL ev 15 sec 9 m

FL ev 5 sec 18 m

Flev 10 sec

up I 220

34

32

25

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