

9080

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-5-4-69
Office No.	R-9080
LOCALITY	
State	Alaska
General locality	Keku Strait
Locality	Devils Elbow to Summit Island
1969	
CHIEF OF PARTY	
R. E. Moses	
LIBRARY & ARCHIVES	
5/17/71	
DATE	

USCOMM-DC 87022-P66

9080

HYDROGRAPHIC TITLE SHEET

H-9080

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-5-4-69

State ~~Alaska~~ Southwest Alaska

General locality Keku Strait - Rocky Pass

Locality Devil's Elbow to Summit Island

Scale 1:5,000

Date of survey 12 July to 29 July, 1969

Instructions dated 10 March 1969

Project No. OPR-448

Vessel Launch 1 (DA-1), RA-4, 17' Whaler (DAVIDSON Launches)

Chief of party CDR Ray E. Moses

Surveyed by LTJG G.H. Endrud, LTJG B.W. Fisher

Soundings taken by echo sounder, ~~1281, 211, 919, 1276~~

Graphic record scaled by _____

Graphic record checked by _____

Protracted by ^{BOATSHEET} G.H. Endrud

Automated plot by GERBER PLOTTER

Soundings penciled by SMOOTH SHEET VERIFIED by NICHOLAS LESTENKOF

Soundings in ~~fathoms~~ feet at MLLW

REMARKS:

Appel to STD 5/26/71

MS

A. PROJECT

This survey was accomplished according to Project Instructions: ✓
OPR-448, KEKU STRAIT, SOUTHEAST ALASKA dated 10 March 1969
and the following supplement: CHANGE NO. 1: Amendment to
Instructions 4 April 1969.

B. AREA SURVEYED

The survey covered the area of Keku Strait, Alaska between
the latitudes 56°38'15"N and 56°40'00"N and longitudes 133°
41'00"W and 133°44'30"W. Work was accomplished between
12 July and 29 July, 1969. The survey makes a junction with
the following contemporary surveys:

DA-5-3-69, H-9079
DA-5-5-69, H-9081.

C. SOUNDING VESSEL

The following vessels were used to survey this area: ✓

<u>Vessel</u>	<u>Color Used On Sheet</u>
Launch 1 (DA-1)	Green
RA-4	Red
17' Whaler	Violet

Detached positions and field edit positions are shown in
brown. Bottom samples were taken by DA-1 and are shown in
green. Positions 924-963 were duplicated by RA-4 and the
17' Whaler; the respective colors can be used to determine
the proper position for each vessel. A summary of each
vessel's work by position numbers is attached. ✓

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers were used: ✓

Launch 1	#919, 1276
RA-4	#214
17' Whaler	#1284.

Echo sounder corrections were determined from bar checks taken ✓
daily by the boats. The fathometers were initialed at, or
adjusted to, the following values:

Launch 1	1.3
RA-4	1.0
17' Whaler	1.7.

These initial values were used to eliminate a draft correction. ✓
Any draft residual from this setting is incorporated in the
Modified Velocity Correction (refer to special report on

Corrections to Echo Sounders - OPR-448 forwarded with this project). Deviations in the initial are corrected in the TC/TI correction (abstract included). All soundings are in feet.

E. SMOOTH SHEET

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

F. CONTROL

Visual three-point fixes were used for control in this survey. There were four types of visual signals used: triangulation, photogrammetric, hydrographic, and topographic. 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 angles. Two signals, #417 and #419, were established by measuring a distance and an angle from a nearby triangulation station. An abstract of signals and manuscripts is included in the appendix. After the survey was completed the position of signal 409 was changed slightly using additional cuts from DA-5-5-69. Positions, therefore, in the immediate area using this signal may shift slightly when smooth plotted.

G. SHORELINE

Shoreline and shoal area outlines were traced onto the beat sheet from the photo manuscripts (see appendix) by ship's officers. Verification of the shoreline was carried out by ship's officers in the manuscript field edit covered by "Field Edit Report - OPR-448, Keku Strait, Southeast Alaska, 1969." Features were checked in location by visual inspection, estimated distances from photo-identifiable objects, and by sextant fixes. Compilation of the manuscripts was good except for some areas east of Beck Island and in the Devil's Elbow. In these areas sextant fixes were used to determine the MHWL. The low water line was defined by the soundings except in isolated places where the beach is very steep.

H. CROSSLINES

The percentage of crosslines to sounding lines is 5.5% (2.6 NM compared to 47.1 NM). There is good agreement at crossings.

I. JUNCTIONS

Junction was made with contemporary surveys DA-5-3-69 (H-9079)

1969

1969

and DA-5-5-69 (H-9081). There is good agreement at the junctions except in the Devil' Elbow area where there are consistent discrepancies of 1-2 feet. This discrepancy is resolved when the actual tide information is used. ✓

J. COMPARISON WITH PRIOR SURVEYS

Comparison was made with prior surveys 4764 and 4945; agreement was, in general, good. Several pre-survey review items were investigated: (all depths reduced with actual tides)

1. Item #5 56°39.83'N, 133°43.10'W ✓
A least depth of 1.8⁰ft. was found in a development of the area (Overlay #3).
2. Sounding of 17 at 56°39.8'N, 133°42.9'W ✓
Comparable soundings were found in a development of this area (Overlay #3).
3. Sounding of 14 at 56°39.7'N, 133°42.9'W ✓
Comparable soundings were found in a development of this area (Overlay #3). A least depth of 14.3⁰ft. was found nearby.
4. Rock at 56°39.6'N, 133°43.0'W ✓
This reef was found to bare 1 ft. above MLLW.
5. Sounding of 6 at 56°39.44'N, 133°42.86'W ✓
This sounding fits on the sloping bottom that has been developed on the boat sheet and Overlay #3.
6. Sounding of 7 at 56°39.45'N, 133°43.1'W ✓
This sounding fits well on the steep bottom in this area.
7. Sounding of ³8 at 56°39.38'N, 133°43.06'W ✓
This sounding fits in this area. A development was run in this area (Overlay #3) and a least sounding of 5.0 ft. was found. *3' removed during dredging ✓*
8. Sounding of 8 at 56°39.26'N, 133°42.86'W ✓
This sounding fits well in this area of uneven bottom; a development of this area was run on the boatsheet.
9. Sounding of 30 at 56°39.05'N, 133°42.96'W ✓
This sounding fits well on the boatsheet.
10. Sounding of 5 at 56°38.84'N, 133°42.6'W ✓
This area was developed on Overlay #2; the least sounding obtained was ~~6.4~~ 5.0 ft.

11. Sounding of 5 at 56°38.80'N, 133°42.57'W ✓
This area was developed on Overlay #2; the least sounding obtained was ~~6.8~~ ^{5.0} ft.
12. Sounding of 8 at 56°38.55'N, 133°42.31'W ✓
This sounding fits well on the steep bottom in this area; see the boat sheet and Overlay #2.
13. Shoal covered by 4 ft. of water at 56°38.29'N, 133°42.20'W ✓
This shoal was found to have a ~~least sounding of 1.8~~ ft. *rock covered 2ft at MLLW.*
14. Sounding of 11 at 56°38.3'N, 133°42.12'W ✓
This sounding fits quite well on the sloping bottom around the shoal investigated in item #13.
15. Sounding of 15 at 56°38.25'N, 133°41.89'W ✓
This sounding fits well on this area of sloping bottom.
16. Sounding of 9 at 56°38.27'N, 133°41.86'W ✓
On this shoal a least depth of 8.9⁰ ft. was found.
17. Sounding of 6 at 56°38.24'N, 133°41.67'W ✓
This sounding fits well on this survey; this area is a relatively flat shallow area.
18. Sounding of 6 at 56°38.25'N, 133°41.60'W ✓
This sounding fits well on this survey; this area is a relatively flat shallow area.
19. Sounding of 6 at 56°38.25'N, 133°41.54'W ✓
This sounding fits well on this survey; this area is a relatively flat shallow area.
20. Item #6, Pile at 56°38.29'N, 133°41.27'W ✓
A search was made for this pile with negative results; it is deemed to not exist.

K. COMPARISON WITH THE CHART

Comparison of this survey with C&GS chart #8272, 3rd Ed., Oct. 17, 1966, is generally good. This present survey shows greater refinement of the depth curves and a better development of shoals. ✓

L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys. ✓

M. AIDS TO NAVIGATION

There are several daybeacons in the area covered by this survey: ✓

<u>Latitude</u>	<u>Longitude</u>	<u>Description</u>
56°39'31.9"	133°43'13.1"	W "23"
56°38'43.8"	133°42'36.1"	W "21"
56°38'15.4"	133°41'59.0"	R "20"
56° 38' 11.0"	133° 41' 34.3"	W "19"
56° 38' 09.4"	133° 41' 08.5"	W "17"

These aids serve a useful navigational purpose. Refer also to the separate report on Landmarks OPR-448.

N. STATISTICS

<u>Vessel</u>	<u>No. Pos.</u>	<u>Nautical Miles Sounding Lines</u>	<u>Bottom Samples</u>	<u>Detached Positions</u>
Launch 1	492	20.1	19	34
RA-4	589	25.1	0	0
17' Whaler	139	4.5	0	0
Field Edit	204	0.0	0	204
<i>Total</i>	<i>1424</i>			

The total area surveyed is 1.1 square nautical miles. There are 9 sounding volumes for this survey. Volume 6 has DP's and bottom samples. The tide gauge used was one established in the Devil's Elbow. The soundings on the boat sheet were reduced using predicted tides for Beck Is., Ak. The time meridian used for this survey was 105°W. Three development overlays were made; copies are included with this report. ✓

O. MISCELLANEOUS

Logging: the HUL Logger (BCD code)/Fridex Flexewriter logging system was used for this survey. A "dual indicator" format was used which combines both the sounding and the position information 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 Sounders - OPR-448 (forwarded with this survey) ✓
Field Edit Report - OPR-448 (forwarded to C14, 3 Oct. 1969)
Landmarks Report - OPR-448 (forwarded with this survey)

Respectfully submitted,

Glenn H. Eadrud

Glenn H. Eadrud
LTJG USESSA

TIDE NOTE

The tide station used for this survey was the Devil's Elbow tide gauge.

Location-	56°38'17 ⁶ "N, 133°41'57"W
Plane of reference-	MLLW (7.1 ft. on the staff)
Time Meridian-	105°W
Type of Gauge-	Portable Bubbler

The tide height data were corrected for differences in time and height.

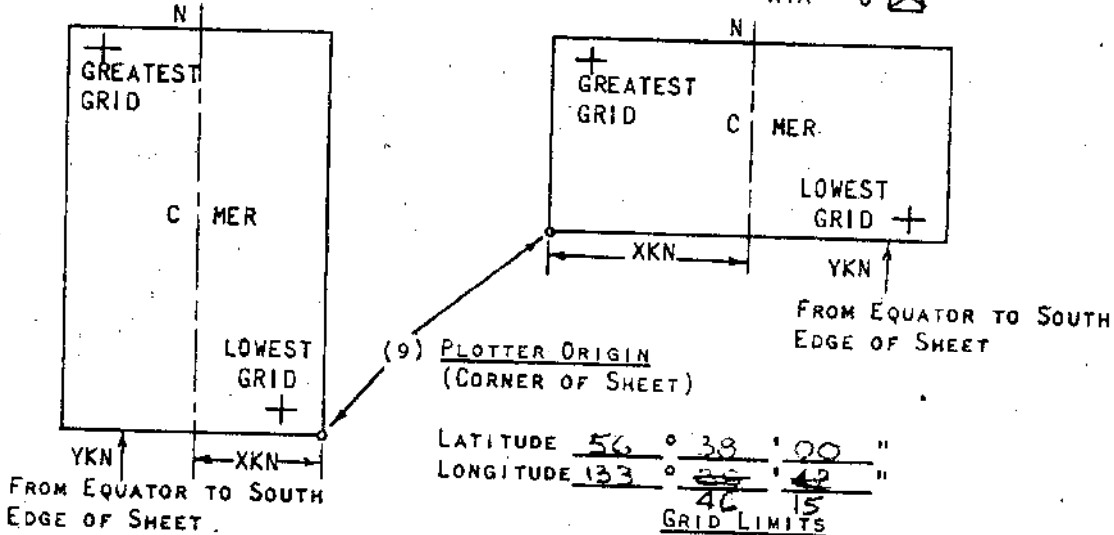
APPENDIX

FORM # 1

FIG. 15

**PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION**

- (1) PROJECT No. OPR-448
- (2) H No. 31139-EDAT
- (3) FIELD No. V
- (4) REQUESTED BY DAVIDSON
- (5) SHIP OR OFFICE DAVIDSON
- (6) DATE REQUIRED 5 MAY 1969
- (7) VISUAL
- (8) ELECTRONIC (FILL OUT FORM #3)
- (10) XKN (SP 5) DISTANCE FROM CMER TO EAST EDGE (NYX = 1) 3324.16
OR WEST EDGE (NYX = 0). ~~3375.31~~ METERS
- (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE OF SHEET. 6,218,870.056 METERS
- (12) CENTRAL MERIDIAN 133° 43' 00"
- (13) SURVEY SCALE 1: 5000
- (14) SIZE OF SHEET (CHECK ONE) 36x54 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., METERS)

- (16) GREATEST LATITUDE 56° 40' 15" (PROJECTION LINE
- (17) LOWEST LATITUDE 56° 38' 15" INTERVAL, PAGE 4
- (18) DIFFERENCE 2' 00" HYDRO MANUAL)
- (19) 0' 15"
- (20) 8.0 YSN
- (21) GREATEST LONGITUDE 133° 46' 15"
- (22) LOWEST LONGITUDE 133° 39' 45"
- (23) DIFFERENCE 6' 30"
- (24) 0' 15"
- (25) 26.0 XSN

△ ON BACK OF P. 2

Field No. 31139
 Date 08/24/54

PARAMETER CARDS

31139

PARAMETER CARD II

Semi major axis of the earth	6,378,206.4	RDA	1 2 3 4 5 6 7 8 9 10
X Constant - Distance from central meridian to origin of plotter SP 5		YMN	11 12 13 14 15 16 17 18 19 20
Y Constant - Distance from equator to origin of plotter SP 2/1		YMN	21 22 23 24 25 26 27 28 29 30
Central Meridian of Projection	133430000	YMN	31 32 33 34 35 36 37 38 39 40
Plotter Scale/Survey Scale	*10298.6876 1:5000	CMR	41 42 43 44 45 46 47 48 49 50
North/south axis of sheet - to correspond to (Y axis - 0)		SCA	1 2 3 4 5 6 7 8 9 10
Feet/Fathom indicator	0 - feet 1 - fathom	NYX	
Identification No.		FOR	53 54 55 56 57
		JN	3 1 1
		YR	58 59 60

PARAMETER CARD III

West Lat. Intersection	56	38	1500	YST	1 2 3 4 5 6 7 8 9 10
Lowest Long. Intersection	133	39	4500	XST	11 12 13 14 15 16 17 18 19 20
Difference between Grid			1500	DXY	21 22 23 24 25 26 27 28 29 30
Interval (Long)				XSN	31 32 33 34
Interval (Lat)				YSN	0 1 2 3 4 5 6 7 8

48114
 45
 Computed _____
 Punched _____
 Checked _____
 Date _____

DLIN	56° 40' 07.95" 133° 44' 15.100"	245.9 m 257.2 m	① 100
ARE	56° 40' 09.353" 133° 43' 24.661"	289.3 m 420.0 m	101
DEUIL	56° 38' 15.345" 133° 41' 10.080"	474.7 m 171.8 m	RTC
PLAT	56° 38' 34.448" 133° 41' 56.909"	1065.5 m 969.9 m	
PETE	56° 38' 44.005" 133° 42' 35.909"	1361.2 m 611.9 m	
OR	56° 39' 10.135" 133° 43' 09.407"	313.5 m 160.3 m	
TEED	56° 39' 31.964" 133° 43' 12.974"	988.7 m 221.0 m	
YOU	56° 39' 54.251" 133° 43' 45.165"	1678.1 m 769.3 m	
EL.	56° 39' 39.107" 133° 42' 40.133"	1209.7 m 683.7 m	
WI	56° 39' 03.740" 133° 42' 36.700"	115.7 m 625.4 m	
VERT	56° 40' 04.541" 133° 42' 55.024"	140.5 m 937.1 m	
ALL	56° 40' 40.147" 133° 44' 33.763"	1241.8 m 574.9 m	
MOST	56° 40' 22.443" 133° 43' 54.317"	694.2 m 925.0	① 112

ABSTRACT OF CORRECTIONS TO ECHO SOUNDERS

In all corrections, Table 1 refers to DA-1, Table 2 refers to RA-4, 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.

Modified Velocity Corrections (feet)

<u>DA-1</u>	<u>Corr'm</u>	<u>RA-4</u>	<u>Corr'm</u>	<u>17' Whaler</u>	<u>Corr'm</u>
4.5	-0.4	5.7	-0.1	3.7	-0.2
8.5	-0.3	9.2	0.0	6.1	-0.1
12.1	-0.2	12.7	+0.1	8.2	0.0
15.9	-0.1	16.0	0.2	10.9	+0.1
19.8	0.0	19.1	0.3	13.7	0.2
23.6	+0.1	21.9	0.4	17.0	0.3
27.5	0.2	24.5	0.5	20.7	0.4
31.5	0.3	26.8	0.6	24.5	0.5
35.1	0.4	29.0	0.7	28.1	0.6
38.8	0.5	31.2	0.8	31.1	0.7
42.2	0.6	33.2	0.9	34.2	0.8
45.1	0.7	35.3	1.0	37.0	0.9
47.8	0.8	37.2	1.1	39.8	1.0
50.1	0.9	39.3	1.2	42.1	1.1
52.3	1.0	41.2	1.3	44.6	1.2
54.3	1.1	43.3	1.4	47.1	1.3
57.0	1.2	45.2	1.5	49.2	1.4
59.4	1.3	47.4	1.6	51.6	1.5
62.0	1.4	50.2	1.7	54.0	1.6
64.3	1.5	52.9	1.8	56.2	1.7
67.0	1.6	55.2	1.9	58.8	1.8
69.3	1.7	57.4	2.0	61.0	1.9
71.8	1.8	60.0	2.1	63.5	2.0
74.3	1.9	62.3	2.2	65.9	2.1
76.8	2.0	64.7	2.3	68.2	2.2
79.2	2.1	67.1	2.4	70.5	2.3
99.0	2.2	69.8	2.5	72.9	2.4
		72.0	2.6	75.2	2.5
		74.6	2.7	77.5	2.6
		77.0	2.8	80.0	2.7
		79.4	2.9	99.0	2.8
		99.0	3.0		

In each case, the depth for each vessel refers to the depth down to which the correction applies.

Refer also to the special report on Corrections to Echo Sounders - OPR-448 for this sheet.

TRA Correction/Table Indicator
(used for correcting initial setting drift)

DA-1			RA-4			17' Whaler		
Day	Time	Corr'm	Day	Time	Corr'm	Day	Time	Corr'm
193	0900	0.0	195	0900	+0.1	208	1110	+0.1
	1032	+0.1		1115	0.0		113150	+0.5
	1042	0.0		1421	-0.1		113245	+0.6
194	0900	-0.1		1425	0.0		113345	+0.7
	1127	0.0	196	0900	-0.1		1136	+0.8
	1239	-0.1		1420	0.0		1140	+0.2
	1350	-0.2	197	0800	0.1		114430	+0.4
	1402	-0.1		1157	0.0		123630	+0.1
	1425	-0.2		1258	-0.1		1245	+0.0
209	1113	-0.1		1313	0.0		1258	+0.2
	1303	-0.4	204	0955	0.0		1510	+0.1
	1516	-0.5		1259	0.0			
				1346	-0.1			

All times are 105°W Meridian.

LIST OF OBSTRUCTIONS - DA-5-4-69

Volume 6 has 160 detached positions and 19 better samples.
Volume 8 has 80 detached positions.

LIST OF STATIONS ON DA-5-4-69

<u>Signal No.</u>	<u>Origin of Signal</u>
401	DUN 1927
402	ARE 1927
403	NEXT 1927
404	EL 1927
405	Vol. 6, pp. 3-10
406	T-12818
407	Vol. 6, pp. 3-10
408	Vol. 6, pp. 3-10
409	Vol. 6, pp. 3-10
410	Vol. 6, pp. 3-10
411	Vol. 6, pp. 3-10
412	Vol. 6, pp. 3-10
413	Vol. 6, pp. 3-10
414	T-12818
415	T-12818
416	T-12818
417	Vol. 6, p. 11
418	HAR 1927
419	Vol. 6, p. 11
420	YOU 1927
421	Vol. 6, p. 13

SIGNALS G.P

H-NO.-		LATITUDE	LONGITUDE	X	Y	
09080	401	69 56400795	133441509	04295	08311	401
09080	402	69 56400934	133432466	06098	08401	402
09080	403	69 56400456	133425501	07158	08090	403
09080	404	69 56393912	133424015	07690	06437	404
09080	405	69 56391688	133423340	07932	04993	405
09080	406	69 56385968	133423251	07963	03876	406
09080	407	69 56383356	133415862	09177	02179	407
09080	408	69 56382987	133414242	09756	01940	408
09080	409	69 56382156	133412229	10477	01400	409
09080	410	69 56381500	133410939	10939	00974	410
09080	411	69 56380938	133410851	10971	00609	411
09080	412	69 56381102	133413432	10047	00716	412
09080	413	69 56381539	133415908	09161	00999	413
09080	414	69 56381051	133423643	07823	00682	414
09080	415	69 56381500	133425321	07223	00974	415
09080	416	69 56382796	133422529	08222	01816	416
09080	417	69 56384381	133423609	07836	02845	417
09080	418	69 56391015	133430939	06644	04556	418
09080	419	69 56393188	133431315	06510	05967	419
09080	420	69 56395425	133434515	05365	07420	420
09080	421	69 56381083	133422100	08376	00704	421

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ABSTRACT OF POSITIONS (Volume No. in parenthesis)

<u>Day</u>	<u>DA-1</u>	<u>RA-4</u>	<u>171 Whaler</u>	<u>DP's</u>	<u>Bottom Samples</u>
193	1-119 (1)				
194	120-215 (1) 216-231 (2)				
195		232-368 (3)			
196		369-479 (3)			
197		480-654 (4)			
204		659-824 (5)			
205					
206				5001-5057, 5801 (6) 5802-5805, 5058-5063 (6) 4501-4561 (6) 4001-4024 (8) 4025-4080 (8) 5064-5093, 4700 (6)	
208			825-963 (7)		
209	924-1135 (9)				8001-8019 (6)
210					

APPROVAL SHEET

OPR-448

DA-5-4-69

Keku Strait

Alaska

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



Ray E. Moses

CDR USESSA

Commanding Officer

USC&GSS DAVIDSON

GEOGRAPHIC NAMES

Survey No. H-9080

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
Beck Island												1
Devils Elbow												2
* Keku Strait												3
Kuiu Island												4
Kupreanof Island												5
Rocky Pass												6
Summit Island												7
												8
* Title												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

PREPARED:

F. W. Pickett

Cartographic Technician
6-29-71

APPROVED

A. J. Wright

Chief Geographer
6-29-71

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 27, 1970

~~Nautical Chart Division~~ Pacific Marine Center

Plane of reference approved ~~in~~ ~~volume of sounding records~~ for Tide tape printout

HYDROGRAPHIC SHEET 9080

Locality: Keku Strait, S.E. Alaska

~~Chief of Party:~~ Year: 1969

Plane of reference is mean lower low water

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

Devils Elbow, Keku Strait, Alaska

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

11.8 feet

Remarks Tide reducers for days 197 and 204 have been revised in red and verified.

J. M. Symons
Chief, Tides and Currents Branch

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9080

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		* 6	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1					
VOLUMES	9					
BONES <i>Bundles</i>			3			

T-SHEET PRINTS (*List*)

SPECIAL REPORTS (*List*)

* 3 Development overlays filed with printouts

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				
POSITIONS CHECKED		1385	50	
POSITIONS REVISED		47	0	
DEPTH SOUNDINGS REVISED		418	7	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0	0	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0	0	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		72	10	82
JUNCTIONS		8	6	14
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		126	50	176
SPECIAL ADJUSTMENTS		10	12	22
ALL OTHER WORK		97	4	102
TOTALS		313	82	395
PRE-VERIFICATION BY		BEGINNING DATE	ENDING DATE	
VERIFICATION BY <i>Nicholas Lestenkof</i>		BEGINNING DATE 4/1/70	ENDING DATE 5/3/71	
REVIEW BY <i>Sergei Mysced</i>		BEGINNING DATE February 16, 1972	ENDING DATE Mar 29, 1972	

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9080

FIELD NO. DA-5-4-69

Alaska - Keku Straits - Devils Elbow to Summit Island

SURVEYED: July 12, 1969 through July 29, 1969

SCALE: 1:5,000

PROJECT NO.: OPR 488

SOUNDINGS: DE723 Depth Recorder
Leadline

CONTROL: Visual fixed on
shore signals

Chief of Party	R.E. Moses
Surveyed by	E.M. Gelb
.....	G.H. Endrud
Protracted by	Gerber Digital Plotter
Soundings Plotted by	Gerber Digital Plotter
Verified and Inked by	N. Lestenkof
Reviewed by	G.K. Myers
.....	Date: March 29, 1972
Inspected by	R.H. Carstens

1. Description of the Area

This survey covers a portion of Keku Strait between Devils Elbow and Summit Island. The bottom in this area is very rugged with many rocks and reefs offshore. Along the shore ledges and boulder strewn mud flats exist.

Predominant bottom characteristics of the area are green mud and sand, stones and pebbles.

2. Shoreline and Control

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

The shoreline is from reviewed photogrammetric manuscripts T-12815 (1964-1969), T-12816 (1961, 1969) and advanced manuscripts T-12817 (1961, 1969) --Bp 78164, and T-12818 (1968-1969) --Bp 78165.

3. Hydrography

- A. Depths at crossings are in good agreement considering the irregularity of the bottom.
- B. The usual depth curves are adequately delineated. A brown depth curve was inked during review in some areas to emphasize critical features.
- C. The development of bottom configuration and the investigation of least depths are considered adequate.

4. Condition of the Survey

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

5. Junctions

An adequate junction was made with H-9079 (1969) on the north. Junction with H-9081 (1969) in the south will be discussed in the review of that survey.

6. Comparison with Prior Surveys

H-2150 (1892), 1:40,000
H-4764 (1927), 1:10,000
H-4764A (1929), 1:5,000
H-4945 (1929), 1:5,000

Survey H-2150 shows only a single line of soundings in the area of the present survey and provides insufficient information for comparison.

The other prior surveys taken together cover the present survey. A detailed comparison between the prior and present surveys reveals only variable differences of about 1 foot. However, some local shifting of sediment has occurred along the foreshore and in the area of Devils Elbow where changes of less than $2\frac{1}{2}$ feet exist.

The 3-foot sounding charted at lat. $56^{\circ}39.4'$, long. $133^{\circ}43.05'$ from H-4764 (1929) was erroneously added during application of boat sheet information of the present survey. This depth was changed by dredging in 1960 and the sounding should be deleted from the chart. The present survey 4 ft. is adequate for charting this feature.

With the addition of some rocks, bottom characteristics, and soundings brought forward from T-4341 (1927), H-4764 (1927), and H-4945 (1929) the present survey is considered adequate to supersede the prior surveys in the common area.

7. Comparison with Chart

Chart Drawing 8272 #7 (latest drawing date 5/19/72)

A. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration supplemented by partial application of depths from the boat sheet (Bp 77801) and verified smooth sheet of the present survey. Some charted information is from Corps of Engineer surveys of 1958 and 1960 (Bp 59443).

The rock awash charted at lat. $56^{\circ}39.53'$, long $133^{\circ}42.68'$ from the verified smooth sheet of the present survey was revised during review and should be removed from the chart.

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

B. Topography

The pile charted at lat. $56^{\circ}38.29'$, long. $133^{\circ}41.28'$ from Notice to Mariners 23 of 1958 was neither proved nor disproved on the present survey and should be retained on the chart.

C. Aids to Navigation

The charted position of fixed aids to navigation within the area of the present survey adequately mark the features intended.


8. Compliance with Project Instructions

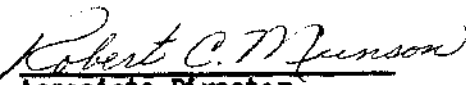
The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a very good basic survey and no additional field work is recommended.

Examined and Approved:


John C. Boyer
Chief
Marine Chart Division


Robert C. Munson
Associate Director
Office of Marine Surveys
and Maps

H-9080

Items for Future Pre-Survey Review

This is a survey of Rocky Pass between Devils Elbow and Summit Island in the area of Keku Straits. No note worthy changes have taken place since the earlier surveys of the 1920's.

Position Index - lat. 563 - long. 1335

Bottom Change Index - 2

Use Change Index - 1

Resurvey Cycle - 50 yrs.

Reg. No. 9080

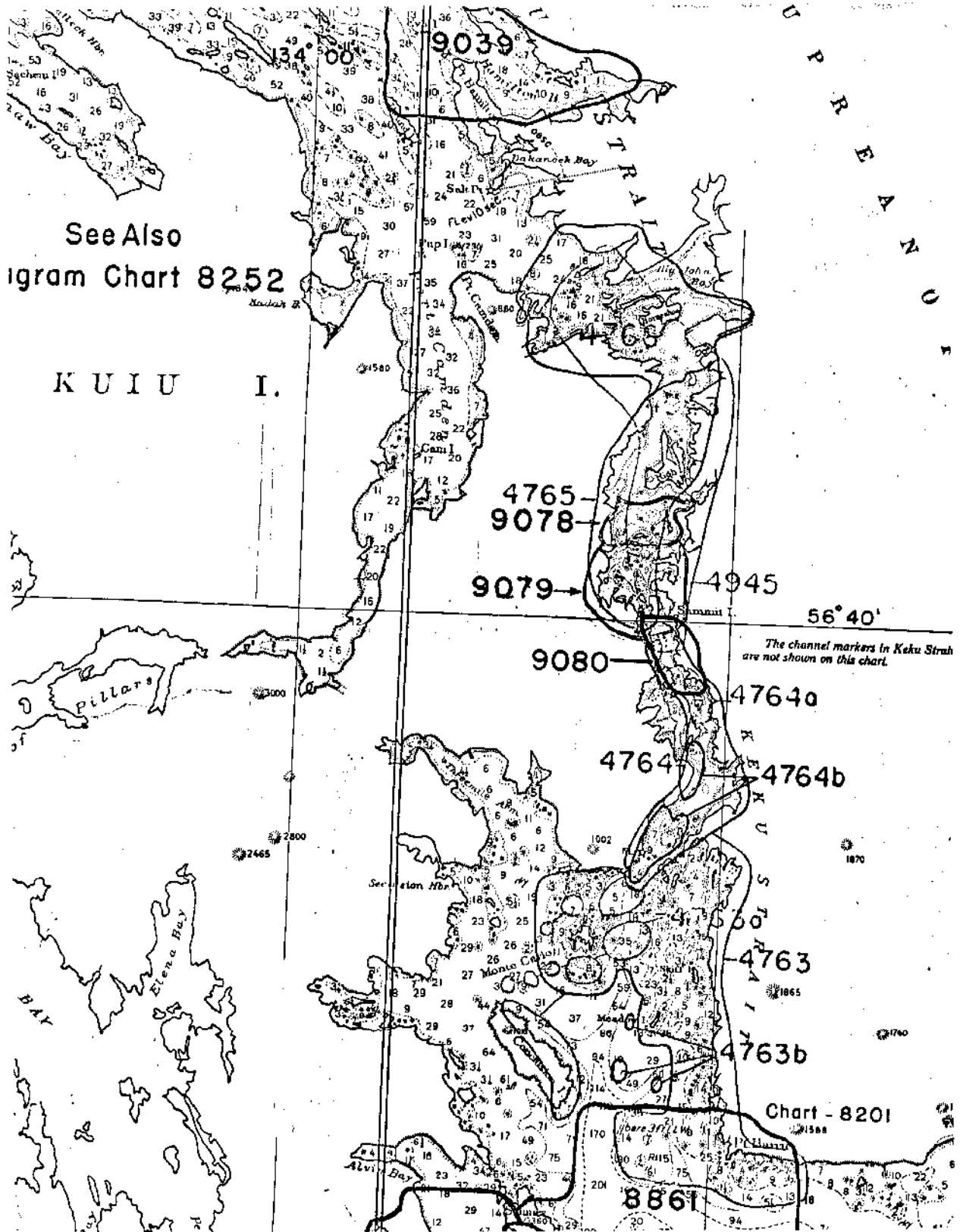
The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

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:



See Also
ogram Chart 8252

KUIU I.

The channel markers in Keku Strah
are not shown on this chart.

Chart - 8201

9039
4765
9078
9079
4945
9080
4764a
4764
4764b
4763
4763b
8861

U
P
R
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N
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K
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K
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S
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R
A
I
T

134° 00'

56° 40'

Atleak In.
Sachem In.
Law Bay

pillars

Eliessa Bay
BAY

Alvi Bay

Dakanock Bay

Section Nbr.

Monte Carlo

Chart - 8201

