

9158

Diag. Cht. No. 8201-3.

9158

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-10-4-70
Office No.	H-9158
LOCALITY	
State	Alaska
General locality	Keku Strait
Locality	Pt. Camden to Big John Bay
1970	
CHIEF OF PARTY	
R. E. Moses	
LIBRARY & ARCHIVES	
DATE	10-17-73

HYDROGRAPHIC TITLE SHEET

H-9158

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-10-4-70

State Alaska

General locality ~~Southwest Alaska~~ Keku Strait

Locality Pt. Camden to Big John Bay
Keku Strait

Scale 1:10,000 Date of survey 20 June - 3 Sept., 1970

Instructions dated 23 March 1970 Project No. OPR-448

Vessel Launch DA-2, 17' Whaler

Chief of party CDR. Ray E. Moses

Surveyed by Lt(iq) Endrud, G.H. Ens. Herz, H.W. Ens. Miller, G.L. Ens. Arnold, R.C. CST Luceno

Soundings taken by echo sounder, ~~beam transducer~~ Raytheon DE-723, #553, 916, 919, 1276

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Commissioned Officers

Protracted by Ens. Herz, Ens. Miller Automated plot by PMC, ^{Garber Digital Plotter} Seattle

Soundings penciled by Ens. Herz, Ens. Miller

Soundings in fathoms ~~feet~~ at MKW MLLW

REMARKS:

Applied to state 11/7/73.

RM

*8201
8272
8125*

A. PROJECT

This survey was accomplished according to Project Instructions: OPR-448, KEKU STRAIT, SOUTHEAST ALASKA dated 23 March 1970.

B. AREA SURVEYED

The area surveyed covers the northern end of Rocky Pass in the Big John Bay area of the strait. The survey limit to the west is Latitude $56^{\circ}49'N$, Longitude $133^{\circ}50'W$, where the survey junctions with DA-10-5-68 (H-9041). The survey junctions with contemporary survey DA-10-5-70 (H-9159) on the south in the area of Latitude $56^{\circ}47'N$, Longitude $133^{\circ}45'W$. Work on the survey was accomplished between 20 June, 1970 and 3 September, 1970.

C. SOUNDING VESSEL

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

<u>VESSEL</u>	<u>POSITION NUMBER</u>	<u>COLOR</u>
Launch DA-2		Red
17' Whaler		Red-Violet

Field edit positions and shoreline are shown in brown. Bottom samples were taken with Launch DA-2 and are shown with red position numbers within blue circles. An abstract of each vessel's work by position numbers is attached.

D. SOUNDING EQUIPMENT

Raytheon DE-723 fathometers were used:

Launch DA-2	#553 & #1276
17' Whaler	#142, #916 & #919

Echo sounder corrections were determined from bar checks taken at least once daily by the launch and the whaler. Fathometers were initialed at zero and require draft corrections for their soundings. Corrections to echo soundings can be found in a separate report titled "Corrections to Echo Sounders - OPR-448 - Keku Strait - 1970." All soundings were taken in fathoms.

E. SMOOTH SHEET

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

F. CONTROL

Visual three-point fixes were used for control in this survey. There were three types of visual signals used; triangulation, photogrammetric and hydrographic. Existing second order triangulation stations were used. Second order traverse stations were used in the Big John Bay area. Photogrammetric signals were located by radial plots from office photos. The triangulation stations and photo signals were plotted by the ship's commissioned officers. Hydrographic signals were cut in with sextant angles and T-2 cuts.

G. SHORELINE

See Review Par. 2

The shoreline was traced from the following manuscripts:

T-12201, T-12202, T-12204, TP-¹²00205 and T-12206
(1961-68) (1961-68) (1961-70) (1961-70) (1961-70)

The MHWL was walked in areas where the accuracy of the manuscripts was in question and sextant fixes were taken and plotted on the boatsheet. MHWL positions are plotted on the sheet with position numbers in brown. Shoreline details were modified in the area of Lat. 56°47.5'N, Long. 133°49.0'W and islands were added in Lat. 56°46.81'N, Long. 133°49.4'W. The shoreline in Lat. 56°48.5'N, Long. 133°46.25'W could not be verified due to poor control and unidentifiable MHWL.

H. CROSSLINES

The percentage of crosslines run was 3% (13.25 miles). There is good agreement at crossings.

I. JUNCTIONS

Junctions were made with the following sheets:

DA-10-5-68 (H-9041)1958 Contemporary survey
DA-10-5-70 (H-9159)1970 Contemporary survey

Soundings were compared at the junctions and found to agree.

J. COMPARISON WITH PRIOR SURVEYS

Comparisons were made with the two prior surveys of the area. The survey of 1892 (No. 2150 - 1:40,000) had only sparse soundings. The soundings agreed though comparison was difficult. The 1927 survey (No. 4766 - 1:10,000) agreed with this survey. (See Review Para. G)

K. COMPARISON WITH THE CHART (See Review Para. 7)

Comparison of soundings and depth curves with C&GS chart 8272, 3rd edition, Oct. 17, 1966 was made and the comparison was excellent with the exception of the Big John Bay area. Soundings in the bay appear to be shallower than on the chart in the upper area of the bay.

L. ADEQUACY OF SURVEY

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

M. AIDS TO NAVIGATION

Seven day beacons on the boat sheet were located and a report on these fixed aids to navigation has been submitted. Information on these beacons can be found in Landmarks and Fixes Aids to Navigation Report - OPR-448, 1970.

N. STATISTICS

<u>VESSEL</u>	<u>No. OF POSITIONS</u>	<u>SOUNDING LINES (NM)</u>	<u>BOTTOM SAMPLES</u>	<u>DETACHED POSITIONS</u>
Launch DA-2	2,158	223.6	52	2
17' Whaler	1,063	58.55	0	6

The total area surveyed is 8.25 square miles. A climatronics logger and Friden flexowriter were used for recording while underway. As a result, both sounding volumes and original printouts constitute the "original records" of the survey. There are 21 volumes/printouts with this survey.

O. MISCELLANEOUS

One tide gauge was installed and maintained on Pup Island (Lat. 56°49.4'N, Long. 133°53.2'W) for reduction of soundings on the smooth plot. Soundings on the boat sheet are reduced to MLLW with predicted tides for Entrance Island, Keku Strait, Alaska. Time meridian 105° West was used for the entire survey. Further information can be found in the attached "tide note".

Detached positions, minus soundings and zero soundings were all logged as 0000 in the sounding column of the data tapes. The verifier should therefore refer to the original sounding volumes/printouts for all 0000 soundings to determine what they represent.

P. RECOMENDATIONS

There are no recommendations for this survey.

Q. REFERENCES TO REPORTS

Correction to Echo Sounders OPR-448-1970

Field Edit Report OPR-448-1970

Landmarks Report OPR-448-1970

Respectfully submitted

Howard W. Herz

Howard W. Herz
LTJG NOAA

ATTACHMENTS:

Tide Note
Tidal Data
List of Stations
Abstract of Positions
Form #1
Approval Sheet

TIDE NOTE

The tide station used for this survey was located on Pup Island.

Location:	Lat. $56^{\circ}49.4'N$, Long. $133^{\circ}53.2'W$
Time Meridian	105° West
Plane of Reference	MLLW (2.41 ft. on the staff)
Type of Gauge	Portable Bubbler

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

APPROVAL SHEET

OPR-448

DA-10-4-70

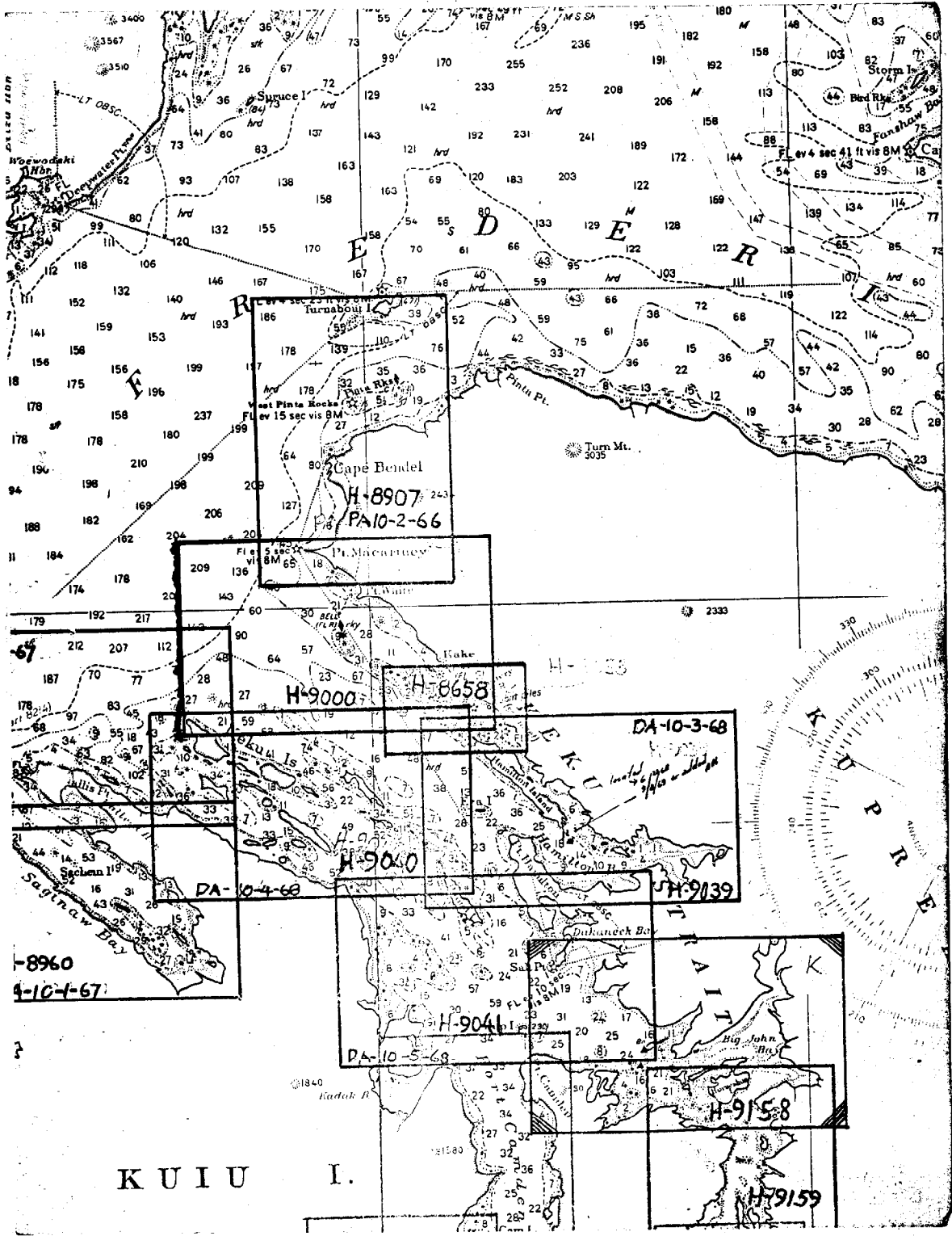
Keku Strait

Southeast Alaska

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



Ray E. Moses
CDR NOAA
Commanding Officer
NOAA Ship DAVIDSON



LIST OF STATIONS ON DA-10-4-70

<u>SIGNAL NUMBER</u>	<u>ORIGIN OF STATION</u>
401	Salt Point Light
402	T-12201
403	SON, 1927
404	T-12201
405	TP- 00 ¹² 205 & Vol. XXI Pg. 3,4,5
406	GULL, 1927
407	Vol. XXI Pg. 12
408	DEN, 1927
409	PET, 1927
410	WAIT, 1927
411	BAR, 1927
412	Vol. XXI Pg. 3,5,13
413	TP- 00 ¹² 205 & Vol. XXI Pg. 3,5
414	TP- 00 ¹² 205 & Vol. XXI Pg. 3
415	TP- 00 ¹² 205
416	TP- 00 ¹² 205 & Vol. XXI Pg. 3,4
417	T-12201
418	T-12201 & Vol. XXI Pg. 4
419	T-12201
420	T-12201 & Vol. XXI Pg. 4,5
421	Vol. XXI Pg. 4,13
422	T-12201 & Vol. XXI Pg. 4,5,14
423	T-12201 & Vol. XXI Pg. 13,14
424	REEF, 1970
425	TP- 00 ¹² 205 & Vol. XXI Pg. 13,14,15

LIST OF STATIONS ON DA-10-4-70

<u>SIGNAL NUMBER</u>	<u>ORIGIN OF STATION</u>
426	TP- ¹² 00 205
427	TP- ¹² 00 205 & Vol. XXI Pg. 15
429	TP- ¹² 00 205 & Vol. XXI Pg. 13,14
430	TP- ¹² 00 205 & Vol. XXI Pg. 14
431	TP- ¹² 00 205
433	Vol. XXI Pg. 13,14,15
434	Vol. XXI Pg. 13,14,15
435	JOHN, 1970
436	Vol. XXI Pg. 13,14,15
437	BIG, 1970
438	BAY, 1970
439	Vol. XXI Pg. 14,15
440	Vol. XXI Pg. 14,15 & TP- ¹²²⁰⁶ 00 205
441	Vol. XXI Pg. 14,15 & TP- ^{12,6} 00 205
442	Vol. XXI Pg. 14,15
443	T-12206 & Vol. XXI Pg. 14,15
444	Vol. XXI Pg. 14,15
445	T-12206 & Vol. XXI Pg. 15,16
446 Day Beacon R"46"	Vol. XXI Pg. 9
447 Day Beacon W"47"	Vol. XXI Pg. 6,7,8,11
449 Day Beacon W"49"	Vol. XXI Pg. 6,7,11
450 Day Beacon R"50"	Vol. XXI Pg. 7,8,10,11
452 Day Beacon R"52"	Vol. XXI Pg. 6,10

LIST OF STATIONS OF DA-10-4-70

<u>SIGNAL NUMBER</u>	<u>ORIGIN OF STATION</u>
453 Day Beacon W"53"	Vol. XXI Pg. 6,7,10,11
454 Day Beacon R"54"	Vol. XXI Pg. 12,13
455	T-12206
456	^{12 6} TP-00203 & Vol. XXI Pg. 14,16
457	^{12 6} TP-00203
458	^{12 6} TP-00203
459	^{12 6} TP-00203
460	Vol. XXI Pg. 14,15
461	Vol. XXI Pg. 14,15,16
462	Vol. XXI Pg. 14,15,16
463	T-12201
464	Vol. XXI Pg. 15,16
465	KEL, 1927

ABSTRACT OF POSITIONS

<u>DAY</u>	<u>LAUNCH DA-2</u>	<u>17' WHALER</u>	<u>BOTTOM SAMPLES & FIELD EDIT</u>
171	1-189 (I)	} There are no vols for these days, only print outs	
173	190-346 (II)		
174	347-460 (III)		
175	461-679 (IV)		
180	671-791 (V)		6205 (XX)
181	792-1000 (VI)		
182	1001-1202 (VII)		
195	1203-1348 (VIII)		
196		3349-3511 (IX)	
197		3512-3618 (IX)	
204			6001-6089 (XX)
205		3306-3340 ⁸ (X)	6206-6208 (XX)
206		3617-3777 (X)	
207		3785-3920 (XI)	6090-6164 (XX)
208		3921-4096 (XI, XII)	
209		4097-4289 (XII)	6165-6204 (XX)
210	1349-1553 (XIII)		
216	1554-1685 (XIV)		
217	1686-1834 (XV)		6209 (XX)
218	1835-2031 (XVI)		8001-8002 (XX)
219	2032-2080 (XVII)		8003-8022 (XX)
220			8023-8052 (XX)
225	2081-2151 (XVIII)	4290-4382 (XIX)	6210-6216 (XX)

ABSTRACT OF POSITIONS

<u>DAY</u>	<u>LAUNCH DA-2</u>	<u>17' WHALER</u>	<u>BOTTOM SAMPLES & FIELD EDIT</u>
232			6217-6220 (XX)
246			6221-6236 (XX)

SIGNAL PLOTTER CARDS

H-NO.		LATITUDE	LONGITUDE	X	Y	X
09158	401	69 56504220	133515463	01071	07071	401
09158	402	69 56501248	133500649	02995	07033	402
09158	403	69 56494545	133493102	04694	06121	403
09158	404	69 56491807	133473107	05761	05232	404
09158	405	69 56473401	133480526	05143	01952	405
09158	406	69 56480689	133484773	04394	02921	406
09158	407	69 56481448	133500707	02980	03169	407
09158	408	69 56483954	133521562	00691	03986	408
09158	409	69 56471917	133472131	05922	01370	409
09158	410	69 56471591	133461879	07047	01264	410
09158	411	69 56465208	133453315	07860	00490	411
09158	412	69 56473930	133491921	03819	02041	412
09158	413	69 56472263	133484771	04375	01483	413
09158	414	69 56465826	133482330	03759	00592	414
09158	415	69 56465176	133490224	04133	00481	415
09158	416	69 56465929	133482333	04317	00725	416
09158	417	69 56491859	133461851	07053	05248	417
09158	418	69 56493514	133452370	08020	05785	418
09158	419	69 56490653	133455706	07435	04856	419
09158	420	69 56485741	133462983	05851	04560	420
09158	421	69 56484342	133463218	06027	04106	421
09158	422	69 56482509	133462233	06984	03511	422
09158	423	69 56482848	133455039	07553	03621	423
09158	424	69 56482851	133461173	08242	03622	424
09158	425	69 56481775	133451844	03122	03272	425
09158	426	69 56480905	133453471	07833	02990	426
09158	427	69 56480595	133454472	07654	02889	427
09158	429	69 56481342	133455763	07424	03131	429
09158	430	69 56481532	133463076	06834	03194	430
09158	431	69 56480417	133462257	06980	02331	431
09158	433	69 56481274	133444025	08603	03110	433
09158	434	69 56481924	133440471	09436	03321	434
09158	435	69 56482531	133430212	10551	03519	435
09158	436	69 56485263	133440984	09344	04405	436
09158	437	69 56490598	133432906	10070	04839	437
09158	438	69 56482415	133411932	12372	03482	438
09158	439	69 56481807	133425946	10589	03283	439
09158	440	69 56480759	133432982	10058	02946	440
09158	441	69 56480152	133433211	10017	02746	441
09158	442	69 56480272	133425830	10611	02784	442
09158	443	69 56475722	133424543	10849	02607	443
09158	444	69 56474833	133411178	12518	02319	444
09158	445	69 56474200	133425102	10750	02141	445
09158	446	69 56471403	133440599	09416	01203	446
09158	447	69 56471277	133443953	09815	01162	447
09158	449	69 56471972	133454753	07604	01388	449

09158	450	69	56473340	133460300	07328	01832	450
09158	452	69	56475619	133463170	06917	02572	452
09158	453	69	56481343	133474701	05460	03295	453
09158	454	69	56483934	133474423	05525	03974	454
09158	455	69	56472150	133423262	11077	01446	455
09158	456	69	56474377	133445255	08584	02169	456
09158	457	69	56475716	133443447	08906	02603	457
09158	458	69	56475864	133441155	09315	02652	458
09158	459	69	56481222	133434267	02704	03006	459
09158	460	69	56475192	133453550	07317	02433	460
09158	461	69	56474652	133454112	07718	02250	461
09158	462	69	56472955	133453213	07878	01706	462
09158	463	69	56471186	133453519	07824	05022	463
09158	464	69	56480753	133443300	08932	02941	464
09158	465	69	56464332	133433551	09258	00206	465

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H-9158 PARAMETER CARDS

637820640/754045000/629486200/481530000/104986880/01/09158/70* P.C. 2
 204420000/481110000/300000000/22809 B.C. 3

000000

H 31109
 Field No. 022 448 "K"
 Date 8/29/69

PARAMETER CARDS (I - II)

31109

PARAMETER CARD II

Bemi major axis of the earth	6,378,206.4	RDA	1 6 2 3 3 7 4 8 5 2 6 0 7 6 8 4 9 0 10 7
X Constant - Distance from central meridian to origin of plotter SP 5	_____ meters	XKN	1 11 2 12 3 13 4 14 5 15 6 16 7 17 8 18 9 19 10 20
Y Constant - Distance from equator to origin of plotter SP 241	_____ meters	YKN	1 21 2 22 3 23 4 24 5 25 6 26 7 27 8 28 9 29 10 30
Central Meridian of Projection	✓ 133453000	CMR	1 31 2 32 3 33 4 34 5 35 6 36 7 37 8 38 9 39 10 40
Plotter Scale/Survey Scale	*10498.6876 1:10000	SCA	1 41 2 42 3 43 4 44 5 45 6 46 7 47 8 48 9 49 10 50
North/south axis of sheet - to correspond to (Y axis - 0)		NYX	1 51 2 52 3 53 4 54 5 55 6 56 7 57 8 58 9 59 10 60
Feet/Fathom indicator	0 - feet 1 - fathom	FOF	1 61 2 62 3 63 4 64 5 65 6 66 7 67 8 68 9 69 10 70
H Identification No.		JN	1 71 2 72 3 73 4 74 5 75 6 76 7 77 8 78 9 79 10 80
FOR - 1		YR	1 81 2 82 3 83 4 84 5 85 6 86 7 87 8 88 9 89 10 90

PARAMETER CARD III

Lowest Lat. Intersection	✓ 56470000	YST	1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 10 10
Lowest Long. Intersection	✓ 133383000	XST	1 11 2 12 3 13 4 14 5 15 6 16 7 17 8 18 9 19 10 20
Difference between Grid	✓ 3000	DXY	1 21 2 22 3 23 4 24 5 25 6 26 7 27 8 28 9 29 10 30
Interval (Long)		XSN	1 31 2 32 3 33 4 34 5 35 6 36 7 37 8 38 9 39 10 40
Interval (Lat)		YSN	1 41 2 42 3 43 4 44 5 45 6 46 7 47 8 48 9 49 10 50

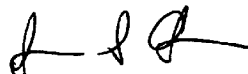
Computed _____
 Punched _____
 Checked _____
 Date _____

SPR / *MIR*

APPROVAL SHEET

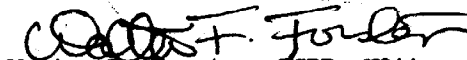
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,



James S. Green
Supervisory Cartographic Technician

Approved and forwarded,



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

VERIFIER'S REPORT

E-9158

DA-10-4-70

This sheet was constructed and plotted at Pacific Marine Center, Seattle, Washington. Information relating to this will be noted under the heading by the number and letter as on the Verifier's Report, C&GS Form 946A.

PART II SHORELINE AND SIGNALS (Descriptive Report)

1. Numerous "MHWL" positions are shown on the Smooth Sheet, as shoreline, in red, where the shoreline differs from advance shoreline manuscripts.

2. Positions 6165, 6166 and 6167 are plotted on the Smooth Sheet but do not appear on the Boatsheet; these positions were retained here because Signal #414 is close by and described as "South Rock of Group"--these positions probably are other rocks of the group. Location: Latitude $56^{\circ} 47' 00''$, Longitude $133^{\circ} 49' 30''$.

3. Area, left, Big John Bay--Positions 6221-6225--these are in small bay off Big John: Latitude $56^{\circ} 48' 07''$, Longitude $133^{\circ} 43' 15''$ (approximate).

These positions are not on the Boatsheet, but appear in the automated plot. The soundings were added by hand plot.

4. At Latitude $56^{\circ} 48' 30''$, Longitude $133^{\circ} 45'$ (3.8), Position #1920 (218) 3 rocks just below Reef, a \emptyset sounding was moved by hand plot to allow both rock and sounding: sounding to show depth between rocks along shore.

Latitude $56^{\circ} 48.42'$, Longitude $133^{\circ} 46.9'$, shoal on manuscript T-12205, no height or depth was obtained over main part of reef as sounding lines pass by on two (2) sides, showing shoal depths. The reef now remaining between survey lines, retained as smaller reef.

Rock, at Latitude $56^{\circ} 47.38'$, Longitude $133^{\circ} 47.08'$ covered rock 24 ft plotted as (symbol) "+" with note ("Rock covers \emptyset fm MLLW). The symbol and note are used to allow sounding beside rock to remain plotted.

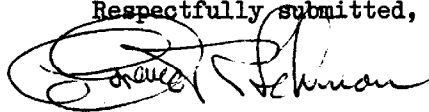
PART XI NOTES TO REVIEWER

34. Rock, Latitude $56^{\circ} 47.4$, Longitude $133^{\circ} 47.9'$. Rock awash, on manuscript T-12205, has not been developed, hydrography does not indicate a rock at this location. Field survey places a rock at Latitude $56^{\circ} 47.42'$, Longitude $133^{\circ} 47.62'$ which is supported by hydrography. In as much as advance manuscript rock is not disproved both rocks are plotted.

*has been removed
existing on map of
photo*

36. There are several plots concerning negative soundings retained within extended reefs. Several instances where this verifier retained overlapping soundings to clarify depth curves, or retained when these were readable. No excuse is offered except that it appeared necessary to depart from the usual to show bottom characteristics better.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Clarence R. Lehman". The signature is written in dark ink and is positioned above the typed name.

Clarence R. Lehman
Cartographic Technician

Name on Survey	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous su No.	On U. S. Quad. Maps	From local information	On local Maps	P. O. Guide or	Rand McNally	U. S. Light Lis.		
BERRY ISLAND										1
BIG JOHN BAY										2
CUCUMBER REEF										3
ENTRANCE ISLAND										4
HORSESHOE ISLAND										5
KEKU STRAIT										6
KUIU ISLAND										7
KUPREANOF ISLAND										8
ROCKY PASS										9
STEDMAN COVE										10
Big John Creek										11
Pt Camden										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Approved by:
Chas E. Harrington
 Staff Geographer
 Nov 29, 1973

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY 8/15/72

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for smooth tide tape printout

Tide Station Used (NOAA Form 77-12): Pup Island, Alaska

Period: June 20 - August 21, 1970

HYDROGRAPHIC SHEET H9158

OPR 448

Locality: Keku Strait, S.E. Alaska

Plane of reference (mean lower low water)= 7.4 feet
which is 2.4 feet on tide staff.

Height of Mean High Water above Plane of Reference is ~~was~~
~~is~~ 13.5 feet

Remarks: Hourly heights for July 14, 15 and 16 have been
revised in red and verified.

Hourly heights for Sept. 3, 1970 have been inferred from data
from the Ketchikan tide station.

Hourly Heights tapes corrected. 9-5-72 JR

Robert A. Cummings

Chief, Tides Branch

HYDROGRAPHIC SURVEY STATISTICS
 HYDROGRAPHIC SURVEY NO. H-9158

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	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES	8	21				
BOXES			1			
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				3,221
POSITIONS CHECKED		3,221	10	
POSITIONS REVISED		233	0	
DEPTH SOUNDINGS REVISED OR removed		38	209	
DEPTH SOUNDINGS ERRONEOUSLY SPACED, added		33	29	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS			32 hrs	
JUNCTIONS		6	1 hr	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		347		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		147	125	
TOTALS		500	158+16=174	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY Clarence R. Lehman	12/24/72		9/19/73	
REVIEW BY <i>Fannie B. Powers</i> 105p <i>C. Carstens</i>	Jan. 16, 1974		Feb. 22, 1974	

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9188

FIELD NO.: DA-10-4-70

Alaska, Keku Strait, Point Camden to Big John Bay

SURVEYED: June 20, 1970 - Sept. 3, 1970

SCALE: 1:10,000

PROJECT NO.: OPR-448

SOUNDINGS: Raytheon DE-723 depth recorders

CONTROL: Sextant fixes on shore signals

Chief of Party	R. E. Moses
Surveyed by	G. H. Endrud
.....	H. W. Herz
.....	G. L. Miller
.....	R. C. Arnold
Protracted by	Gerber Digital Plotter
Soundings Plotted by	Gerber Digital Plotter
Verified and inked by	C. R. Lehman
Reviewed by	F. B. Powers
.....	Date: Feb. 21, 1974
Inspected by	R. H. Carstens

1. Description of the Area

This survey covers a portion of Keku Strait from Point Camden on the northwest to Big John Bay on the east and includes the northern end of Rocky Pass.

The inshore gravel beach area is foul with intermittent ledges and offlying rocks awash. Scattered reefs, islets, shoals and foul areas break up the sloping bottom.

The predominant bottom characteristics are mud, sand, stone, shells and pebbles.

2. Shoreline and Control

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

The shoreline originates with reviewed photogrammetric manuscripts T-12201 (1961-68), T-12202 (1961-68), T-12204 (1961-70), T-12205 (1961-70) and T-12206 (1961-70). The hydrographer provided considerable information for changes in the delineation of the shoreline and reefs. Several fore-shore characteristics shown as rky on the above manuscripts were described more appropriately on the present survey smooth sheet as boulders. The islet on T-12205 in lat. $56^{\circ}47.55'$, long. $133^{\circ}46.04'$ is a scribing error and should be disregarded.

3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves are adequately delineated, except in some inshore foul areas. In some cases, supplemental dashed and brown depth curves were added in accordance with Par. 6-64 of the Hydrographic Manual.

C. The development of the bottom configuration and the investigation of least depths are considered adequate.

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. However, in several instances the use of weak fixes resulted in positions being excessively displaced for some features on the verified smooth plot. One reef was shifted as much as 100 meters.

5. Junctions

An adequate junction was effected with H-9041 (1968) on the northwest. The junction with H-9159 (1970) on the south will be discussed in the review of that survey.

6. Comparison with Prior Surveys

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

The reconnaissance nature of this prior smaller scale survey provides only general information of the area. No noteworthy differences exist between prior and present depths. However, in deep areas prior soundings appear the deeper, probably as a result of the survey methods. The present survey reveals the delineation of the bottom in much greater detail and is adequate to supersede the prior survey within the common area.

- B. H-4766 (1927), 1:10,000
H-4943 (1929), 1:10,000

These surveys taken together covers approximately 90% of the present survey area. A comparison between the present and prior survey depths, indicates general differences of less than one fathom. These differences are attributed to the natural shifting of sediments and differences in survey methods, leadline on the prior work versus depth recorder sounding on the present survey.

Several rocks awash were not verified or disproved by the hydrographer and are carried forward in violet from H-4766 to supplement the present survey information. In addition several reef limits were revised.

Three rocks awash and a ledge were not verified or disproved by the hydrographer and are carried forward in brown from H-4943 to supplement the present survey information.

With the additions noted, this survey is adequate to supersede the prior surveys within the common area.

7. Comparison with Chart 8272, 5th Ed. print date Nov. 4, 1972
Chart 8201, 18th Ed. print date Mar. 17, 1973

A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by the partial application of depths from the boat sheet and verified smooth sheet of the present survey before review.

Attention is directed to the following:

- (1) The following items were charted from the boat sheet information should be revised as indicated:

(a) Two rocks awash in the vicinity of lat. $56^{\circ}47.42'$, long. $133^{\circ}47.62''$ should be deleted and revised to agree with the final smooth sheet data.

(b) A rock awash charted in lat. $56^{\circ}47.38'$, long. $133^{\circ}47.07'$ should be revised to a sunken rock covered four-tenth fathom at MLLW as indicated on the smooth sheet.

(c) The rock awash at mean lower low water charted in lat. $56^{\circ}47.2'$, long. $133^{\circ}46.0'$ from T-12205 should be revised to agree with present survey information.

(2) The following items charted from H-4766 are superseded by the present survey information and should be deleted from the chart:

(a) A rock awash in lat. $56^{\circ}49.09'$, long. $133^{\circ}43.44'$.

(b) A rock awash in lat. $56^{\circ}49.1'$, long. $133^{\circ}43.5'$.

(3) Two rocks awash charted from T-4340 (1927) in lat. $56^{\circ}48.38'$, long. $133^{\circ}46.15'$ should be revised to sunken rocks in accordance with the final smooth sheet data. Observations at $\frac{1}{2}$ ft. of tide did not detect the rocks awash.

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

B. Aids to Navigation

Several aids to navigation have been established or relocated subsequent to the date of the present survey. The aids presently charted adequately mark the features intended.


8. Compliance with Instructions

This survey adequately complies with the project instructions.


9. Additional Field Work

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

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys
and Maps

H-9158 (1970)

Minor differences were noticed since the prior surveys. These differences are attributed to the natural shifting of sediments and differences in survey methods, leadline on the prior work versus depth recorder soundings on the present survey.

The sunken rocks in lat. $56^{\circ}48.38'$, long. $133^{\circ}46.15'$ carried forward from rock awash symbols on T-4340 should be investigated on any future survey as they are questionable.

<u>Position 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>
564	1335	2	1	50 Years
564	1340	2	1	50 Years

Reg. No. _____

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 _____

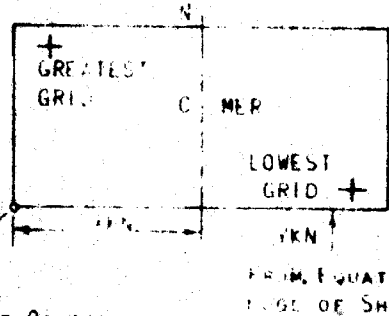
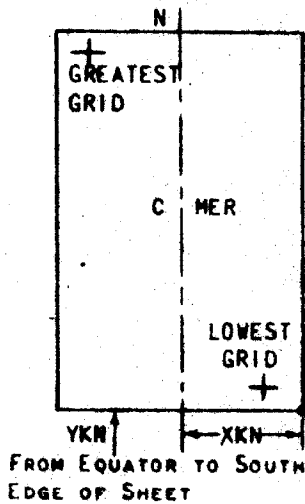
REMARKS:

FORM # 1

FIG. 15

**PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION**

- (1) PROJECT No. OPR 448
- (2) H No. H-9158
- (3) FIELD No. DA-10-9-70
SHEET K
- (4) REQUESTED BY LCDR K. WILLIAM JEFFERS
- (5) SHIP OR OFFICE BRADSON
- (6) DATE REQUIRED 5 MAY 1969
- (7) VISUAL
- (8) ELEVATION (FILL OUT FORM #3)
- (10) XKN (SP 5) DISTANCE FROM C MER TO EAST EDGE (NYX = 1) OR WEST EDGE (NYX = 0). 7540.31 METERS
- (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE OF SHEET. 6,294,861.9 METERS
- (12) CENTRAL MERIDIAN 133° 45' 30" W
- (13) SURVEY SCALE 1:10,000
- (14) SIZE OF SHEET (CHECK ONE) 36x54 42x50 OTHER 36x60
- (15) NYX, ORIENTATION OF SHEET (CHECK ONE)
NYX = 1 NYX = 0



(9) PLOTTER ORIGIN (CORNER OF SHEET)

LATITUDE 56° 46' 37" N
LONGITUDE 133° 52' 54" W

GRID LIMITS

- (16) GREATEST LATITUDE 56° 51' 30" (PROJECTION LINE)
- (17) LOWEST LATITUDE 56° 47' 00" INTERVAL, PAGE 4
- (18) DIFFERENCE 0° 4' 30" HYDRO MANUAL)
- (19) 0' 30"
- (20) 9 YSN
- (21) GREATEST LONGITUDE 133° 52' 30"
- (22) LOWEST LONGITUDE 133° 38' 30"
- (23) DIFFERENCE 0° 14' 00"
- (24) 0' 30"
- (25) 28 XSN

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

Visual-hydro

Triang. (Deg., Min., Sec)

	LAT. & LONG		SECONDS IN METERS
LIND	56° 133	50' 52	1365.1 62.0
DEN	56 133	48 52	1223.2 265.3
SON	56 133	49 48	1405.7 525.6
DEE	56 133	48 50	449.1 119.7
GULL	56 133	48 48	212.9 809.8
BEAK	56 133	48 47	1232.7 743.4
PET	56 133	47 47	592.6 372.2
JUN	56 133	47 46	1740.2 545.0
FLAT	56 133	47 45	1160.1 917.3
TREN	56 133	47 44	429.0 100.5
DIN	56 133	47 42	142.3 503.3
AMY	56 133	48 41	1584.7 323.7

December 22, 1970

C331W-250-CSS

Tidal Data - OPR 448, Koku Strait, Alaska

Commanding Officer
NOAA Ship DAVIDSON

Listed below are planes of reference time and height relationships for the four tide stations installed in 1970.

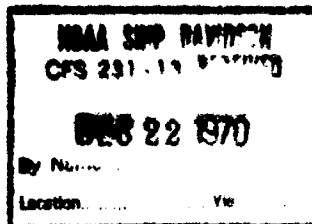
	H.W. Interval H	L.W. Interval H	Mean Range ft.	GT Range ft.	MLLW on Staff ft.
Monte Carlo I.	9.47	3.20	10.1	12.2	6.58
Eagle I.	9.41	3.40	10.3	12.5	2.25
High I.	9.64	3.38	12.5	14.9	6.13
Pup I.	9.58	3.39	12.0	14.4	2.41

The recommended zoning is acceptable. Additional zoning for Sheet DA-10-7-70 is listed below:

Northward to lat. 56°38'.5 use Eagle Island. Between lat. 56°38'.5 and 56°40'.5 the area should be divided into three zones using the following corrections on Eagle Island.

	Time of Tide		Height of Tide	
	H.W. h m	L.W. h m	H.W. ft.	L.W.
Zone 1	+0 05	+0 08	+0.6	0.0
Zone 2	+0 10	+0 17	+1.2	0.0
Zone 3	+0 15	+0 25	+1.8	0.0

L. C. Wharton
L. C. Wharton
Tides & Currents Branch
Oceanography Division
National Ocean Survey



FWD

